



IES ROAD REPORT

PHOTOMETRIC FILENAME : TLWP-LED-07L-40.IES

DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] 3761

[TESTLAB] TUV SUD America

[ISSUE DATE] 2/20/2020

[TEST DATE] 8/29/2019 11:48:03 AM

[MANUFAC] LSI INDUSTRIES, INC

[LUMCAT] TLWP-LED-07L-40

[OTHER] TEST PROCEDURE: IESNA

[ABSOLUTE] NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED

[SEARCH_SOURCETYPE] LED

[SEARCH_APPLICATION] Outdoor

CHARACTERISTICS

IES Classification	Type IV
Longitudinal Classification	Very Short
Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	7157
Downward Total Efficiency	N.A. (absolute)
Total Luminaire Efficiency	N.A. (absolute)
Luminaire Efficacy Rating (LER)	117
Total Luminaire Watts	61
Ballast Factor	1.00
Upward Waste Light Ratio	0.23
Maximum Candela	2279.08
Maximum Candela Angle	360H 52.5V
Maximum Candela (<90 Degrees Vertical)	2279.08
Maximum Candela Angle (<90 Degrees Vertical)	360H 52.5V
Maximum Candela At 90 Degrees Vertical	1797.76 (25.1% Luminaire Lumens)
Maximum Candela from 80 to <90 Degrees Vertical	2022.73 (28.3% Luminaire Lumens)
Cutoff Classification (deprecated)	N.A. (absolute)

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LUMINAIRE CLASSIFICATION SYSTEM (LCS)

	Lumens	% Lamp	% Luminaire
FL - Front-Low (0-30)	620.9	N.A.	8.7
FM - Front-Medium (30-60)	1864.9	N.A.	26.1
FH - Front-High (60-80)	1474.8	N.A.	20.6
FVH - Front-Very High (80-90)	650.9	N.A.	9.1
BL - Back-Low (0-30)	327.7	N.A.	4.6
BM - Back-Medium (30-60)	434.4	N.A.	6.1
BH - Back-High (60-80)	121.0	N.A.	1.7
BVH - Back-Very High (80-90)	26.0	N.A.	0.4
UL - Uplight-Low (90-100)	555.3	N.A.	7.8
UH - Uplight-High (100-180)	1080.9	N.A.	15.1
Total	7156.8	N.A.	100.0
BUG Rating	B1-U5-G4		

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CANDELA TABULATION

Vert. Angles	Horizontal Angles									
	0.0	22.5	45.0	67.5	90.0	112.5	135.0	157.5	180.0	202.5
0.0	1170.54	1170.54	1170.54	1170.54	1170.54	1170.54	1170.54	1170.54	1170.54	1170.54
2.5	1272.09	1241.04	1221.94	1195.17	1164.72	1132.58	1107.74	1090.05	1106.77	1090.05
5.0	1350.61	1312.18	1275.13	1221.57	1159.90	1097.18	1046.36	1014.99	1022.74	1014.99
7.5	1425.19	1380.83	1324.90	1245.02	1152.03	1059.90	990.32	950.05	952.25	950.05
10.0	1495.16	1445.49	1372.71	1265.28	1141.87	1021.88	937.47	885.35	881.72	885.35
12.5	1563.57	1505.99	1416.25	1282.96	1128.85	985.27	884.97	824.09	817.42	824.09
15.0	1637.62	1562.67	1454.45	1296.16	1112.63	946.42	833.01	763.85	752.71	763.85
17.5	1709.23	1624.41	1488.30	1304.55	1094.04	909.82	782.91	705.43	690.64	705.43
20.0	1779.44	1685.08	1520.89	1310.22	1072.17	870.17	732.00	648.27	629.59	648.27
22.5	1845.75	1745.92	1556.03	1313.49	1049.33	829.01	684.00	590.35	564.01	590.35
25.0	1904.52	1800.14	1589.77	1313.36	1028.18	787.89	635.48	532.89	502.94	532.89
27.5	1957.37	1847.55	1621.52	1310.08	1001.63	747.13	588.86	477.55	448.48	477.55
30.0	1995.76	1888.04	1648.29	1306.47	974.11	707.36	542.37	428.93	403.08	428.93
32.5	2037.64	1918.92	1671.07	1303.76	945.48	668.79	495.66	387.18	365.04	387.18
35.0	2080.53	1949.81	1689.10	1299.61	916.82	630.40	454.06	352.63	334.18	352.63
37.5	2106.08	1981.85	1702.72	1293.84	887.11	592.62	414.43	321.74	303.78	321.74
40.0	2137.58	2003.27	1711.93	1287.76	861.18	554.92	375.96	296.61	282.24	296.61
42.5	2184.89	2024.83	1719.62	1283.05	829.82	517.84	340.79	272.02	258.54	272.02
45.0	2213.58	2056.24	1726.18	1276.01	797.02	482.42	310.29	247.97	234.60	247.97
47.5	2226.31	2075.55	1729.07	1265.13	764.24	447.18	281.86	225.28	213.27	225.28
50.0	2250.08	2080.79	1731.40	1251.61	728.93	412.34	255.75	199.62	189.18	199.62
52.5	2279.08	2091.58	1730.48	1236.46	693.21	379.07	230.49	174.98	163.91	174.98
55.0	2273.64	2101.77	1721.69	1218.91	655.68	346.09	206.47	148.99	138.51	148.99
57.5	2242.33	2086.31	1708.27	1196.35	617.54	313.08	181.24	122.16	109.85	122.16
60.0	2210.06	2051.64	1688.44	1171.49	578.35	281.48	155.79	94.27	78.63	94.27
62.5	2187.31	2015.18	1657.34	1143.43	537.92	252.04	130.82	65.07	50.73	65.07
65.0	2170.50	1985.71	1618.32	1112.13	494.36	223.10	105.42	36.27	21.43	36.27
67.5	2156.62	1961.73	1574.29	1078.71	451.95	195.06	79.64	14.78	0.00	14.78
70.0	2144.86	1939.55	1532.40	1037.28	409.39	167.86	56.70	2.60	0.00	2.60
72.5	2125.98	1916.63	1490.54	990.29	367.25	143.57	43.17	1.75	0.00	1.75
75.0	2099.84	1887.90	1449.69	941.17	326.71	120.89	32.71	1.31	0.00	1.31
77.5	2063.81	1853.21	1407.96	890.37	286.39	102.74	28.61	0.95	0.00	0.95
80.0	2022.73	1813.00	1362.51	840.00	247.93	89.23	26.12	0.72	0.00	0.72
82.5	1977.36	1768.63	1316.23	791.58	212.94	79.36	23.75	0.44	0.00	0.44
85.0	1925.02	1718.59	1267.22	739.19	183.31	72.62	22.01	0.34	0.03	0.34
87.5	1867.61	1663.29	1215.62	688.85	160.48	68.06	20.29	0.18	0.09	0.18
90.0	1797.76	1601.19	1161.36	641.93	143.17	64.79	18.71	0.18	0.07	0.18
92.5	1721.33	1533.63	1104.24	595.04	130.89	61.05	17.25	0.15	0.28	0.15
95.0	1640.33	1460.28	1048.90	549.37	122.26	57.73	15.79	0.06	0.29	0.06
97.5	1554.71	1383.49	988.78	505.37	114.79	54.25	14.52	0.16	0.01	0.16
100.0	1465.88	1304.62	927.95	465.17	107.49	51.03	13.30	0.11	0.18	0.11
102.5	1376.34	1225.57	869.15	428.27	100.60	48.09	12.04	0.19	0.18	0.19
105.0	1289.28	1147.99	815.00	395.05	93.65	45.12	10.66	0.03	0.11	0.03
107.5	1201.31	1071.53	758.08	363.88	86.91	42.13	9.60	0.00	0.00	0.00
110.0	1113.62	999.46	702.28	335.23	80.41	39.47	8.40	0.01	0.00	0.01
112.5	1025.17	922.88	647.49	307.99	74.08	36.47	7.28	0.00	0.05	0.00
115.0	949.40	849.90	594.49	282.85	68.00	33.94	6.31	0.09	0.18	0.09
117.5	867.92	777.05	543.75	259.25	61.98	31.01	5.56	0.21	0.48	0.21
120.0	792.70	709.11	496.84	236.22	56.96	28.30	4.61	0.32	0.72	0.32
122.5	722.22	646.07	453.26	215.60	51.86	25.64	3.91	0.35	0.63	0.35
125.0	652.66	588.49	414.35	196.10	46.32	23.15	3.32	0.44	0.86	0.44
127.5	588.19	533.75	377.67	177.64	40.43	20.59	2.84	0.85	1.31	0.85
130.0	530.95	483.18	344.26	159.71	34.46	17.84	2.66	1.09	1.57	1.09

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CANDELA TABULATION - (Cont.)

132.5	478.59	436.90	312.39	143.70	28.56	15.47	2.42	1.42	1.94	1.42
135.0	432.69	395.79	283.08	130.43	23.43	13.37	2.19	1.89	2.14	1.89
137.5	390.99	357.81	257.72	118.43	19.22	10.88	2.10	1.79	2.22	1.79
140.0	349.75	321.98	235.47	106.19	15.80	8.90	2.02	2.11	2.19	2.11
142.5	313.83	293.78	218.81	93.09	12.90	7.03	1.88	2.48	2.77	2.48
145.0	291.96	270.41	201.98	74.94	10.89	5.43	2.11	2.54	2.94	2.54
147.5	268.25	251.87	189.23	62.16	8.82	4.24	2.29	2.78	2.98	2.78
150.0	258.75	238.97	173.39	53.40	7.02	3.09	2.35	2.96	2.95	2.96
152.5	243.10	221.80	153.40	41.69	5.58	2.41	2.42	2.86	3.01	2.86
155.0	213.02	195.49	129.58	25.38	4.70	2.04	2.45	2.95	2.96	2.95
157.5	180.10	163.37	101.32	7.87	4.01	2.23	2.74	3.25	2.91	3.25
160.0	145.81	131.18	67.98	3.82	2.85	2.39	2.63	3.19	2.93	3.19
162.5	109.82	97.98	33.22	2.47	2.19	2.46	2.55	3.07	3.06	3.07
165.0	67.31	57.24	10.91	1.84	2.10	2.56	2.82	2.85	2.91	2.85
167.5	18.60	16.42	1.91	2.16	2.29	2.52	2.58	2.92	2.95	2.92
170.0	1.81	1.90	2.01	2.36	2.52	2.57	2.93	2.96	2.91	2.96
172.5	1.81	2.05	2.22	2.32	2.71	2.76	2.82	2.95	2.63	2.95
175.0	2.28	2.22	2.39	2.57	2.74	2.83	2.83	3.03	2.68	3.03
177.5	2.34	2.45	2.63	2.57	2.77	2.66	2.63	2.78	2.58	2.78
180.0	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00

Vert. Angles **Horizontal Angles**

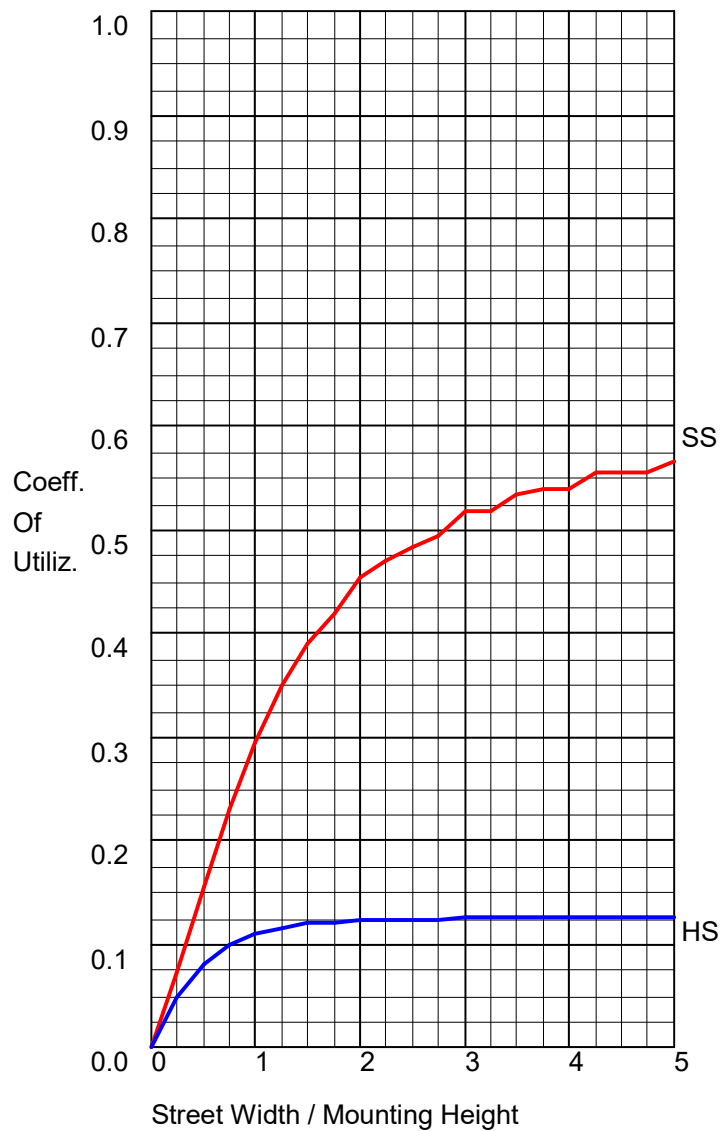
	<u>225.0</u>	<u>247.5</u>	<u>270.0</u>	<u>292.5</u>	<u>315.0</u>	<u>337.5</u>	<u>360.0</u>
0.0	1170.54	1170.54	1170.54	1170.54	1170.54	1170.54	1170.54
2.5	1107.74	1132.58	1164.72	1195.17	1221.94	1241.04	1272.09
5.0	1046.36	1097.18	1159.90	1221.57	1275.13	1312.18	1350.61
7.5	990.32	1059.90	1152.03	1245.02	1324.90	1380.83	1425.19
10.0	937.47	1021.88	1141.87	1265.28	1372.71	1445.49	1495.16
12.5	884.97	985.27	1128.85	1282.96	1416.25	1505.99	1563.57
15.0	833.01	946.42	1112.63	1296.16	1454.45	1562.67	1637.62
17.5	782.91	909.82	1094.04	1304.55	1488.30	1624.41	1709.23
20.0	732.00	870.17	1072.17	1310.22	1520.89	1685.08	1779.44
22.5	684.00	829.01	1049.33	1313.49	1556.03	1745.92	1845.75
25.0	635.48	787.89	1028.18	1313.36	1589.77	1800.14	1904.52
27.5	588.86	747.13	1001.63	1310.08	1621.52	1847.55	1957.37
30.0	542.37	707.36	974.11	1306.47	1648.29	1888.04	1995.76
32.5	495.66	668.79	945.48	1303.76	1671.07	1918.92	2037.64
35.0	454.06	630.40	916.82	1299.61	1689.10	1949.81	2080.53
37.5	414.43	592.62	887.11	1293.84	1702.72	1981.85	2106.08
40.0	375.96	554.92	861.18	1287.76	1711.93	2003.27	2137.58
42.5	340.79	517.84	829.82	1283.05	1719.62	2024.83	2184.89
45.0	310.29	482.42	797.02	1276.01	1726.18	2056.24	2213.58
47.5	281.86	447.18	764.24	1265.13	1729.07	2075.55	2226.31
50.0	255.75	412.34	728.93	1251.61	1731.40	2080.79	2250.08
52.5	230.49	379.07	693.21	1236.46	1730.48	2091.58	2279.08
55.0	206.47	346.09	655.68	1218.91	1721.69	2101.77	2273.64
57.5	181.24	313.08	617.54	1196.35	1708.27	2086.31	2242.33
60.0	155.79	281.48	578.35	1171.49	1688.44	2051.64	2210.06
62.5	130.82	252.04	537.92	1143.43	1657.34	2015.18	2187.31
65.0	105.42	223.10	494.36	1112.13	1618.32	1985.71	2170.50
67.5	79.64	195.06	451.95	1078.71	1574.29	1961.73	2156.62
70.0	56.70	167.86	409.39	1037.28	1532.40	1939.55	2144.86
72.5	43.17	143.57	367.25	990.29	1490.54	1916.63	2125.98
75.0	32.71	120.89	326.71	941.17	1449.69	1887.90	2099.84
77.5	28.61	102.74	286.39	890.37	1407.96	1853.21	2063.81

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CANDELA TABULATION - (Cont.)

80.0	26.12	89.23	247.93	840.00	1362.51	1813.00	2022.73
82.5	23.75	79.36	212.94	791.58	1316.23	1768.63	1977.36
85.0	22.01	72.62	183.31	739.19	1267.22	1718.59	1925.02
87.5	20.29	68.06	160.48	688.85	1215.62	1663.29	1867.61
90.0	18.71	64.79	143.17	641.93	1161.36	1601.19	1797.76
92.5	17.25	61.05	130.89	595.04	1104.24	1533.63	1721.33
95.0	15.79	57.73	122.26	549.37	1048.90	1460.28	1640.33
97.5	14.52	54.25	114.79	505.37	988.78	1383.49	1554.71
100.0	13.30	51.03	107.49	465.17	927.95	1304.62	1465.88
102.5	12.04	48.09	100.60	428.27	869.15	1225.57	1376.34
105.0	10.66	45.12	93.65	395.05	815.00	1147.99	1289.28
107.5	9.60	42.13	86.91	363.88	758.08	1071.53	1201.31
110.0	8.40	39.47	80.41	335.23	702.28	999.46	1113.62
112.5	7.28	36.47	74.08	307.99	647.49	922.88	1025.17
115.0	6.31	33.94	68.00	282.85	594.49	849.90	949.40
117.5	5.56	31.01	61.98	259.25	543.75	777.05	867.92
120.0	4.61	28.30	56.96	236.22	496.84	709.11	792.70
122.5	3.91	25.64	51.86	215.60	453.26	646.07	722.22
125.0	3.32	23.15	46.32	196.10	414.35	588.49	652.66
127.5	2.84	20.59	40.43	177.64	377.67	533.75	588.19
130.0	2.66	17.84	34.46	159.71	344.26	483.18	530.95
132.5	2.42	15.47	28.56	143.70	312.39	436.90	478.59
135.0	2.19	13.37	23.43	130.43	283.08	395.79	432.69
137.5	2.10	10.88	19.22	118.43	257.72	357.81	390.99
140.0	2.02	8.90	15.80	106.19	235.47	321.98	349.75
142.5	1.88	7.03	12.90	93.09	218.81	293.78	313.83
145.0	2.11	5.43	10.89	74.94	201.98	270.41	291.96
147.5	2.29	4.24	8.82	62.16	189.23	251.87	268.25
150.0	2.35	3.09	7.02	53.40	173.39	238.97	258.75
152.5	2.42	2.41	5.58	41.69	153.40	221.80	243.10
155.0	2.45	2.04	4.70	25.38	129.58	195.49	213.02
157.5	2.74	2.23	4.01	7.87	101.32	163.37	180.10
160.0	2.63	2.39	2.85	3.82	67.98	131.18	145.81
162.5	2.55	2.46	2.19	2.47	33.22	97.98	109.82
165.0	2.82	2.56	2.10	1.84	10.91	57.24	67.31
167.5	2.58	2.52	2.29	2.16	1.91	16.42	18.60
170.0	2.93	2.57	2.52	2.36	2.01	1.90	1.81
172.5	2.82	2.76	2.71	2.32	2.22	2.05	1.81
175.0	2.83	2.83	2.74	2.57	2.39	2.22	2.28
177.5	2.63	2.66	2.77	2.57	2.63	2.45	2.34
180.0	2.00	2.00	2.00	2.00	2.00	2.00	2.00

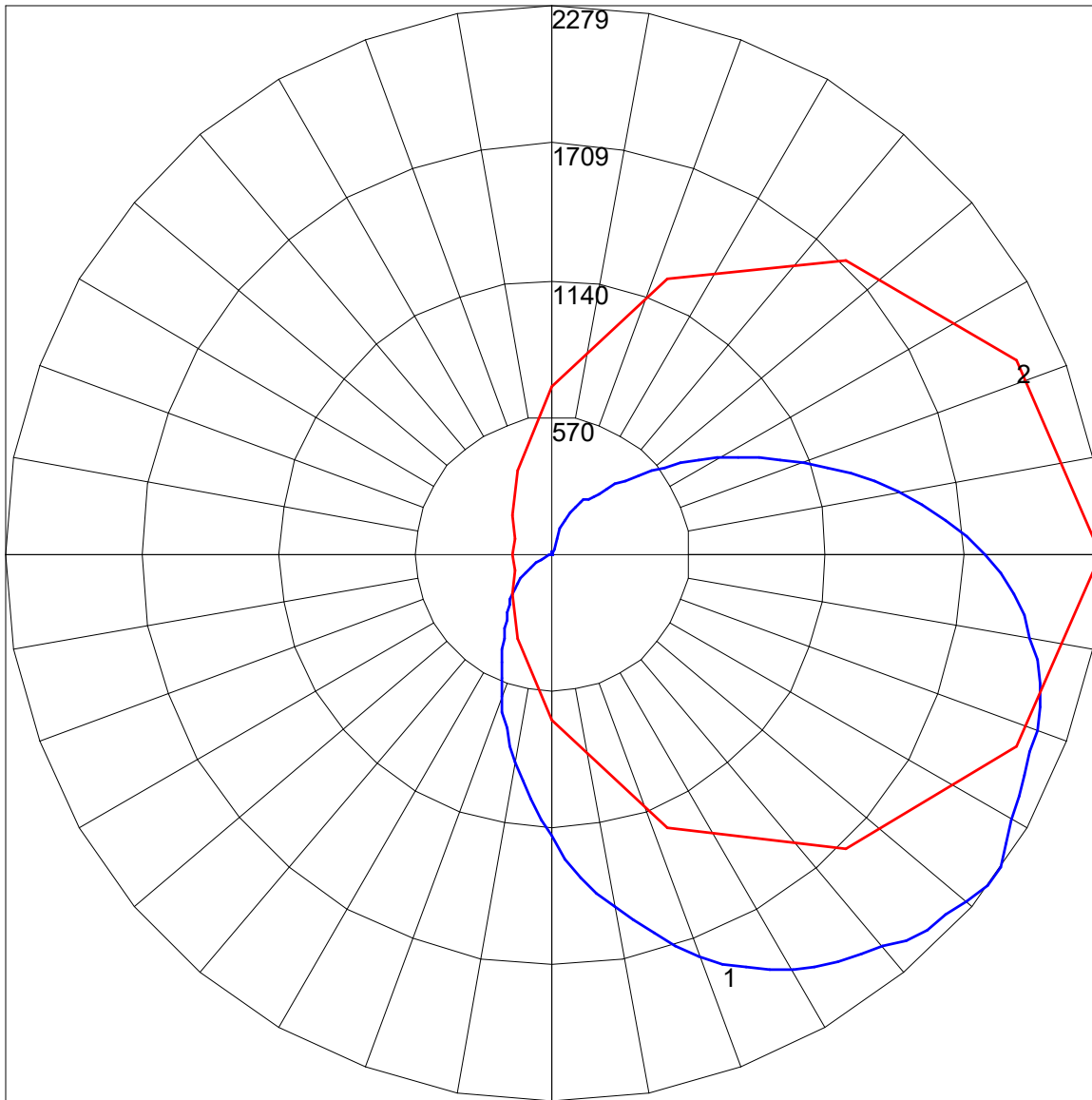
COEFFICIENTS OF UTILIZATION



FLUX DISTRIBUTION

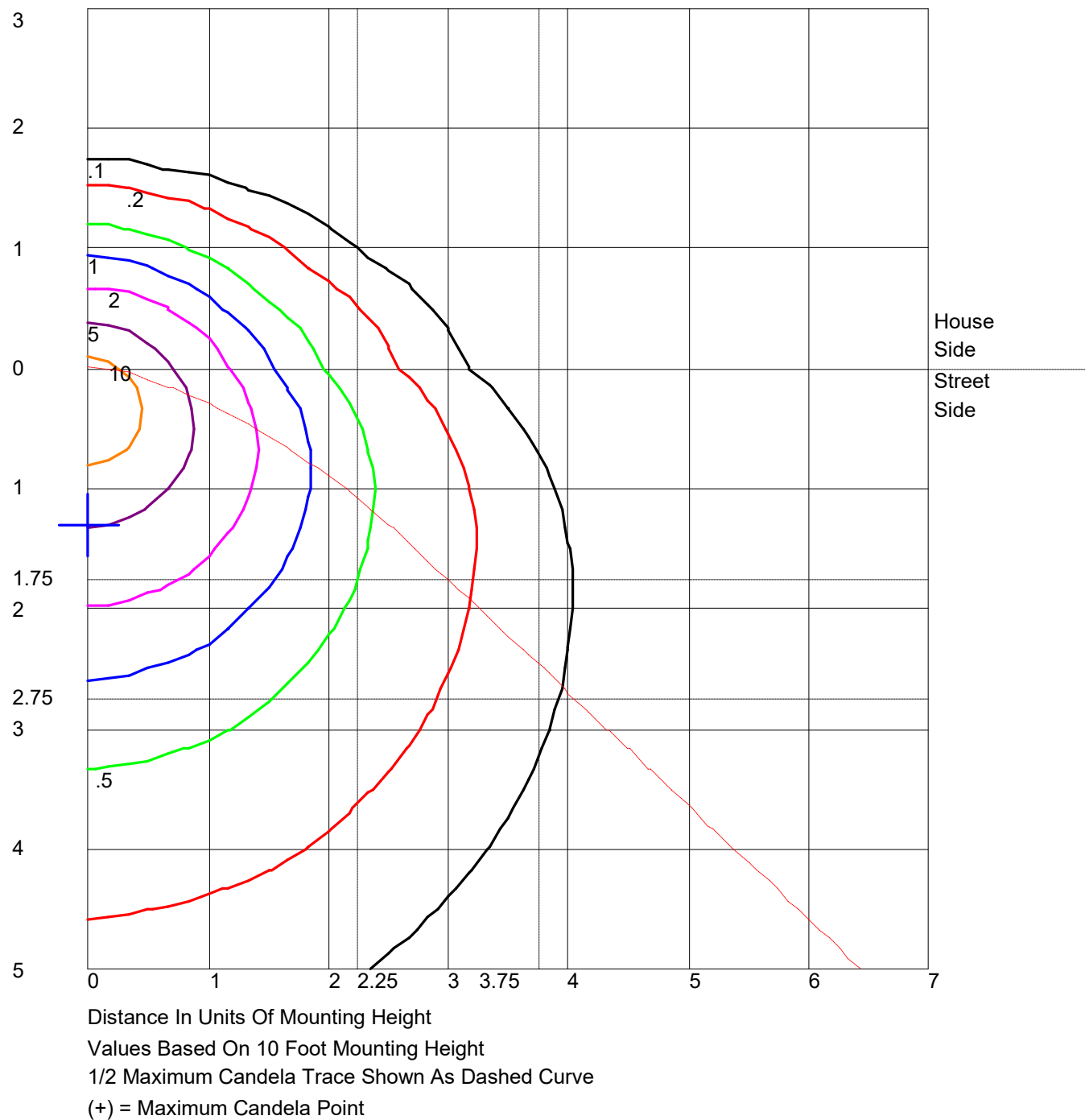
	Lumens	Percent Of Luminaire
Downward Street Side	4611.5	64.4
Downward House Side	909.0	12.7
Downward Total	5520.5	77.1
Upward Street Side	1583.6	22.1
Upward House Side	52.6	0.7
Upward Total	1636.2	22.9
Total Flux	7156.7	100.0

POLAR GRAPH

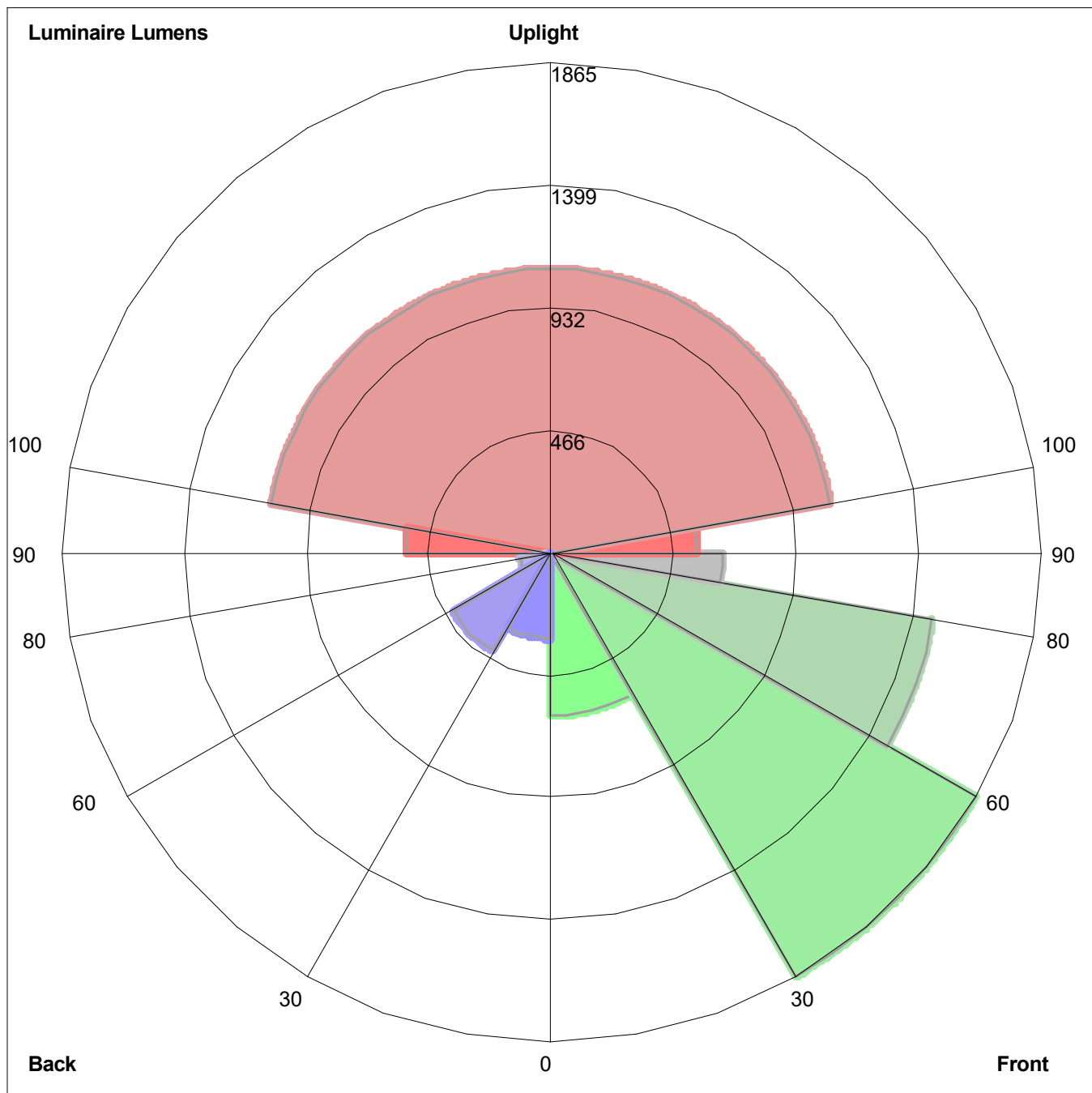


Maximum Candela = 2279.08 Located At Horizontal Angle = 360, Vertical Angle = 52.5
1 - Vertical Plane Through Horizontal Angles (360 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (52.5) (Through Max. Cd.)

ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE



LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:
Front: Low=620.9, Medium=1864.9, High=1474.8, Very High=650.9
Back: Low=327.7, Medium=434.4, High=121.0, Very High=26.0
Uplight: Low=555.3, High=1080.9

BUG Rating : B1-U5-G4