



IES ROAD REPORT

PHOTOMETRIC FILENAME : TLWP-LED-05L-30.IES

DESCRIPTIVE INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] 3755

[TESTLAB] TUV SUD America

[ISSUE DATE] 2/20/2020

[TEST DATE] 8/21/2019 10:36:42 AM

[MANUFAC] LSI INDUSTRIES, INC

[LUMCAT] TLWP-LED-05L-30

[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	4884
Downward Total Efficiency	N.A. (absolute)
Total Luminaire Efficiency	N.A. (absolute)
Luminaire Efficacy Rating (LER)	125
Total Luminaire Watts	39
Ballast Factor	1.00
Upward Waste Light Ratio	0.22
Maximum Candela	1569.17
Maximum Candela Angle	360H 52.5V
Maximum Candela (<90 Degrees Vertical)	1569.17
Maximum Candela Angle (<90 Degrees Vertical)	360H 52.5V
Maximum Candela At 90 Degrees Vertical	1213.23 (24.8% Luminaire Lumens)
Maximum Candela from 80 to <90 Degrees Vertical	1374.75 (28.1% Luminaire Lumens)
Cutoff Classification (deprecated)	N.A. (absolute)

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LUMINAIRE CLASSIFICATION SYSTEM (LCS)

	Lumens	% Lamp	% Luminaire
FL - Front-Low (0-30)	434.6	N.A.	8.9
FM - Front-Medium (30-60)	1285.1	N.A.	26.3
FH - Front-High (60-80)	1004.2	N.A.	20.6
FVH - Front-Very High (80-90)	436.4	N.A.	8.9
BL - Back-Low (0-30)	234.7	N.A.	4.8
BM - Back-Medium (30-60)	308.5	N.A.	6.3
BH - Back-High (60-80)	82.9	N.A.	1.7
BVH - Back-Very High (80-90)	16.2	N.A.	0.3
UL - Uplight-Low (90-100)	369.1	N.A.	7.6
UH - Uplight-High (100-180)	711.9	N.A.	14.6
Total	4883.6	N.A.	100.0
BUG Rating	B1-U4-G3		

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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	833.27	833.27	833.27	833.27	833.27	833.27	833.27	833.27	833.27	833.27
2.5	902.86	880.06	868.54	850.40	829.98	807.65	789.94	777.62	790.84	777.62
5.0	955.39	928.50	904.08	868.68	825.92	783.12	747.91	725.81	733.28	725.81
7.5	1006.04	974.10	938.26	884.32	820.65	757.66	708.68	679.18	680.67	679.18
10.0	1053.04	1017.19	968.76	897.38	813.38	730.40	669.62	633.19	627.71	633.19
12.5	1097.49	1056.38	996.71	908.52	804.02	702.63	631.86	591.47	585.53	591.47
15.0	1144.90	1093.94	1021.49	916.74	792.18	676.51	596.52	549.52	542.77	549.52
17.5	1191.52	1134.40	1042.60	921.94	778.64	647.93	560.95	508.60	499.60	508.60
20.0	1235.48	1174.39	1063.16	924.84	763.58	618.31	525.34	468.47	455.58	468.47
22.5	1276.75	1211.44	1087.31	925.21	746.53	589.26	491.74	428.26	409.66	428.26
25.0	1316.54	1245.87	1107.51	923.46	728.74	561.53	458.10	386.54	363.77	386.54
27.5	1349.84	1276.12	1125.60	919.96	709.53	533.19	424.90	345.84	324.46	345.84
30.0	1375.93	1301.59	1141.84	914.45	689.54	505.34	392.04	310.30	291.26	310.30
32.5	1406.54	1322.16	1154.69	908.18	668.62	477.14	359.44	279.83	264.87	279.83
35.0	1432.31	1344.54	1165.74	904.40	647.90	449.74	326.83	253.65	241.61	253.65
37.5	1449.39	1365.16	1172.12	901.12	626.42	422.92	295.48	231.38	219.12	231.38
40.0	1473.64	1378.20	1176.42	894.96	604.90	396.82	267.52	211.33	202.04	211.33
42.5	1508.35	1394.40	1181.22	887.78	582.51	370.37	241.98	194.76	184.09	194.76
45.0	1525.20	1416.54	1184.28	879.77	559.60	344.80	218.42	177.45	166.94	177.45
47.5	1530.89	1428.98	1185.28	870.88	536.12	318.85	197.96	159.02	151.89	159.02
50.0	1545.59	1430.96	1185.15	860.79	511.20	293.83	179.88	141.98	134.88	141.98
52.5	1569.17	1437.89	1184.02	849.42	485.05	268.67	162.56	123.98	116.69	123.98
55.0	1568.61	1445.89	1177.08	835.21	458.42	244.84	145.80	105.41	98.04	105.41
57.5	1546.59	1437.75	1166.32	818.84	431.18	221.27	128.87	86.07	76.87	86.07
60.0	1522.76	1413.82	1151.07	800.42	402.16	198.38	110.88	66.09	55.11	66.09
62.5	1503.45	1386.30	1129.92	780.52	372.92	176.50	92.62	45.85	35.99	45.85
65.0	1487.54	1362.95	1101.43	758.50	343.49	155.66	74.57	24.12	15.78	24.12
67.5	1473.91	1342.64	1070.23	732.12	313.37	136.48	56.84	6.10	0.00	6.10
70.0	1461.76	1323.94	1038.90	701.74	282.59	117.02	38.98	0.00	0.00	0.00
72.5	1448.38	1306.42	1007.86	668.56	249.70	99.66	25.41	0.00	0.00	0.00
75.0	1430.98	1286.06	978.50	634.36	216.62	82.94	20.38	0.00	0.00	0.00
77.5	1406.74	1262.04	949.46	598.99	183.50	68.84	18.33	0.00	0.00	0.00
80.0	1374.75	1232.55	918.39	562.17	152.83	59.19	16.74	0.00	0.00	0.00
82.5	1338.74	1198.51	884.40	525.12	126.38	53.12	15.32	0.00	0.00	0.00
85.0	1299.23	1161.60	848.94	488.60	104.79	49.22	13.92	0.00	0.00	0.00
87.5	1256.91	1122.47	813.26	453.07	89.34	46.72	13.01	0.00	0.00	0.00
90.0	1213.23	1080.12	775.40	419.68	80.41	44.30	11.80	0.00	0.00	0.00
92.5	1160.38	1033.21	736.28	387.58	74.94	41.80	10.94	0.00	0.00	0.00
95.0	1102.13	981.51	694.56	357.59	71.34	39.36	10.05	0.00	0.00	0.00
97.5	1041.07	928.97	653.28	331.02	67.67	37.06	9.11	0.00	0.00	0.00
100.0	979.99	875.00	611.79	305.99	64.60	34.91	8.15	0.00	0.00	0.00
102.5	923.59	819.50	571.96	281.74	61.30	32.58	7.32	0.00	0.00	0.00
105.0	863.92	767.40	532.90	258.16	58.15	30.49	6.40	0.00	0.00	0.00
107.5	802.55	713.54	495.70	236.94	55.11	28.40	5.41	0.00	0.00	0.00
110.0	740.85	661.12	458.34	217.68	51.76	26.57	4.72	0.00	0.00	0.00
112.5	681.47	609.29	421.74	199.94	48.73	24.60	3.87	0.00	0.00	0.00
115.0	624.46	558.66	387.74	183.98	45.38	22.60	3.28	0.00	0.00	0.00
117.5	570.03	510.75	354.68	169.30	41.80	20.45	2.32	0.00	0.00	0.00
120.0	518.83	465.95	325.00	155.48	38.19	18.83	2.04	0.00	0.00	0.00
122.5	471.40	424.39	296.86	142.68	33.69	17.16	1.60	0.00	0.04	0.00
125.0	427.22	385.76	271.32	130.01	28.26	15.24	1.02	0.01	0.00	0.01
127.5	385.60	351.24	247.68	117.65	22.16	13.39	0.64	0.00	0.00	0.00
130.0	348.76	318.17	226.83	106.26	16.62	11.95	0.34	0.06	0.07	0.06

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CANDELA TABULATION - (Cont.)

132.5	314.49	288.52	207.20	95.96	14.26	10.46	0.34	0.20	0.29	0.20
135.0	285.54	262.05	188.16	87.27	12.63	8.89	0.22	0.56	0.68	0.56
137.5	257.92	237.96	170.77	79.91	10.84	7.50	0.24	0.40	0.89	0.40
140.0	231.43	214.19	158.04	72.96	9.36	5.94	0.34	0.63	0.82	0.63
142.5	207.88	195.52	146.05	65.08	7.98	4.72	0.51	0.89	0.95	0.89
145.0	193.84	181.64	136.88	57.36	6.44	3.66	0.64	0.98	1.03	0.98
147.5	179.91	169.22	128.53	46.74	5.30	2.64	0.74	1.17	1.34	1.17
150.0	174.93	162.35	118.34	29.24	3.99	1.82	0.82	1.10	1.18	1.10
152.5	163.70	150.41	104.65	13.30	3.06	1.06	0.80	1.12	1.24	1.12
155.0	144.10	132.61	88.31	5.72	2.35	0.58	0.94	1.14	1.15	1.14
157.5	120.94	111.29	69.85	3.69	1.86	0.63	1.03	1.36	1.27	1.36
160.0	96.98	89.76	48.44	1.84	1.36	0.86	1.06	1.36	1.38	1.36
162.5	74.72	66.74	20.64	0.73	0.56	0.84	1.27	1.18	1.43	1.18
165.0	47.08	38.24	2.58	0.74	0.69	0.84	1.24	1.12	1.24	1.12
167.5	9.18	8.16	0.50	0.77	1.08	0.97	1.14	1.18	1.44	1.18
170.0	0.39	0.71	0.48	0.92	0.92	1.00	1.14	1.25	1.19	1.25
172.5	0.62	0.71	0.72	0.80	0.94	1.27	1.24	1.02	1.27	1.02
175.0	0.69	0.88	0.92	1.02	1.16	1.22	1.38	1.16	1.25	1.16
177.5	0.73	1.09	1.00	1.16	1.04	1.20	1.08	1.30	1.23	1.30
180.0	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Vert. Angles **Horizontal Angles**

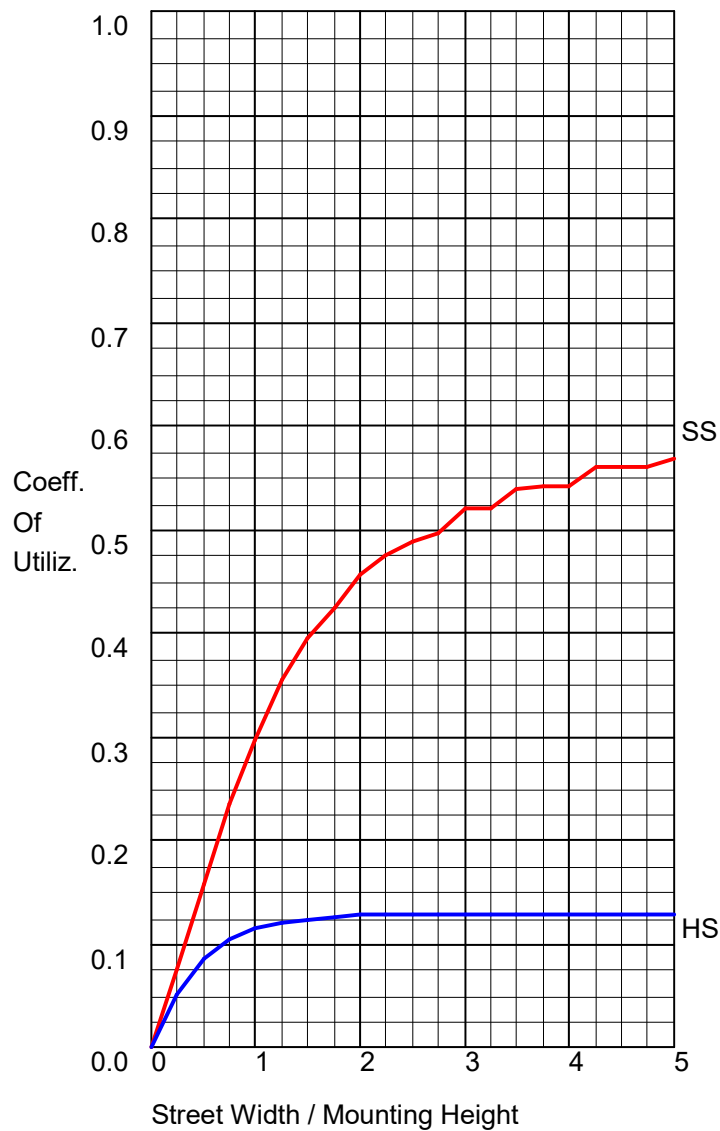
	<u>225.0</u>	<u>247.5</u>	<u>270.0</u>	<u>292.5</u>	<u>315.0</u>	<u>337.5</u>	<u>360.0</u>
0.0	833.27	833.27	833.27	833.27	833.27	833.27	833.27
2.5	789.94	807.65	829.98	850.40	868.54	880.06	902.86
5.0	747.91	783.12	825.92	868.68	904.08	928.50	955.39
7.5	708.68	757.66	820.65	884.32	938.26	974.10	1006.04
10.0	669.62	730.40	813.38	897.38	968.76	1017.19	1053.04
12.5	631.86	702.63	804.02	908.52	996.71	1056.38	1097.49
15.0	596.52	676.51	792.18	916.74	1021.49	1093.94	1144.90
17.5	560.95	647.93	778.64	921.94	1042.60	1134.40	1191.52
20.0	525.34	618.31	763.58	924.84	1063.16	1174.39	1235.48
22.5	491.74	589.26	746.53	925.21	1087.31	1211.44	1276.75
25.0	458.10	561.53	728.74	923.46	1107.51	1245.87	1316.54
27.5	424.90	533.19	709.53	919.96	1125.60	1276.12	1349.84
30.0	392.04	505.34	689.54	914.45	1141.84	1301.59	1375.93
32.5	359.44	477.14	668.62	908.18	1154.69	1322.16	1406.54
35.0	326.83	449.74	647.90	904.40	1165.74	1344.54	1432.31
37.5	295.48	422.92	626.42	901.12	1172.12	1365.16	1449.39
40.0	267.52	396.82	604.90	894.96	1176.42	1378.20	1473.64
42.5	241.98	370.37	582.51	887.78	1181.22	1394.40	1508.35
45.0	218.42	344.80	559.60	879.77	1184.28	1416.54	1525.20
47.5	197.96	318.85	536.12	870.88	1185.28	1428.98	1530.89
50.0	179.88	293.83	511.20	860.79	1185.15	1430.96	1545.59
52.5	162.56	268.67	485.05	849.42	1184.02	1437.89	1569.17
55.0	145.80	244.84	458.42	835.21	1177.08	1445.89	1568.61
57.5	128.87	221.27	431.18	818.84	1166.32	1437.75	1546.59
60.0	110.88	198.38	402.16	800.42	1151.07	1413.82	1522.76
62.5	92.62	176.50	372.92	780.52	1129.92	1386.30	1503.45
65.0	74.57	155.66	343.49	758.50	1101.43	1362.95	1487.54
67.5	56.84	136.48	313.37	732.12	1070.23	1342.64	1473.91
70.0	38.98	117.02	282.59	701.74	1038.90	1323.94	1461.76
72.5	25.41	99.66	249.70	668.56	1007.86	1306.42	1448.38
75.0	20.38	82.94	216.62	634.36	978.50	1286.06	1430.98
77.5	18.33	68.84	183.50	598.99	949.46	1262.04	1406.74

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CANDELA TABULATION - (Cont.)

80.0	16.74	59.19	152.83	562.17	918.39	1232.55	1374.75
82.5	15.32	53.12	126.38	525.12	884.40	1198.51	1338.74
85.0	13.92	49.22	104.79	488.60	848.94	1161.60	1299.23
87.5	13.01	46.72	89.34	453.07	813.26	1122.47	1256.91
90.0	11.80	44.30	80.41	419.68	775.40	1080.12	1213.23
92.5	10.94	41.80	74.94	387.58	736.28	1033.21	1160.38
95.0	10.05	39.36	71.34	357.59	694.56	981.51	1102.13
97.5	9.11	37.06	67.67	331.02	653.28	928.97	1041.07
100.0	8.15	34.91	64.60	305.99	611.79	875.00	979.99
102.5	7.32	32.58	61.30	281.74	571.96	819.50	923.59
105.0	6.40	30.49	58.15	258.16	532.90	767.40	863.92
107.5	5.41	28.40	55.11	236.94	495.70	713.54	802.55
110.0	4.72	26.57	51.76	217.68	458.34	661.12	740.85
112.5	3.87	24.60	48.73	199.94	421.74	609.29	681.47
115.0	3.28	22.60	45.38	183.98	387.74	558.66	624.46
117.5	2.32	20.45	41.80	169.30	354.68	510.75	570.03
120.0	2.04	18.83	38.19	155.48	325.00	465.95	518.83
122.5	1.60	17.16	33.69	142.68	296.86	424.39	471.40
125.0	1.02	15.24	28.26	130.01	271.32	385.76	427.22
127.5	0.64	13.39	22.16	117.65	247.68	351.24	385.60
130.0	0.34	11.95	16.62	106.26	226.83	318.17	348.76
132.5	0.34	10.46	14.26	95.96	207.20	288.52	314.49
135.0	0.22	8.89	12.63	87.27	188.16	262.05	285.54
137.5	0.24	7.50	10.84	79.91	170.77	237.96	257.92
140.0	0.34	5.94	9.36	72.96	158.04	214.19	231.43
142.5	0.51	4.72	7.98	65.08	146.05	195.52	207.88
145.0	0.64	3.66	6.44	57.36	136.88	181.64	193.84
147.5	0.74	2.64	5.30	46.74	128.53	169.22	179.91
150.0	0.82	1.82	3.99	29.24	118.34	162.35	174.93
152.5	0.80	1.06	3.06	13.30	104.65	150.41	163.70
155.0	0.94	0.58	2.35	5.72	88.31	132.61	144.10
157.5	1.03	0.63	1.86	3.69	69.85	111.29	120.94
160.0	1.06	0.86	1.36	1.84	48.44	89.76	96.98
162.5	1.27	0.84	0.56	0.73	20.64	66.74	74.72
165.0	1.24	0.84	0.69	0.74	2.58	38.24	47.08
167.5	1.14	0.97	1.08	0.77	0.50	8.16	9.18
170.0	1.14	1.00	0.92	0.92	0.48	0.71	0.39
172.5	1.24	1.27	0.94	0.80	0.72	0.71	0.62
175.0	1.38	1.22	1.16	1.02	0.92	0.88	0.69
177.5	1.08	1.20	1.04	1.16	1.00	1.09	0.73
180.0	1.00	1.00	1.00	1.00	1.00	1.00	1.00

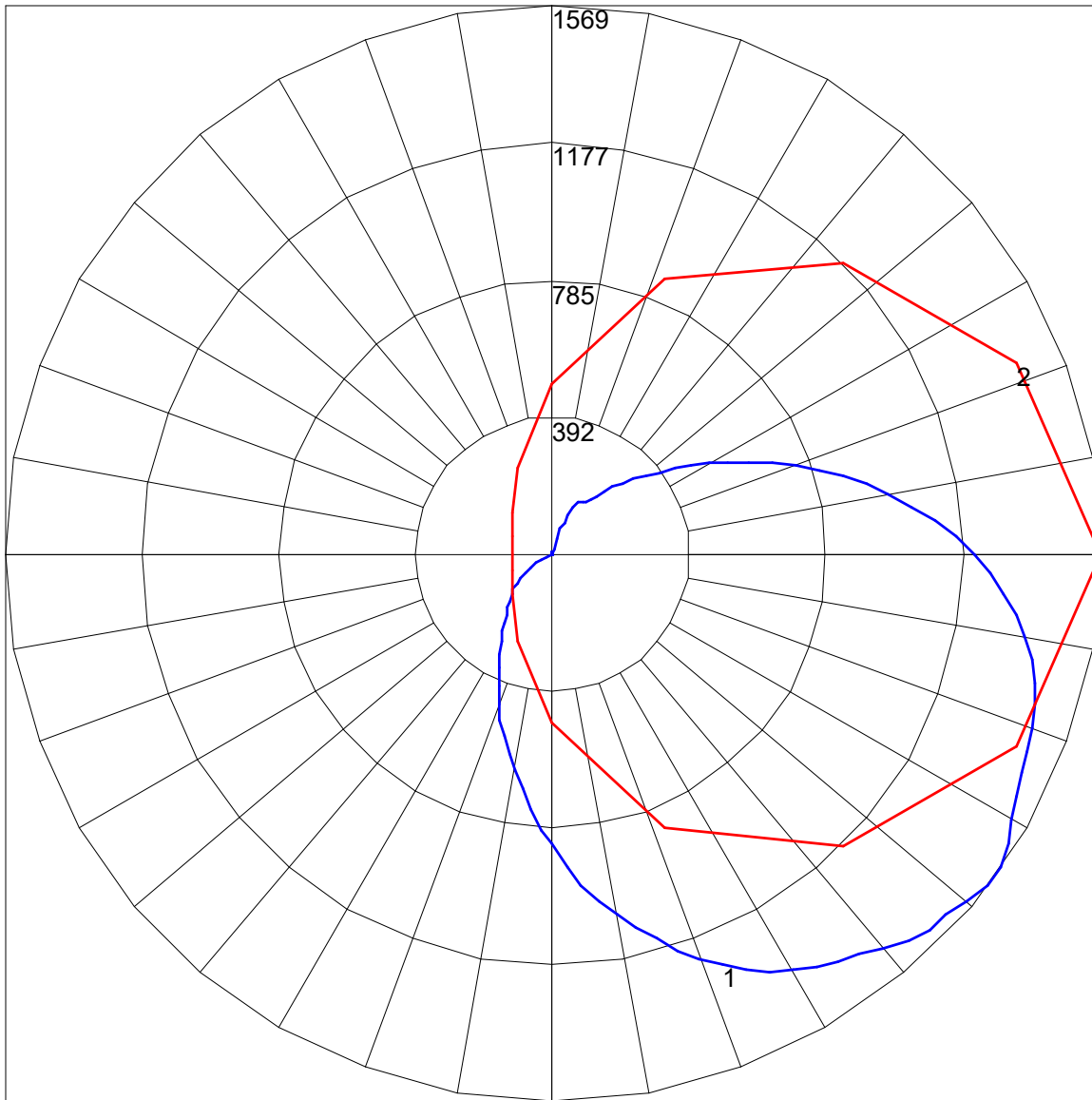
COEFFICIENTS OF UTILIZATION



FLUX DISTRIBUTION

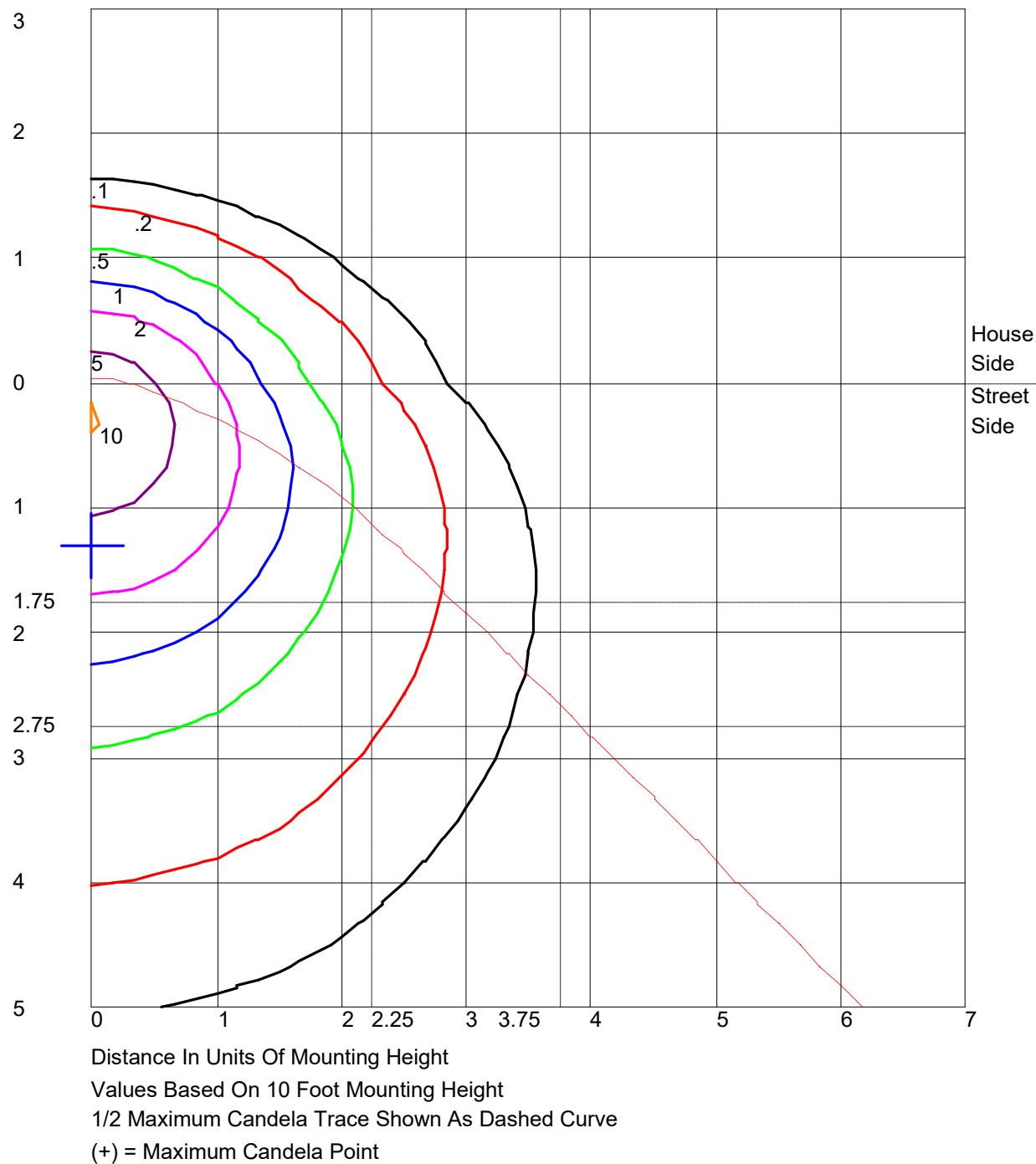
	Lumens	Percent Of Luminaire
Downward Street Side	3160.2	64.7
Downward House Side	642.2	13.2
Downward Total	3802.4	77.9
Upward Street Side	1048.4	21.5
Upward House Side	32.6	0.7
Upward Total	1081.0	22.1
Total Flux	4883.4	100.0

POLAR GRAPH

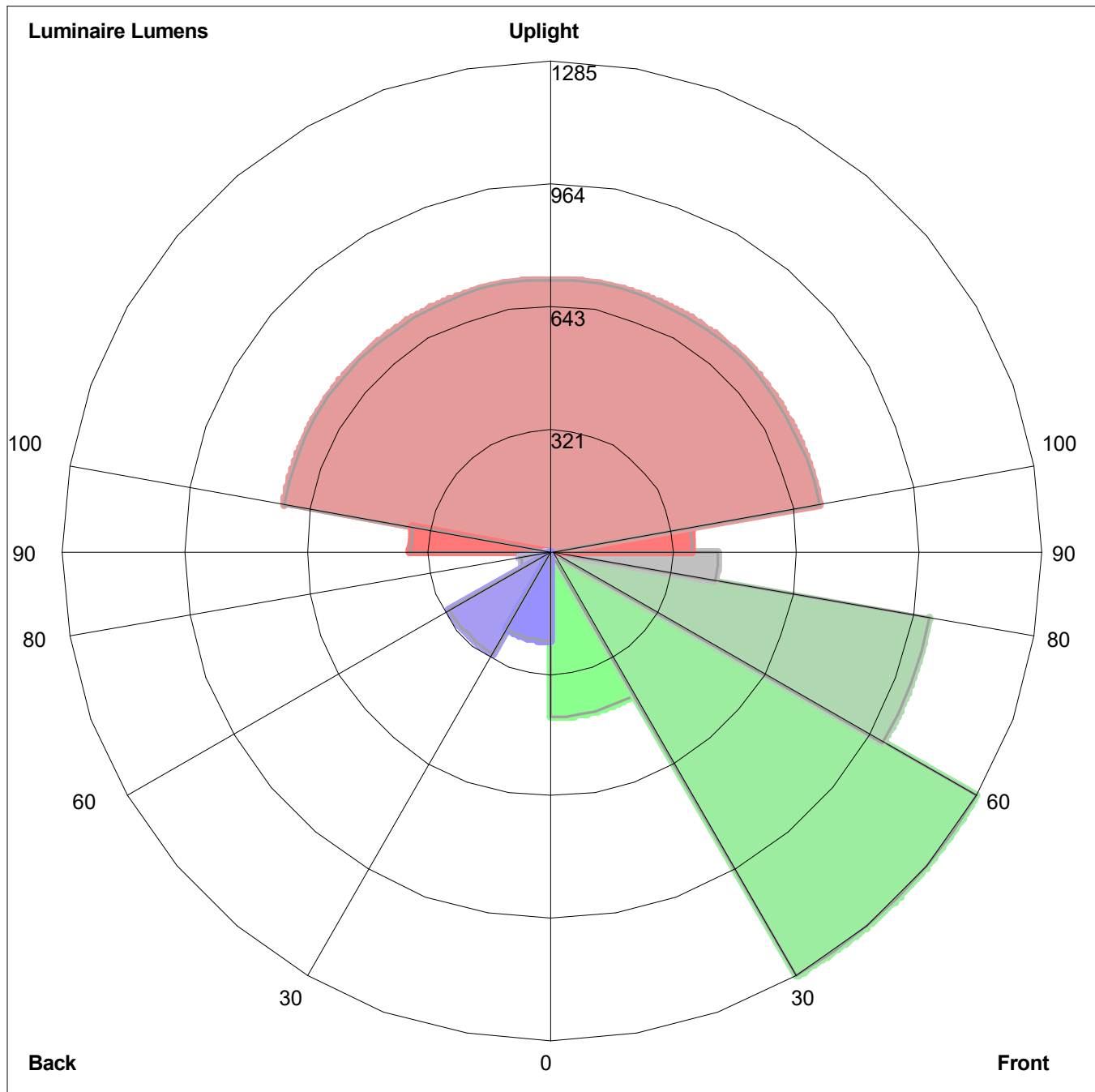


Maximum Candela = 1569.17 Located At Horizontal Angle = 360, Vertical Angle = 52.5
1 - Vertical Plane Through Horizontal Angles (360 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (52.5) (Through Max. Cd.)

ISOFOOTCANDLE LINES OF HORIZONTAL ILLUMINANCE



LUMINAIRE CLASSIFICATION SYSTEM (LCS) GRAPH



Luminaire Lumens:
Front: Low=434.6, Medium=1285.1, High=1004.2, Very High=436.4
Back: Low=234.7, Medium=308.5, High=82.9, Very High=16.2
Uplight: Low=369.1, High=711.9

BUG Rating : B1-U4-G3