



IES ROAD REPORT

PHOTOMETRIC FILENAME : LED-9800-L4-90W-5K IES FILE.IES

DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST]
 [TESTLAB] BA CL
 [TESTDATE] 2017-03-23
 [ISSUE DATE] 2017-03-23 15:34:26
 [LAMP POSITION] 0,0
 [OTHER] EVERFINE GO-R5000_V2 SYSTEM
 [MANUFAC] Grandlite
 [LUMINAIRE] LED-9800-L4-90W-5K
 [LAMP]

CHARACTERISTICS

IES Classification	Type VS
Longitudinal Classification	Very Short
Lumens Per Lamp	9836.3 (1 lamp)
Total Lamp Lumens	9836.3
Luminaire Lumens	9836
Downward Total Efficiency	100 %
Total Luminaire Efficiency	100 %
Luminaire Efficacy Rating (LER)	125
Total Luminaire Watts	78.4
Ballast Factor	1.00
Upward Waste Light Ratio	0.00
Maximum Candela	4236.32
Maximum Candela Angle	270H 1V
Maximum Candela (<90 Degrees Vertical)	4236.32
Maximum Candela Angle (<90 Degrees Vertical)	270H 1V
Maximum Candela At 90 Degrees Vertical	14.12 (0.1% Lamp Lumens)
Maximum Candela from 80 to <90 Degrees Vertical	245.84 (2.5% Lamp Lumens)
Cutoff Classification (deprecated)	Cutoff

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LUMINAIRE CLASSIFICATION SYSTEM (LCS)

	Lumens	% Lamp	% Luminaire
FL - Front-Low (0-30)	1320.8	13.4	13.4
FM - Front-Medium (30-60)	2743.7	27.9	27.9
FH - Front-High (60-80)	760.2	7.7	7.7
FVH - Front-Very High (80-90)	38.4	0.4	0.4
BL - Back-Low (0-30)	1330.1	13.5	13.5
BM - Back-Medium (30-60)	2774.6	28.2	28.2
BH - Back-High (60-80)	797.9	8.1	8.1
BVH - Back-Very High (80-90)	41.8	0.4	0.4
UL - Uplight-Low (90-100)	6.8	0.1	0.1
UH - Uplight-High (100-180)	21.8	0.2	0.2
Total	9836.1	99.9	100.0
BUG Rating	B3-U2-G1		

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CANDELA TABULATION

Vert. Angles	Horizontal Angles									
	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>	<u>112.5</u>	<u>135.0</u>	<u>157.5</u>	<u>180.0</u>	<u>202.5</u>
0	4233.38	4233.38	4233.38	4233.38	4233.38	4233.38	4233.38	4233.38	4233.38	4233.38
1	4233.99	4231.32	4231.46	4231.32	4228.11	4226.95	4234.39	4235.61	4234.17	4232.08
2	4228.14	4227.71	4225.75	4226.59	4222.52	4226.84	4231.34	4230.95	4232.08	4228.38
3	4219.51	4220.47	4219.76	4218.61	4216.76	4222.29	4227.93	4228.72	4230.99	4230.60
4	4178.71	4210.34	4207.72	4211.13	4209.57	4216.56	4216.75	4221.97	4227.26	4226.51
5	3680.07	4101.92	3698.38	4044.34	4202.51	4208.31	4199.57	4213.89	4217.42	4221.02
6	3560.79	3533.55	3243.29	3421.27	4192.43	4197.34	3645.99	4041.40	4208.34	4209.50
7	3367.96	3222.91	3222.80	3235.58	4179.03	3971.38	3202.76	3379.00	4181.13	3929.04
8	2802.94	3205.58	3209.47	3213.28	4163.86	3491.98	3178.35	3184.19	3923.70	3335.89
9	2517.14	3192.12	3197.14	3201.30	4148.34	3194.81	3160.83	3166.97	3472.25	3182.67
10	2262.20	3179.60	3187.11	3190.65	4140.20	3152.59	3149.46	3149.41	2882.77	3167.71
11	2195.89	3154.90	3174.98	3178.97	4131.24	3140.97	3138.18	3136.06	2470.88	3151.27
12	2180.71	2978.36	3159.49	3166.97	4120.93	3130.81	3125.12	3121.31	2168.53	3130.15
13	2170.94	2683.00	3145.97	3151.25	4105.23	3116.80	3112.94	3045.09	2135.32	2995.55
14	2160.45	2392.09	3133.69	3138.12	4089.91	3104.73	3097.45	2815.19	2123.80	2708.16
15	2150.54	2196.74	3117.96	3122.36	4070.79	3091.29	3082.66	2543.24	2115.09	2402.88
16	2141.40	2149.29	3100.10	3106.82	4052.12	3074.77	3063.77	2297.65	2106.56	2180.45
17	2161.01	2136.83	3082.97	3088.71	4033.19	3057.24	3050.40	2136.93	2096.28	2111.28
18	2576.62	2122.57	3064.55	3067.83	4011.86	3040.05	3035.71	2095.19	2098.17	2096.04
19	3274.31	2128.30	3044.99	3048.78	3992.19	3026.84	3016.62	2081.01	2341.53	2088.35
20	3797.73	2329.39	3021.96	3028.27	3972.32	3011.08	2996.32	2068.99	2951.27	2092.39
21	3943.97	2720.20	3000.45	3008.64	3947.94	2991.49	2977.82	2059.46	3498.93	2250.85
22	3932.41	2969.23	2946.71	2987.02	3919.81	2968.41	2958.06	2046.88	3794.28	2627.41
23	3910.77	2971.58	2861.84	2964.39	3893.04	2944.33	2937.66	2125.26	3932.16	2945.57
24	3887.73	2954.18	2764.53	2942.42	3865.92	2928.32	2910.56	2614.06	3928.63	2982.63
25	3861.51	2932.06	3022.81	2916.18	3834.07	2948.60	2882.34	2932.23	3906.28	2966.44
26	3831.81	2908.73	3378.67	2891.88	3802.12	3034.84	3050.92	2933.30	3882.48	2946.33
27	3799.64	2885.87	3300.99	2861.99	3766.44	3150.67	3468.25	2912.15	3852.56	2923.55
28	3767.01	2873.08	3193.47	2833.71	3732.54	3237.53	3598.78	2886.94	3825.41	2897.15
29	3730.92	2915.23	3080.98	2799.87	3703.63	3192.10	3505.20	2859.50	3791.89	2882.22
30	3691.85	3000.00	2976.69	2772.15	3662.11	3064.16	3400.01	2829.93	3751.66	2901.70
31	3651.48	3095.23	2884.26	2738.67	3617.75	2947.48	3298.51	2800.46	3713.49	2970.86
32	3605.41	3189.20	2802.25	2704.31	3572.94	2838.38	3187.95	2779.85	3669.37	3070.59
33	3559.96	3274.32	2741.61	2667.85	3526.38	2739.55	3082.49	2791.01	3629.62	3162.37
34	3514.29	3337.59	2694.04	2631.72	3482.15	2656.36	2979.31	2835.05	3582.53	3252.02
35	3466.87	3378.18	2652.07	2590.77	3430.58	2591.14	2883.58	2891.85	3535.22	3324.83
36	3414.18	3374.55	2608.47	2552.01	3382.19	2537.72	2787.65	2959.30	3486.88	3376.98
37	3361.89	3337.83	2571.33	2508.95	3329.31	2487.87	2701.90	3021.49	3434.22	3394.08
38	3307.88	3293.09	2530.65	2464.15	3276.94	2439.97	2626.35	3071.86	3383.98	3369.68
39	3254.88	3239.85	2487.17	2417.83	3222.42	2396.57	2551.80	3106.73	3332.03	3326.28
40	3197.14	3185.88	2441.95	2371.85	3167.98	2348.28	2490.17	3130.50	3272.41	3276.15
41	3139.86	3125.64	2393.23	2321.75	3107.20	2295.66	2436.71	3132.46	3214.89	3216.98
42	3076.14	3068.19	2345.35	2270.26	3044.43	2247.27	2386.31	3100.68	3154.13	3160.35
43	3011.48	3004.25	2296.97	2218.48	2979.46	2194.90	2334.82	3049.08	3093.78	3099.03
44	2947.73	2944.61	2247.53	2164.24	2912.45	2141.89	2285.31	2993.37	3026.48	3038.38
45	2878.77	2878.67	2196.95	2109.97	2845.28	2089.31	2234.20	2930.09	2960.47	2973.99
46	2811.67	2808.40	2142.25	2054.47	2775.28	2033.63	2182.43	2864.42	2893.59	2909.45
47	2741.97	2740.67	2089.55	1994.45	2702.27	1974.67	2128.48	2798.58	2822.79	2839.77
48	2668.57	2666.40	2035.04	1936.87	2628.74	1917.04	2074.88	2725.52	2752.66	2768.36
49	2594.90	2593.09	1977.68	1873.71	2556.10	1857.63	2018.53	2651.98	2682.48	2697.40
50	2520.09	2520.14	1915.37	1818.60	2479.86	1793.59	1961.72	2574.80	2605.32	2623.06
51	2443.56	2438.76	1853.61	1766.67	2400.19	1731.65	1901.45	2497.53	2530.61	2547.52
52	2361.90	2358.63	1786.12	1720.23	2318.88	1668.29	1837.94	2417.60	2451.74	2471.71

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CANDELA TABULATION - (Cont.)

53	2274.71	2277.46	1722.10	1671.10	2238.76	1603.03	1774.68	2333.95	2374.45	2392.32
54	2196.25	2199.65	1653.15	1629.85	2155.65	1534.67	1710.95	2253.13	2292.92	2312.20
55	2115.67	2121.18	1580.06	1596.53	2079.03	1465.72	1650.70	2169.46	2213.57	2233.85
56	2036.44	2031.60	1505.75	1562.98	1998.37	1395.69	1580.06	2088.53	2133.29	2152.78
57	1961.04	1941.76	1435.19	1526.96	1919.22	1323.81	1510.44	2003.06	2056.31	2070.52
58	1877.18	1851.53	1360.01	1485.70	1834.87	1251.53	1443.12	1914.02	1978.75	1980.63
59	1781.02	1754.84	1286.95	1441.95	1741.57	1178.18	1369.99	1821.39	1895.28	1890.03
60	1687.78	1652.86	1212.37	1398.01	1647.34	1105.93	1299.51	1728.41	1800.45	1796.78
61	1594.49	1558.29	1138.63	1346.47	1551.99	1032.06	1228.37	1627.29	1706.03	1697.84
62	1496.72	1466.53	1060.34	1289.72	1456.46	961.36	1154.13	1530.16	1608.60	1603.89
63	1400.23	1371.47	985.52	1228.23	1365.77	889.52	1082.90	1440.26	1512.23	1513.88
64	1305.44	1276.67	913.72	1158.01	1273.17	818.44	1011.63	1350.77	1416.13	1419.14
65	1212.77	1172.90	846.59	1092.15	1187.33	749.91	944.97	1258.15	1324.88	1328.60
66	1122.07	1077.00	780.16	1020.53	1099.07	680.77	879.02	1161.50	1233.64	1238.06
67	1036.11	987.03	722.06	946.99	1009.59	613.59	816.98	1072.33	1142.37	1147.51
68	947.98	904.02	669.42	872.94	927.50	560.05	761.07	990.61	1049.45	1056.41
69	866.09	821.15	621.35	797.38	847.39	506.89	707.38	911.44	956.33	975.19
70	787.90	744.79	575.83	727.65	774.49	453.73	651.99	832.44	869.14	895.40
71	715.06	669.24	530.38	658.64	705.11	403.00	592.85	758.45	789.97	819.59
72	651.41	600.85	484.93	588.04	643.03	354.13	537.77	685.62	722.37	741.42
73	597.23	540.70	441.32	528.31	593.96	310.75	482.82	612.82	660.94	663.56
74	529.85	480.74	400.19	468.78	524.09	266.96	433.17	545.60	601.27	592.54
75	462.29	430.84	362.42	417.47	454.13	229.51	387.28	478.40	539.82	521.88
76	397.88	386.23	324.87	370.49	389.13	200.70	341.82	411.21	470.28	454.92
77	333.77	343.59	286.71	326.66	327.94	174.89	299.00	366.67	401.58	405.37
78	277.64	288.39	246.64	278.39	272.60	148.81	260.88	320.34	341.38	356.65
79	238.82	236.43	197.14	231.43	224.89	121.23	213.57	259.43	286.41	300.88
80	207.39	197.61	169.21	198.10	187.34	97.40	172.74	214.05	241.64	245.84
81	172.52	161.49	147.22	164.08	153.19	70.38	143.91	176.33	203.43	197.93
82	137.81	126.65	119.66	129.40	119.41	60.32	118.31	137.05	165.36	162.45
83	106.97	101.27	94.60	96.87	87.70	50.30	103.06	105.31	127.30	126.96
84	83.11	72.52	74.17	71.34	62.21	40.28	75.84	78.37	89.71	91.77
85	57.90	51.87	55.66	53.16	49.89	32.22	56.53	58.36	69.87	70.43
86	33.56	31.42	37.19	35.13	37.84	20.80	40.31	36.85	55.86	49.57
87	9.23	10.97	18.73	17.10	25.80	15.89	24.17	15.29	38.96	36.03
88	7.38	6.69	12.99	13.39	13.76	13.08	15.86	10.52	22.06	22.49
89	5.80	6.14	12.48	13.06	1.72	12.73	13.66	7.13	5.37	9.01
90	4.22	5.65	11.82	12.72	1.70	12.42	13.14	6.73	4.07	6.82
91	3.96	5.16	10.62	12.25	1.72	12.02	12.28	6.08	3.89	6.32
92	3.78	4.77	8.47	11.77	1.75	11.67	10.31	5.41	3.71	5.33
93	3.61	4.48	7.17	11.15	1.77	11.22	8.39	4.90	3.51	4.62
94	3.57	4.45	6.82	10.51	1.79	10.68	7.07	4.45	3.32	4.22
95	3.62	4.41	6.48	9.73	1.81	10.03	6.82	4.07	3.26	4.05
96	3.69	4.39	6.14	8.97	1.82	9.26	6.62	3.79	3.26	4.00
97	3.81	4.43	5.96	8.27	1.83	8.56	6.41	3.59	3.34	4.02
98	3.95	4.51	5.81	7.71	1.84	7.93	6.26	3.45	3.49	4.04
99	4.07	4.60	5.66	7.31	1.85	7.46	6.08	3.46	3.61	4.13
100	4.19	4.71	5.48	7.06	1.86	7.22	5.81	3.59	3.72	4.20
101	4.30	4.80	5.38	6.76	1.88	6.90	5.65	3.83	3.82	4.33
102	4.42	4.87	5.30	6.51	1.90	6.60	5.54	4.02	3.93	4.41
103	4.51	4.81	5.23	6.26	1.93	6.30	5.45	4.18	4.05	4.49
104	4.59	4.20	5.19	6.01	1.94	6.00	5.43	4.29	4.13	4.47
105	4.56	3.62	5.12	5.84	1.97	5.82	5.35	3.83	4.20	3.90
106	3.97	3.77	5.07	5.69	1.99	5.66	5.24	3.23	4.14	3.24
107	3.39	4.51	5.00	5.53	2.01	5.49	5.13	3.25	3.57	3.27
108	3.41	5.14	4.95	5.42	2.04	5.38	5.04	4.01	2.94	3.98

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109	4.13	5.20	4.86	5.27	2.07	5.23	4.91	4.86	2.96	4.73
110	4.87	5.18	4.80	5.12	2.11	5.07	4.82	5.09	3.68	4.92
111	5.06	5.19	4.70	4.99	2.14	4.92	4.75	5.13	4.50	4.91
112	5.09	5.21	4.57	4.87	2.18	4.78	4.54	5.17	4.81	4.91
113	5.15	5.21	4.43	4.78	2.22	4.66	4.35	5.26	4.83	4.92
114	5.24	5.22	4.12	4.67	2.26	4.53	4.02	5.32	4.90	4.95
115	5.30	5.23	3.77	4.54	2.30	4.38	3.62	5.36	5.03	4.99
116	5.37	5.25	3.39	4.47	2.35	4.31	3.22	5.40	5.17	5.05
117	5.45	5.29	3.06	4.41	2.40	4.24	2.94	5.45	5.26	5.14
118	5.52	5.32	2.90	4.35	2.45	4.17	2.87	5.48	5.35	5.21
119	5.58	5.35	3.01	4.29	2.51	4.11	3.19	5.50	5.42	5.25
120	5.63	5.40	3.31	4.17	2.56	3.96	3.52	5.56	5.50	5.28
121	5.68	5.45	3.70	3.93	2.59	3.75	3.95	5.62	5.55	5.35
122	5.73	5.50	4.15	3.66	2.63	3.50	4.43	5.68	5.60	5.43
123	5.72	5.58	4.43	3.38	2.63	3.25	4.83	5.76	5.67	5.52
124	5.57	5.68	4.67	3.12	2.58	3.05	5.10	5.85	5.72	5.61
125	5.66	5.78	4.69	2.97	2.46	2.95	5.06	5.96	5.66	5.73
126	5.92	5.89	4.56	2.94	2.28	2.97	4.93	6.05	5.71	5.85
127	5.84	6.01	4.34	3.14	2.10	3.26	4.77	6.17	5.91	5.99
128	5.72	6.13	4.12	3.48	2.04	3.59	4.54	6.29	6.00	6.13
129	5.03	6.25	3.91	3.86	2.07	3.94	4.30	6.39	5.89	6.26
130	3.92	6.37	3.83	4.30	2.27	4.38	4.09	6.51	5.29	6.38
131	3.41	6.40	3.82	4.78	2.56	4.73	3.96	6.60	4.19	6.45
132	4.14	6.35	3.78	5.15	2.86	5.09	3.92	6.60	3.31	6.41
133	4.40	6.16	3.87	5.59	3.29	5.42	3.89	6.49	4.11	6.29
134	4.47	5.93	4.21	5.81	3.57	5.63	3.97	6.23	4.57	6.02
135	4.39	5.65	4.67	5.99	3.93	5.81	4.29	5.92	4.58	5.73
136	4.24	5.31	5.22	6.15	4.14	5.99	4.80	5.39	4.48	5.38
137	4.08	4.93	5.68	6.25	4.28	6.10	5.30	4.80	4.29	5.03
138	3.92	4.41	5.99	6.23	4.41	6.14	5.68	4.20	4.09	4.56
139	3.73	4.09	6.33	6.23	4.49	6.12	5.95	3.60	3.86	4.10
140	3.47	3.66	6.61	6.16	4.53	6.07	6.20	3.19	3.57	3.59
141	3.24	3.28	6.69	6.05	4.52	5.96	6.32	2.91	3.26	3.11
142	3.06	3.16	6.57	5.85	4.44	5.80	6.34	2.78	2.99	2.76
143	2.83	3.20	6.30	5.58	4.30	5.55	6.17	2.79	2.66	2.61
144	2.69	3.20	5.91	5.29	4.12	5.28	5.81	2.80	2.32	2.44
145	2.71	3.21	5.43	4.94	3.97	4.94	5.39	2.83	2.14	2.21
146	2.74	3.17	4.92	4.55	3.81	4.60	4.89	2.90	2.10	2.03
147	2.83	3.17	4.47	4.21	3.68	4.29	4.45	2.99	2.05	1.99
148	2.94	3.22	4.04	3.90	3.63	4.01	4.06	3.09	2.06	2.01
149	3.04	3.29	3.83	3.72	3.59	3.85	3.86	3.20	2.09	2.05
150	3.16	3.39	3.78	3.68	3.55	3.84	3.83	3.30	2.13	2.09
151	3.29	3.51	3.74	3.66	3.59	3.84	3.79	3.40	2.19	2.08
152	3.43	3.62	3.79	3.69	3.66	3.89	3.84	3.51	2.25	2.12
153	3.56	3.73	3.84	3.72	3.73	3.95	3.92	3.62	2.29	2.23
154	3.69	3.84	3.90	3.76	3.78	4.02	3.99	3.73	2.34	2.28
155	3.80	3.95	3.94	3.82	3.83	4.08	4.07	3.85	2.38	2.27
156	3.93	4.05	3.99	3.90	3.88	4.14	4.15	3.94	2.42	2.34
157	4.04	4.13	4.04	3.98	3.94	4.20	4.23	4.03	2.48	2.42
158	4.15	4.18	4.07	4.05	3.98	4.24	4.30	4.10	2.53	2.49
159	4.24	4.20	4.10	4.09	4.01	4.27	4.34	4.13	2.57	2.54
160	4.27	4.22	4.12	4.10	4.02	4.28	4.36	4.14	2.61	2.57
161	4.28	4.22	4.12	4.10	4.00	4.27	4.35	4.14	2.61	2.57
162	4.27	4.20	4.09	4.08	4.00	4.25	4.33	4.13	2.60	2.57
163	4.27	4.19	4.06	4.05	4.02	4.22	4.28	4.14	2.61	2.58
164	4.25	4.18	4.02	3.99	4.02	4.19	4.24	4.15	2.64	2.61

IES ROAD REPORT
PHOTOMETRIC FILENAME : LED-9800-L4-90W-5K IES FILE.IES

CANDELA TABULATION - (Cont.)

165	4.22	4.15	3.98	3.94	4.00	4.15	4.20	4.14	2.68	2.65
166	4.17	4.11	3.94	3.87	3.96	4.11	4.13	4.11	2.75	2.72
167	4.11	4.06	3.89	3.81	3.91	4.05	4.05	4.07	2.82	2.79
168	4.05	3.98	3.82	3.74	3.85	3.97	3.98	4.01	2.87	2.84
169	4.00	3.92	3.76	3.68	3.79	3.90	3.90	3.95	2.92	2.90
170	3.99	3.88	3.71	3.65	3.74	3.85	3.86	3.91	2.92	2.90
171	4.02	3.87	3.72	3.64	3.67	3.83	3.83	3.91	2.89	2.89
172	4.02	3.85	3.72	3.61	3.61	3.81	3.79	3.90	2.92	2.91
173	4.00	3.83	3.69	3.58	3.53	3.77	3.77	3.88	2.97	2.97
174	3.97	3.80	3.67	3.56	3.48	3.73	3.76	3.85	3.08	3.06
175	3.90	3.74	3.64	3.52	3.47	3.67	3.73	3.80	3.20	3.19
176	3.80	3.68	3.60	3.44	3.44	3.59	3.69	3.73	3.24	3.24
177	3.67	3.57	3.52	3.35	3.34	3.50	3.61	3.63	3.29	3.28
178	3.56	3.47	3.41	3.26	3.24	3.40	3.53	3.55	3.33	3.33
179	3.47	3.39	3.31	3.19	3.18	3.32	3.46	3.49	3.36	3.36
180	3.38	3.38	3.38	3.38	3.38	3.38	3.38	3.38	3.38	3.38

Vert. Horizontal Angles

	<u>225.0</u>	<u>247.5</u>	<u>270.0</u>	<u>292.5</u>	<u>315.0</u>	<u>337.5</u>	<u>360.0</u>
0	4233.38	4233.38	4233.38	4233.38	4233.38	4233.38	4233.38
1	4235.43	4233.15	4236.32	4233.73	4234.40	4235.43	4233.99
2	4235.81	4230.85	4226.87	4228.20	4233.82	4235.68	4228.14
3	4234.33	4230.20	4221.89	4222.18	4224.03	4225.90	4219.51
4	4230.73	4226.50	4218.21	4218.63	4213.19	4219.79	4178.71
5	4216.12	4219.79	4212.35	4207.54	4142.47	4203.66	3680.07
6	4034.86	4197.50	4203.57	4056.57	3405.21	3933.51	3560.79
7	3273.88	3858.10	4195.75	3468.24	3191.72	3313.82	3367.96
8	3190.09	3263.43	4185.74	3188.72	3177.78	3174.12	2802.94
9	3177.46	3181.65	4175.66	3171.93	3166.40	3157.42	2517.14
10	3166.24	3169.98	4166.48	3162.40	3154.95	3142.64	2262.20
11	3155.24	3157.82	4153.18	3155.39	3143.00	3096.61	2195.89
12	3143.28	3147.33	4138.51	3141.11	3133.22	2879.03	2180.71
13	3130.96	3136.64	4124.00	3129.05	3117.45	2582.55	2170.94
14	3116.98	3121.85	4114.51	3118.43	3103.21	2294.29	2160.45
15	3103.10	3108.18	4097.34	3103.68	3087.89	2166.90	2150.54
16	3089.93	3094.19	4079.53	3087.12	3072.19	2148.94	2141.40
17	3073.29	3078.87	4062.17	3070.60	3056.83	2138.13	2161.01
18	3055.52	3061.52	4043.81	3055.30	3037.82	2126.54	2576.62
19	3038.98	3042.63	4025.10	3035.21	3019.81	2116.64	3274.31
20	3022.13	3023.73	4004.12	3018.55	2999.57	2104.19	3797.73
21	3003.52	3004.25	3979.02	3001.68	2973.04	2099.89	3943.97
22	2983.49	2984.71	3950.67	2976.00	2943.46	2206.88	3932.41
23	2955.60	2963.37	3928.84	2955.97	2876.20	2661.71	3910.77
24	2914.07	2944.31	3904.35	2935.17	2797.51	2982.18	3887.73
25	2840.68	2919.14	3875.22	2912.35	2733.75	2976.45	3861.51
26	2872.56	2894.35	3847.76	2889.00	3123.33	2955.43	3831.81
27	3346.48	2867.88	3815.56	2864.84	3421.65	2932.32	3799.64
28	3447.10	2841.52	3782.76	2849.88	3332.99	2905.59	3767.01
29	3330.74	2814.00	3747.79	2829.02	3236.18	2881.96	3730.92
30	3216.24	2783.40	3713.40	2787.89	3137.89	2880.43	3691.85
31	3105.36	2753.19	3672.20	2754.53	3047.57	2921.60	3651.48
32	3002.97	2720.90	3629.48	2714.64	2962.22	2982.48	3605.41
33	2908.21	2689.46	3583.43	2679.92	2879.97	3045.31	3559.96
34	2817.69	2654.51	3543.16	2644.77	2808.14	3113.86	3514.29
35	2744.99	2615.29	3495.00	2605.72	2746.14	3173.23	3466.87

IES ROAD REPORT
PHOTOMETRIC FILENAME : LED-9800-L4-90W-5K IES FILE.IES

CANDELA TABULATION - (Cont.)

36	2685.40	2578.40	3450.04	2567.19	2696.49	3217.06	3414.18
37	2636.26	2538.30	3397.75	2526.47	2654.00	3246.76	3361.89
38	2591.53	2495.35	3349.23	2483.72	2610.51	3257.01	3307.88
39	2549.90	2452.81	3296.73	2440.26	2565.80	3245.04	3254.88
40	2505.02	2407.45	3241.83	2396.34	2522.08	3201.58	3197.14
41	2460.69	2361.30	3185.99	2352.56	2478.44	3152.83	3139.86
42	2412.35	2312.54	3128.31	2299.36	2432.33	3094.38	3076.14
43	2366.92	2265.83	3070.45	2248.69	2383.99	3033.05	3011.48
44	2316.36	2214.46	3006.29	2198.46	2332.96	2969.79	2947.73
45	2268.09	2166.33	2941.33	2144.26	2280.64	2903.07	2878.77
46	2220.27	2116.47	2877.51	2089.46	2228.70	2838.16	2811.67
47	2163.95	2063.94	2809.28	2033.76	2173.13	2770.47	2741.97
48	2110.89	2007.99	2742.58	1975.18	2118.61	2696.29	2668.57
49	2056.68	1949.81	2670.66	1917.75	2059.66	2620.05	2594.90
50	2000.52	1890.82	2596.99	1855.25	2000.60	2542.59	2520.09
51	1943.37	1829.92	2522.12	1797.49	1935.65	2465.74	2443.56
52	1882.47	1768.25	2445.97	1729.15	1871.96	2382.14	2361.90
53	1819.59	1706.40	2368.14	1668.33	1805.29	2299.08	2274.71
54	1755.39	1641.23	2290.26	1600.48	1737.13	2214.10	2196.25
55	1690.71	1578.42	2211.00	1532.32	1671.37	2129.29	2115.67
56	1630.10	1517.17	2129.87	1463.25	1600.01	2050.48	2036.44
57	1556.76	1463.94	2052.08	1391.19	1527.28	1966.90	1961.04
58	1489.24	1416.22	1974.59	1319.54	1455.41	1874.79	1877.18
59	1419.15	1368.70	1892.30	1250.45	1382.69	1786.49	1781.02
60	1349.76	1325.91	1799.75	1181.32	1314.68	1695.29	1687.78
61	1282.13	1285.95	1704.07	1110.98	1249.76	1594.86	1594.49
62	1214.49	1246.22	1609.35	1036.09	1184.77	1505.30	1496.72
63	1146.84	1206.23	1512.64	964.22	1116.48	1419.68	1400.23
64	1075.73	1159.80	1414.80	891.43	1046.65	1328.92	1305.44
65	1008.08	1114.60	1322.76	823.19	983.41	1238.16	1212.77
66	939.16	1060.73	1230.72	757.19	919.85	1147.42	1122.07
67	874.36	1007.45	1138.66	689.15	860.75	1057.65	1036.11
68	815.29	950.76	1043.84	623.89	802.96	976.55	947.98
69	760.07	894.26	947.38	563.93	749.90	894.63	866.09
70	705.86	836.09	855.69	509.57	697.57	815.83	787.90
71	649.49	772.36	772.33	459.38	642.68	741.20	715.06
72	593.57	712.23	698.84	406.93	585.63	669.00	651.41
73	537.63	645.95	632.59	356.03	526.66	598.78	597.23
74	479.08	575.23	567.55	305.22	470.86	528.90	529.85
75	427.39	499.30	505.20	264.48	423.18	467.83	462.29
76	382.09	423.20	440.50	230.94	376.27	413.03	397.88
77	343.46	364.91	380.51	202.28	334.40	366.76	333.77
78	305.41	321.71	328.88	177.78	296.15	324.43	277.64
79	266.21	277.92	280.64	153.26	255.79	266.72	238.82
80	214.96	230.05	238.23	128.74	201.68	211.68	207.39
81	178.63	193.16	196.29	104.28	173.37	171.49	172.52
82	150.74	161.60	166.97	82.75	145.06	141.89	137.81
83	122.85	130.03	137.66	65.47	116.76	112.30	106.97
84	95.03	98.57	108.34	50.59	89.32	89.60	83.11
85	70.92	72.94	79.09	39.45	62.40	63.53	57.90
86	53.30	66.05	59.46	30.25	52.27	48.38	33.56
87	47.56	32.02	39.84	20.45	39.89	34.58	9.23
88	19.27	18.60	20.22	16.06	17.41	20.78	7.38
89	16.69	14.34	1.29	13.65	15.66	7.43	5.80
90	14.12	14.08	1.26	13.43	13.91	7.15	4.22
91	11.57	13.72	1.26	13.13	12.17	6.44	3.96

IES ROAD REPORT
PHOTOMETRIC FILENAME : LED-9800-L4-90W-5K IES FILE.IES

CANDELA TABULATION - (Cont.)

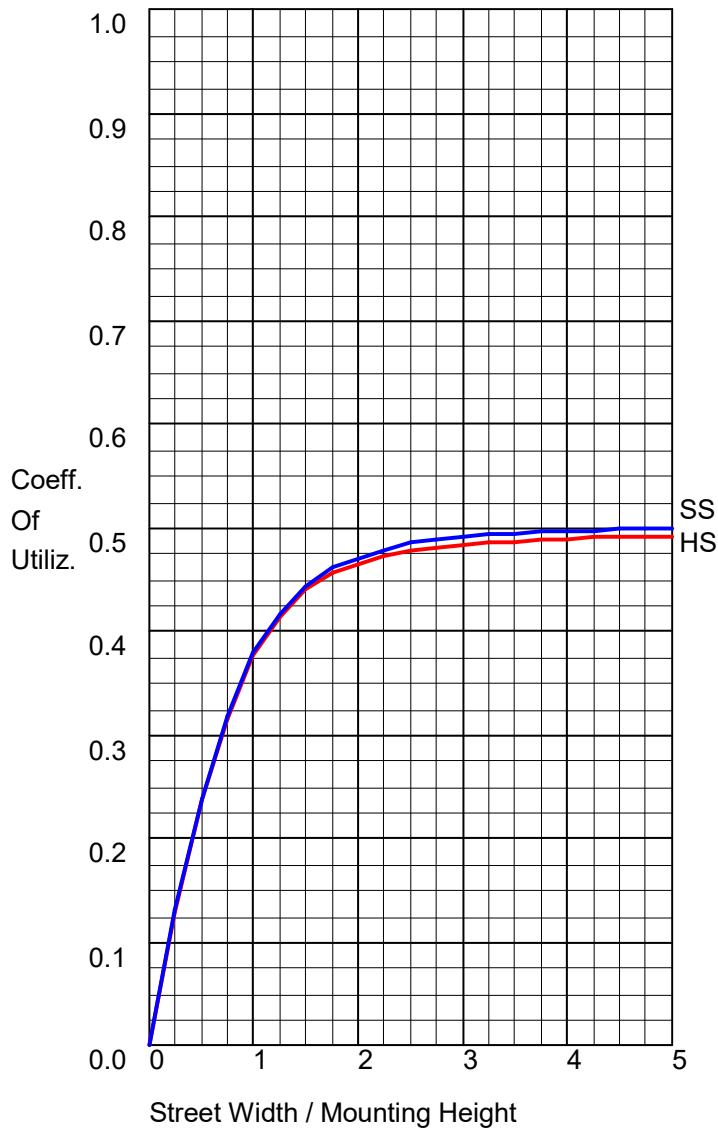
92	10.35	12.93	1.25	12.47	10.42	5.34	3.78
93	8.57	12.13	1.25	11.81	8.58	4.60	3.61
94	7.04	11.34	1.25	11.14	7.05	4.16	3.57
95	6.12	10.55	1.25	10.28	6.13	3.78	3.62
96	5.85	9.63	1.27	9.44	6.17	3.48	3.69
97	6.09	8.83	1.29	8.68	6.31	3.23	3.81
98	5.96	8.13	1.31	8.01	6.10	3.00	3.95
99	5.68	7.61	1.34	7.53	5.80	2.90	4.07
100	5.45	7.21	1.36	7.13	5.52	2.93	4.19
101	5.22	6.82	1.39	6.74	5.36	3.08	4.30
102	5.11	6.45	1.42	6.38	5.24	3.25	4.42
103	5.03	6.18	1.45	6.12	5.16	3.42	4.51
104	4.94	5.96	1.48	5.87	5.10	3.53	4.59
105	4.92	5.70	1.52	5.70	4.99	3.10	4.56
106	4.80	5.56	1.56	5.55	4.86	2.55	3.97
107	4.71	5.41	1.60	5.38	4.74	2.68	3.39
108	4.62	5.24	1.64	5.22	4.64	3.51	3.41
109	4.55	5.16	1.69	5.11	4.52	4.36	4.13
110	4.45	5.00	1.74	4.92	4.46	4.53	4.87
111	4.39	4.86	1.79	4.75	4.39	4.60	5.06
112	4.31	4.73	1.85	4.61	4.26	4.70	5.09
113	4.21	4.61	1.92	4.49	4.10	4.82	5.15
114	4.07	4.52	1.98	4.39	3.75	4.88	5.24
115	3.83	4.44	2.05	4.25	3.38	4.94	5.30
116	3.50	4.29	2.12	4.13	3.01	5.01	5.37
117	3.14	4.24	2.19	4.07	2.79	5.07	5.45
118	2.90	4.22	2.26	4.01	2.74	5.13	5.52
119	2.77	4.19	2.33	3.96	3.08	5.18	5.58
120	3.00	4.16	2.39	3.86	3.46	5.26	5.63
121	3.32	4.03	2.45	3.70	3.84	5.35	5.68
122	3.70	3.84	2.50	3.45	4.29	5.44	5.73
123	4.12	3.58	2.53	3.21	4.62	5.52	5.72
124	4.33	3.33	2.50	3.00	4.96	5.61	5.57
125	4.44	3.12	2.40	2.85	4.93	5.70	5.66
126	4.46	2.98	2.23	2.86	4.80	5.80	5.92
127	4.29	2.99	2.04	3.08	4.62	5.90	5.84
128	4.05	3.31	1.93	3.42	4.35	6.02	5.72
129	3.81	3.67	1.85	3.73	4.06	6.14	5.03
130	3.62	4.05	2.01	4.12	3.82	6.26	3.92
131	3.65	4.54	2.30	4.48	3.65	6.36	3.41
132	3.63	4.87	2.57	4.75	3.66	6.35	4.14
133	3.69	5.28	2.99	5.05	3.61	6.24	4.40
134	3.98	5.59	3.28	5.20	3.60	5.99	4.47
135	4.42	5.78	3.56	5.31	3.88	5.71	4.39
136	4.89	5.93	3.79	5.39	4.34	5.30	4.24
137	5.34	6.05	3.93	5.45	4.84	4.81	4.08
138	5.67	6.08	4.01	5.45	5.29	4.28	3.92
139	5.95	6.04	4.05	5.41	5.60	3.77	3.73
140	6.19	6.00	4.02	5.35	5.95	3.35	3.47
141	6.32	5.91	3.96	5.26	6.16	2.93	3.24
142	6.27	5.77	3.88	5.09	6.17	2.59	3.06
143	6.03	5.55	3.72	4.88	5.90	2.53	2.83
144	5.61	5.25	3.49	4.60	5.47	2.46	2.69
145	5.09	4.87	3.22	4.22	4.89	2.43	2.71
146	4.46	4.36	3.01	3.76	4.26	2.40	2.74
147	3.85	3.85	2.84	3.32	3.65	2.40	2.83

IES ROAD REPORT
PHOTOMETRIC FILENAME : LED-9800-L4-90W-5K IES FILE.IES

CANDELA TABULATION - (Cont.)

148	3.29	3.34	2.60	2.92	3.11	2.40	2.94
149	2.83	2.89	2.47	2.57	2.68	2.41	3.04
150	2.65	2.69	2.41	2.40	2.49	2.44	3.16
151	2.49	2.56	2.36	2.32	2.38	2.42	3.29
152	2.45	2.52	2.37	2.30	2.35	2.44	3.43
153	2.48	2.54	2.40	2.33	2.36	2.47	3.56
154	2.54	2.58	2.44	2.37	2.39	2.52	3.69
155	2.59	2.61	2.47	2.41	2.40	2.55	3.80
156	2.60	2.62	2.51	2.43	2.38	2.55	3.93
157	2.56	2.63	2.53	2.43	2.37	2.56	4.04
158	2.57	2.54	2.50	2.41	2.32	2.57	4.15
159	2.57	2.49	2.44	2.40	2.28	2.57	4.24
160	2.55	2.47	2.42	2.36	2.28	2.56	4.27
161	2.52	2.47	2.42	2.35	2.29	2.55	4.28
162	2.50	2.48	2.41	2.34	2.29	2.56	4.27
163	2.49	2.52	2.43	2.34	2.32	2.57	4.27
164	2.50	2.55	2.46	2.37	2.33	2.59	4.25
165	2.53	2.57	2.52	2.41	2.37	2.61	4.22
166	2.59	2.59	2.56	2.48	2.41	2.62	4.17
167	2.64	2.58	2.57	2.53	2.45	2.64	4.11
168	2.68	2.58	2.58	2.57	2.55	2.67	4.05
169	2.72	2.58	2.59	2.60	2.56	2.70	4.00
170	2.73	2.55	2.58	2.57	2.50	2.72	3.99
171	2.74	2.54	2.56	2.54	2.50	2.70	4.02
172	2.77	2.56	2.58	2.55	2.55	2.72	4.02
173	2.82	2.60	2.63	2.60	2.61	2.76	4.00
174	2.92	2.69	2.71	2.67	2.73	2.89	3.97
175	3.04	2.84	2.82	2.74	2.86	3.06	3.90
176	3.11	2.92	2.90	2.78	2.93	3.15	3.80
177	3.17	3.02	2.96	2.87	3.02	3.23	3.67
178	3.24	3.11	3.03	2.94	3.11	3.29	3.56
179	3.29	3.18	3.08	3.05	3.18	3.33	3.47
180	3.38	3.38	3.38	3.38	3.38	3.38	3.38

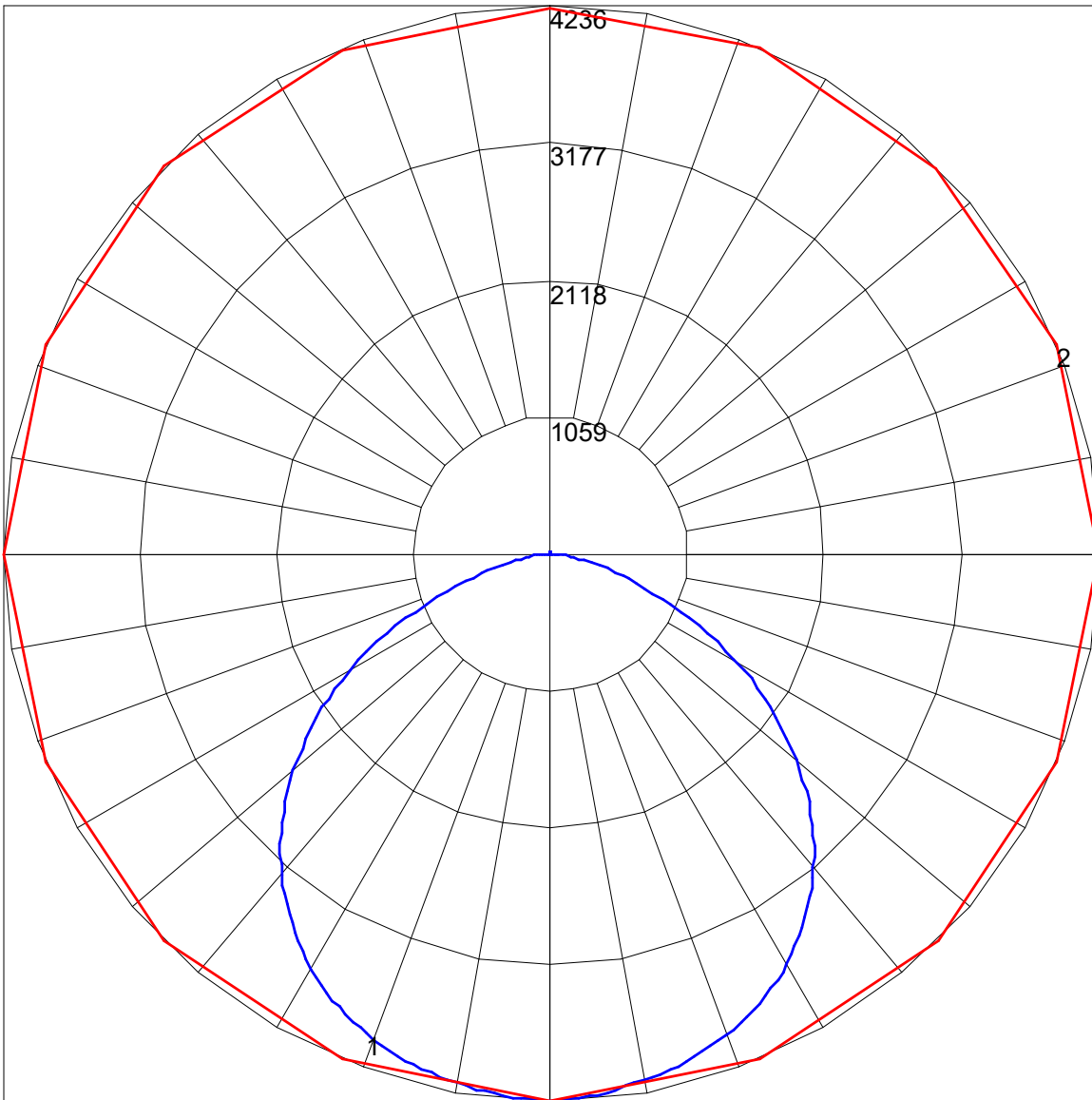
COEFFICIENTS OF UTILIZATION



FLUX DISTRIBUTION

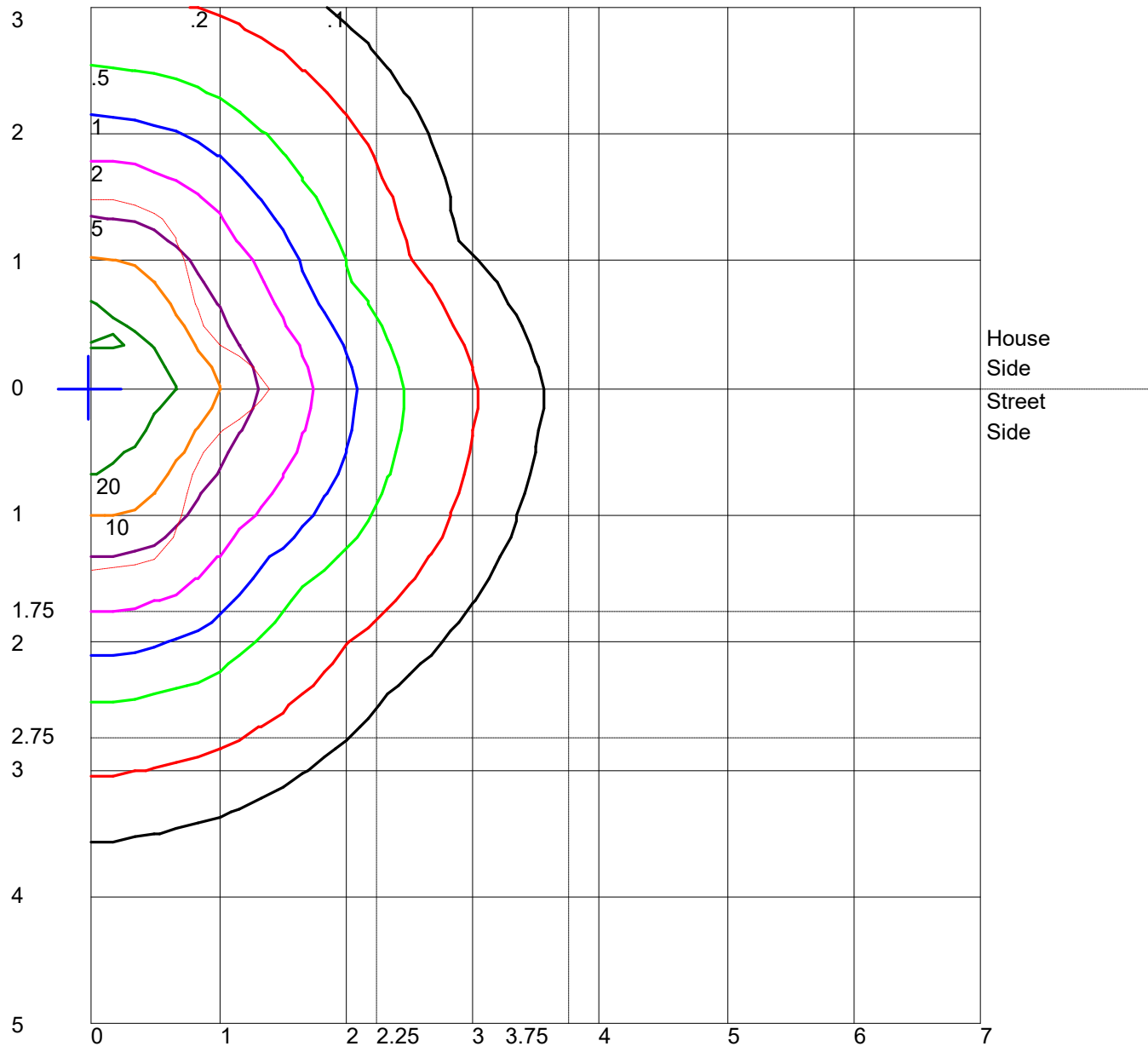
	Lumens	Percent Of Lamp
Downward Street Side	4863.0	49.4
Downward House Side	4944.3	50.3
Downward Total	9807.3	99.7
Upward Street Side	14.3	0.1
Upward House Side	14.3	0.1
Upward Total	28.6	0.3
Total Flux	9835.9	100.0

POLAR GRAPH



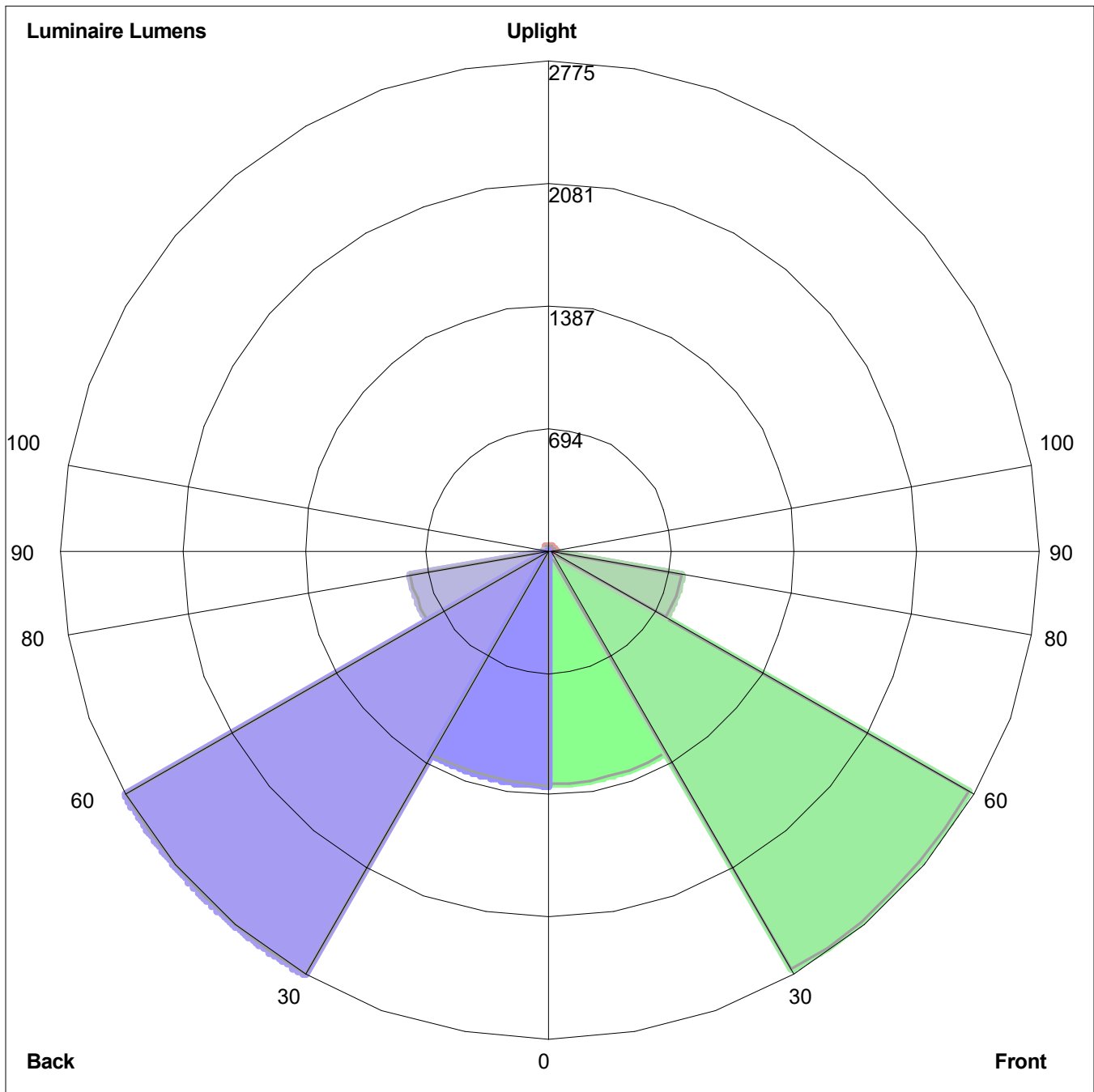
Maximum Candela = 4236.32 Located At Horizontal Angle = 270, Vertical Angle = 1
1 - Vertical Plane Through Horizontal Angles (270 - 90) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (1) (Through Max. Cd.)

ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE



Distance In Units Of Mounting Height
 Values Based On 10 Foot Mounting Height
 1/2 Maximum Candela Trace Shown As Dashed Curve
 (+) = Maximum Candela Point

LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:
 Front: Low=1320.8, Medium=2743.7, High=760.2, Very High=38.4
 Back: Low=1330.1, Medium=2774.6, High=797.9, Very High=41.8
 Uplight: Low=6.8, High=21.8

BUG Rating : B3-U2-G1