

Scaled data based on original data using

LM-41-14 Approved Method for Photometric Testing Of Indoor Fluorescent Luminaires

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: McGRAW-EDISON

Report Number: P150686

Luminaire Tested: **TLM-F05-LED-E1-SL3-HSS-7050**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P150686
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33727)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: TLM-F05-LED-E1-SL3-HSS-7050
Description: TALON MEDIUM LED SITE LUMINAIRE
(5) LIGHTBARS WITH AccuLED OPTICS - TYPE 3 W/ SPILL LIGHT CONTROL AND
HOUSE SIDE SHIELD
Light Source: (35) 5000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7343.4 lumens
Efficiency: N/A
Efficacy: 55.1 lumens/watt
Spacing Criteria (0/90/45): 4.23 / 3.52 / 4.34
Luminous Opening: Rectangular (W 0.83' x L: 1' x H: 0')
CIE Type: Direct

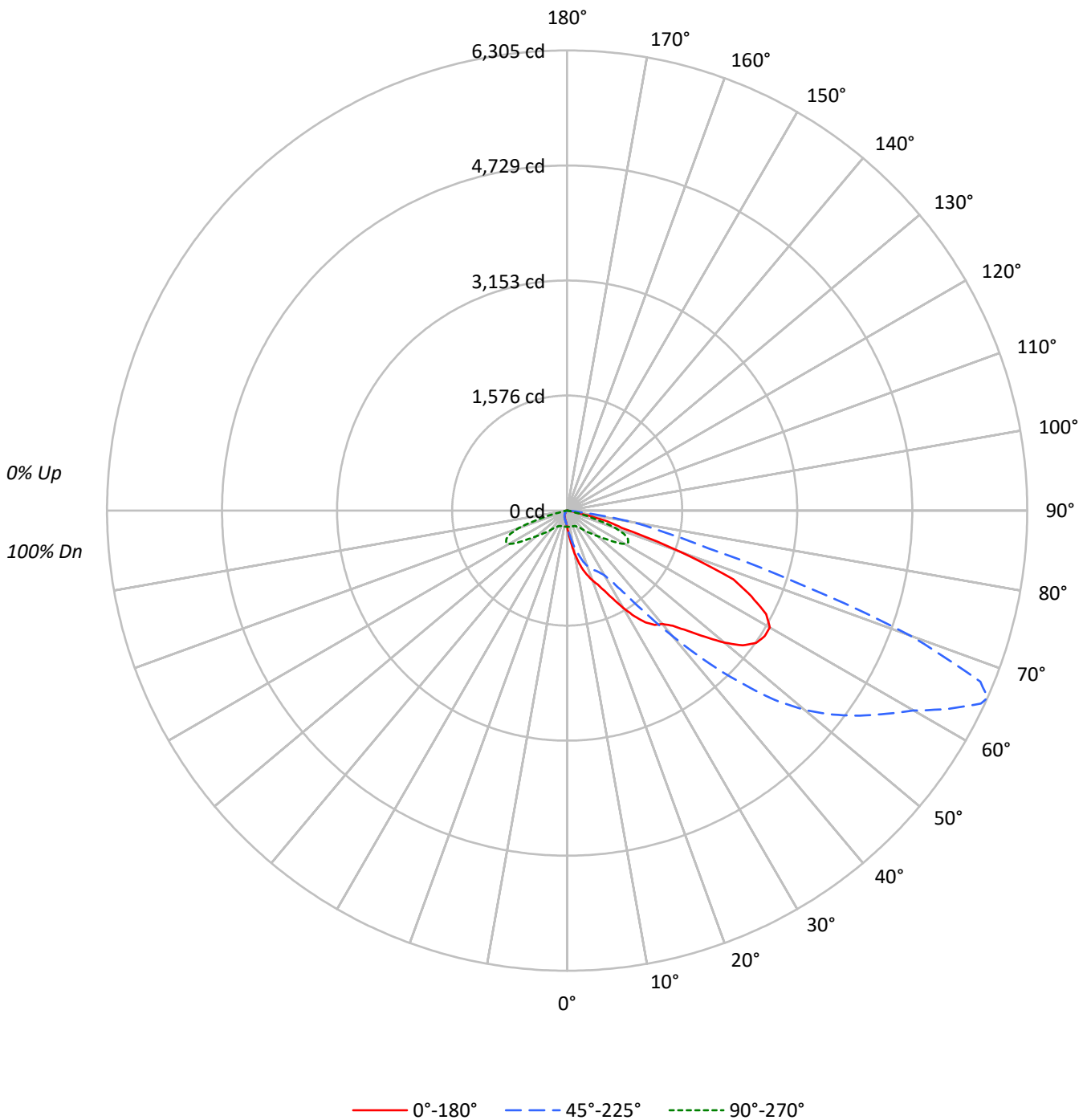
Input Watts (W): 133.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	105	98	93	87	102	96	91	86	92	87	83	88	84	81	84	81	78	76
2	91	80	71	63	88	78	69	62	74	67	61	71	64	59	67	62	58	55
3	80	66	55	46	77	64	54	46	61	52	45	58	50	44	55	48	43	40
4	71	55	43	35	68	53	43	34	51	41	34	48	40	33	45	38	32	30
5	63	47	35	27	61	45	34	26	43	33	26	41	32	26	39	31	25	23
6	57	40	29	21	55	39	29	21	37	28	21	35	27	20	33	26	20	17
7	52	35	24	17	50	34	24	17	33	23	17	31	23	16	29	22	16	14
8	48	31	21	14	46	30	21	14	29	20	14	28	19	13	26	19	13	11
9	44	28	18	12	42	27	18	12	26	17	11	25	17	11	24	16	11	9
10	41	25	16	10	39	25	16	10	24	15	10	23	15	10	22	15	10	7

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	2875	2875	2875
5°	4815	2895	2114
10°	7901	2919	1766
15°	11278	3042	1497
20°	14029	3147	1286
25°	17353	3333	1090
30°	23066	3732	930
35°	29593	4415	782
40°	34321	5808	621
45°	42619	7845	466
50°	56768	10938	456
55°	71502	15992	511
60°	83160	23729	550
65°	85477	28181	608
70°	62473	27062	698
75°	28155	11778	922
80°	5064	2950	1374
85°	417	2626	2515



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	24.8	0.3
10°-20°	105.2	1.4
20°-30°	226.9	3.1
30°-40°	484.6	6.6
40°-50°	1071.7	14.6
50°-60°	1816.2	24.7
60°-70°	2423.5	33.0
70°-80°	1067.5	14.5
80°-90°	123.0	1.7
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	356.9	4.9
0°-40°	841.5	11.5
0°-60°	3729.4	50.8
0°-90°	7343.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7343.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	222	222	222	222	222	
5°	370	313	222	168	162	42
15°	840	641	227	120	112	240
25°	1213	905	233	88	76	581
35°	1869	1400	279	59	49	1159
45°	2324	3296	428	35	25	1837
55°	3162	4899	707	17	23	2787
65°	2786	6254	918	13	20	2659
75°	562	2002	235	10	18	620
85°	3	42	18	8	17	17
90°	0	0	0	0	0	



TEST NUMBER: P150686

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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	66°	67°	68°
0°	221.7	221.7	221.7	221.7	221.7	221.7	221.7	221.7	221.7	221.7	221.7
2.5°	279.5	278.1	272.5	272.5	264.0	258.4	251.3	244.2	244.2	242.8	241.4
5°	369.9	361.4	360.0	344.5	331.8	313.4	296.5	273.9	271.1	268.2	266.8
7.5°	470.1	468.7	456.0	437.7	412.2	378.4	344.5	307.8	302.1	299.3	293.7
10°	600.0	593.0	576.0	545.0	506.8	461.7	406.6	348.7	341.7	336.0	333.2
12.5°	724.2	711.5	701.7	662.1	614.1	547.8	481.4	398.1	392.5	385.4	374.1
15°	840.0	828.7	811.8	777.9	724.2	641.0	563.3	461.7	447.5	437.7	429.2
17.5°	930.4	923.3	903.5	865.4	807.5	734.1	641.0	526.6	515.3	502.6	487.1
20°	1016.5	1006.6	975.5	923.3	861.2	804.7	732.7	611.3	595.8	580.2	563.3
22.5°	1098.4	1088.5	1037.7	951.5	885.2	861.2	835.8	707.3	683.3	670.6	653.7
25°	1212.7	1191.6	1112.5	975.5	886.6	905.0	948.7	831.5	809.0	790.6	763.8
27.5°	1366.6	1338.4	1214.1	1010.8	892.3	953.0	1078.6	982.6	958.6	937.4	907.8
30°	1540.3	1521.9	1373.7	1095.6	933.2	1023.5	1224.0	1174.6	1146.4	1121.0	1085.7
32.5°	1715.3	1689.9	1543.1	1256.5	1043.3	1160.5	1406.1	1397.7	1361.0	1337.0	1298.8
35°	1869.2	1856.5	1747.8	1520.5	1294.6	1400.5	1649.0	1658.9	1626.4	1601.0	1558.6
37.5°	1973.7	1973.7	1952.5	1804.3	1694.2	1773.2	2006.2	2007.6	1975.1	1917.2	1896.0
40°	2027.3	2042.9	2119.1	2147.3	2141.7	2243.3	2474.9	2449.5	2422.6	2393.0	2322.4
42.5°	2137.5	2151.6	2313.9	2508.8	2635.8	2769.9	2929.5	2921.0	2888.5	2834.9	2769.9
45°	2323.8	2342.2	2535.6	2844.8	3105.9	3296.5	3398.2	3358.7	3326.2	3275.4	3241.5
47.5°	2561.0	2596.3	2815.1	3197.7	3512.5	3827.4	3933.3	3828.8	3800.5	3761.0	3706.0
50°	2813.7	2847.6	3080.5	3518.2	3874.0	4249.5	4426.0	4249.5	4208.6	4195.8	4133.7
52.5°	3032.5	3060.8	3285.2	3765.3	4150.7	4591.1	4848.1	4615.2	4585.5	4543.1	4498.0
55°	3162.4	3185.0	3395.4	3883.8	4338.4	4898.9	5256.1	5051.4	5007.6	4990.7	4925.7
57.5°	3206.2	3228.8	3418.0	3899.4	4440.1	5179.9	5751.6	5758.7	5706.5	5645.8	5626.0
60°	3206.2	3231.6	3391.1	3861.3	4538.9	5479.2	6412.4	7001.1	6888.1	6876.8	6804.8
62.5°	3073.5	3097.5	3258.4	3744.1	4671.6	5882.9	7332.9	8371.9	8339.5	8266.0	8147.5
65°	2785.5	2799.6	2957.7	3444.8	4620.8	6254.2	8130.5	9283.9	9231.7	9087.7	8935.2
66°	2655.6	2666.9	2815.1	3273.9	4454.2	6305.1	8271.7	9398.3	9312.2	9190.8	9018.5
67.5°	2467.8	2487.6	2592.1	2956.3	4054.7	6128.6	8182.8	9317.8	9243.0	9096.2	8923.9
70°	1647.6	1633.4	2001.9	2268.8	3089.0	4993.5	7341.3	8366.3	8367.7	8298.5	8229.3
72.5°	782.1	790.6	897.9	1396.3	2021.7	3336.1	5843.4	6677.8	6773.8	6649.5	6563.4
75°	561.9	574.6	639.5	854.1	1205.7	2001.9	3787.8	4670.2	4673.0	4452.8	4256.6
77.5°	163.8	170.8	240.0	526.6	903.5	1351.1	2175.6	2596.3	2535.6	2377.5	2229.2
80°	67.8	67.8	70.6	168.0	362.8	917.7	1521.9	1999.1	1992.0	1931.3	1843.8
82.5°	25.4	26.8	33.9	69.2	86.1	225.9	1015.1	1735.1	1730.9	1644.7	1582.6
85°	2.8	2.8	8.5	29.6	32.5	42.4	203.3	765.2	761.0	765.2	670.6
87.5°	0.0	0.0	1.4	2.8	4.2	5.6	8.5	29.6	32.5	31.1	28.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	69°	70°	71°	72°	73°	74°	75°	76°	77°	78°	79°
0°	221.7	221.7	221.7	221.7	221.7	221.7	221.7	221.7	221.7	221.7	221.7
2.5°	241.4	238.6	238.6	237.2	237.2	237.2	235.8	234.4	234.4	232.9	231.5
5°	264.0	261.2	259.8	256.9	255.5	254.1	251.3	249.9	247.1	245.7	244.2
7.5°	290.8	285.2	283.8	279.5	275.3	272.5	269.7	265.4	262.6	256.9	255.5
10°	324.7	317.7	312.0	306.4	302.1	295.1	290.8	285.2	279.5	275.3	271.1
12.5°	368.5	358.6	350.1	344.5	334.6	326.1	317.7	313.4	302.1	296.5	289.4
15°	416.5	405.2	395.3	384.0	376.9	362.8	351.5	338.8	333.2	323.3	312.0
17.5°	478.6	460.2	444.7	433.4	419.3	405.2	392.5	379.8	362.8	351.5	337.4
20°	545.0	529.4	508.2	488.5	471.5	454.6	436.2	419.3	403.8	385.4	368.5
22.5°	629.7	607.1	581.7	561.9	539.3	521.0	495.5	473.0	447.5	423.5	403.8
25°	737.0	707.3	683.3	655.1	628.2	600.0	569.0	540.7	508.2	485.7	451.8
27.5°	869.7	841.4	809.0	772.3	745.4	703.1	662.1	626.8	588.7	553.4	515.3
30°	1039.1	998.1	964.3	929.0	875.3	834.4	786.4	738.4	686.1	650.8	593.0
32.5°	1242.4	1198.6	1147.8	1097.0	1047.6	989.7	930.4	871.1	813.2	748.3	689.0
35°	1490.9	1438.6	1380.7	1325.7	1249.4	1187.3	1112.5	1030.6	965.7	890.8	816.0
37.5°	1819.8	1733.7	1682.9	1625.0	1521.9	1437.2	1353.9	1272.0	1157.7	1078.6	972.7
40°	2232.0	2181.2	2097.9	2004.7	1911.6	1800.0	1687.1	1578.4	1445.7	1335.6	1212.7
42.5°	2716.3	2641.5	2556.8	2422.6	2328.0	2196.7	2068.3	1924.3	1761.9	1620.7	1476.7
45°	3170.9	3081.9	3017.0	2882.9	2784.1	2628.8	2473.5	2321.0	2133.2	1951.1	1784.5
47.5°	3662.2	3588.8	3481.5	3372.8	3272.5	3097.5	2929.5	2744.5	2546.9	2330.9	2114.9
50°	4094.2	4036.3	3962.9	3831.6	3720.1	3573.2	3375.6	3173.7	2923.8	2709.2	2463.6
52.5°	4461.3	4416.1	4313.0	4219.8	4119.6	3981.3	3804.8	3611.4	3341.7	3105.9	2826.4
55°	4894.7	4862.2	4771.9	4714.0	4625.0	4492.3	4327.1	4147.8	3862.7	3605.7	3289.5
57.5°	5604.8	5579.4	5500.3	5476.3	5388.8	5273.0	5069.7	4877.7	4544.6	4225.5	3864.1
60°	6780.8	6730.0	6614.2	6555.0	6370.0	6214.7	5950.7	5686.7	5284.3	4877.7	4442.9
62.5°	8040.2	7897.6	7677.3	7488.1	7225.6	6955.9	6603.0	6199.2	5727.6	5244.8	4745.0
65°	8719.2	8476.4	8198.3	7897.6	7557.3	7160.6	6715.9	6231.7	5724.8	5215.2	4687.2
66°	8796.9	8523.0	8227.9	7893.3	7515.0	7092.8	6641.1	6132.8	5606.2	5109.3	4581.3
67.5°	8699.5	8412.9	8100.9	7729.6	7320.1	6882.5	6408.1	5880.1	5373.3	4869.3	4355.4
70°	8017.6	7732.4	7454.3	7063.2	6627.0	6186.5	5737.5	5147.4	4667.4	4204.3	3746.9
72.5°	6402.5	6209.1	5933.8	5599.2	5174.2	4657.5	4283.4	3755.4	3338.9	2889.9	2535.6
75°	4001.0	3728.5	3388.3	2961.9	2637.2	2217.9	1999.1	1598.1	1361.0	1153.4	953.0
77.5°	2045.7	1841.0	1602.4	1362.4	1132.3	903.5	698.8	494.1	333.2	231.5	172.2
80°	1689.9	1509.2	1311.6	1092.7	889.4	690.4	497.0	338.8	216.0	141.2	110.1
82.5°	1396.3	1243.8	1067.3	864.0	687.5	542.1	376.9	245.7	152.5	98.8	77.6
85°	594.4	539.3	416.5	330.4	248.5	183.5	128.5	86.1	60.7	49.4	45.2
87.5°	25.4	28.2	26.8	21.2	15.5	15.5	14.1	11.3	11.3	11.3	11.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	80°	81°	82°	83°	84°	85°	95°	105°	115°	125°	135°
0°	221.7	221.7	221.7	221.7	221.7	221.7	221.7	221.7	221.7	221.7	221.7
2.5°	231.5	230.1	228.7	228.7	227.3	225.9	217.4	210.4	201.9	196.2	190.6
5°	241.4	240.0	237.2	235.8	232.9	231.5	213.2	197.7	184.9	175.1	168.0
7.5°	251.3	249.9	245.7	241.4	240.0	237.2	207.5	187.8	170.8	159.5	152.5
10°	264.0	259.8	255.5	249.9	245.7	241.4	201.9	176.5	158.1	148.2	141.2
12.5°	282.4	275.3	268.2	261.2	255.5	248.5	199.1	166.6	148.2	136.9	129.9
15°	303.5	293.7	285.2	276.7	266.8	259.8	193.4	158.1	139.8	128.5	120.0
17.5°	323.3	312.0	299.3	286.6	276.7	266.8	187.8	149.7	131.3	120.0	111.5
20°	351.5	334.6	319.1	303.5	289.4	276.7	179.3	141.2	124.2	111.5	103.1
22.5°	382.6	362.8	343.1	321.9	303.5	286.6	172.2	134.1	117.2	104.5	94.6
25°	422.1	398.1	371.3	344.5	323.3	300.7	165.2	127.1	110.1	97.4	87.5
27.5°	477.2	443.3	413.7	379.8	347.3	321.9	159.5	121.4	103.1	90.4	80.5
30°	552.0	502.6	456.0	419.3	381.2	344.5	153.9	114.4	97.4	83.3	72.0
32.5°	635.3	577.4	523.8	468.7	420.7	378.4	148.2	108.7	90.4	76.2	66.4
35°	738.4	665.0	593.0	529.4	471.5	415.1	142.6	103.1	84.7	69.2	59.3
37.5°	886.6	794.8	700.2	618.4	543.5	468.7	138.4	97.4	77.6	62.1	52.2
40°	1089.9	971.3	855.5	744.0	646.6	553.4	132.7	91.8	72.0	56.5	46.6
42.5°	1310.1	1166.1	1013.7	888.0	753.9	636.7	127.1	86.1	66.4	50.8	40.9
45°	1584.0	1404.7	1219.8	1049.0	885.2	734.1	121.4	80.5	59.3	45.2	35.3
47.5°	1883.3	1654.6	1445.7	1231.1	1036.3	855.5	114.4	76.2	53.6	39.5	31.1
50°	2191.1	1949.7	1685.7	1441.4	1209.9	977.0	107.3	69.2	48.0	35.3	25.4
52.5°	2522.9	2237.7	1968.0	1664.5	1394.9	1136.5	100.2	63.5	43.8	31.1	21.2
55°	2945.0	2625.9	2309.7	1969.5	1644.7	1321.4	93.2	56.5	38.1	26.8	16.9
57.5°	3475.8	3097.5	2709.2	2325.2	1931.3	1564.3	87.5	49.4	32.5	22.6	14.1
60°	3977.0	3535.1	3065.0	2623.1	2178.4	1750.6	79.1	43.8	28.2	18.4	14.1
62.5°	4236.8	3732.8	3225.9	2738.9	2264.5	1817.0	70.6	36.7	24.0	15.5	12.7
65°	4173.3	3659.4	3168.1	2676.8	2212.3	1774.6	62.1	32.5	21.2	14.1	12.7
66°	4081.5	3573.2	3079.1	2611.8	2168.5	1729.4	57.9	31.1	19.8	14.1	11.3
67.5°	3881.0	3389.7	2918.2	2483.3	2048.5	1643.3	52.2	28.2	18.4	12.7	11.3
70°	3314.9	2868.8	2491.8	2105.0	1750.6	1385.0	42.4	24.0	15.5	11.3	11.3
72.5°	2193.9	1890.4	1639.1	1410.4	1178.8	914.8	35.3	19.8	12.7	11.3	9.9
75°	827.3	748.3	642.4	577.4	504.0	441.9	28.2	12.7	9.9	9.9	9.9
77.5°	146.8	135.5	120.0	110.1	101.6	93.2	22.6	8.5	8.5	9.9	9.9
80°	98.8	91.8	83.3	76.2	70.6	63.5	15.5	7.1	8.5	8.5	9.9
82.5°	70.6	66.4	62.1	56.5	52.2	46.6	9.9	7.1	8.5	8.5	8.5
85°	42.4	39.5	36.7	33.9	29.6	28.2	7.1	7.1	7.1	8.5	8.5
87.5°	11.3	9.9	11.3	11.3	8.5	9.9	5.6	5.6	5.6	7.1	7.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P150686

CATALOG NUMBER: TLM-F05-LED-E1-SL3-HSS-7050

CANDELA DISTRIBUTION (continued):

	145°	155°	165°	175°	180°
0°	221.7	221.7	221.7	221.7	221.7
2.5°	187.8	187.8	184.9	189.2	189.2
5°	162.4	162.4	160.9	162.4	162.4
7.5°	148.2	146.8	146.8	146.8	148.2
10°	135.5	134.1	134.1	134.1	134.1
12.5°	124.2	122.8	121.4	122.8	122.8
15°	114.4	111.5	111.5	111.5	111.5
17.5°	105.9	103.1	101.6	101.6	101.6
20°	97.4	93.2	93.2	93.2	93.2
22.5°	88.9	84.7	84.7	84.7	84.7
25°	80.5	76.2	76.2	76.2	76.2
27.5°	73.4	69.2	69.2	69.2	69.2
30°	64.9	62.1	62.1	63.5	62.1
32.5°	59.3	55.1	55.1	56.5	56.5
35°	52.2	49.4	49.4	49.4	49.4
37.5°	45.2	42.4	42.4	42.4	42.4
40°	39.5	36.7	35.3	36.7	36.7
42.5°	33.9	31.1	29.6	29.6	29.6
45°	29.6	25.4	24.0	25.4	25.4
47.5°	24.0	21.2	21.2	22.6	22.6
50°	18.4	18.4	19.8	22.6	22.6
52.5°	16.9	16.9	19.8	22.6	22.6
55°	15.5	16.9	19.8	21.2	22.6
57.5°	14.1	16.9	19.8	21.2	21.2
60°	14.1	15.5	18.4	21.2	21.2
62.5°	12.7	14.1	16.9	19.8	19.8
65°	12.7	14.1	16.9	19.8	19.8
66°	12.7	14.1	16.9	19.8	19.8
67.5°	12.7	14.1	16.9	19.8	19.8
70°	12.7	14.1	16.9	18.4	18.4
72.5°	11.3	12.7	15.5	18.4	18.4
75°	11.3	12.7	15.5	18.4	18.4
77.5°	11.3	12.7	15.5	18.4	18.4
80°	11.3	12.7	15.5	16.9	18.4
82.5°	9.9	12.7	14.1	16.9	16.9
85°	9.9	11.3	14.1	15.5	16.9
87.5°	8.5	9.9	11.3	14.1	14.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)