

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: P156623

Luminaire Tested: **TLM-F02-LED-E1-T4-8030**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P156623  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33673)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: MCGRAW-EDISON  
Catalog Number: TLM-F02-LED-E1-T4-8030  
Description: TALON MEDIUM LED SITE LUMINAIRE  
(2) LIGHTBARS WITH AccuLED OPTICS - TYPE 4  
Light Source: (14) 3000K CCT, 80 CRI LEDs  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4211.1 lumens  
Efficiency: N/A  
Efficacy: 76.6 lumens/watt  
Spacing Criteria (0/90/45): 1.73 / 2.02 / 2.64  
Luminous Opening: Rectangular (W 0.33' x L: 1' x H: 0')  
CIE Type: Direct

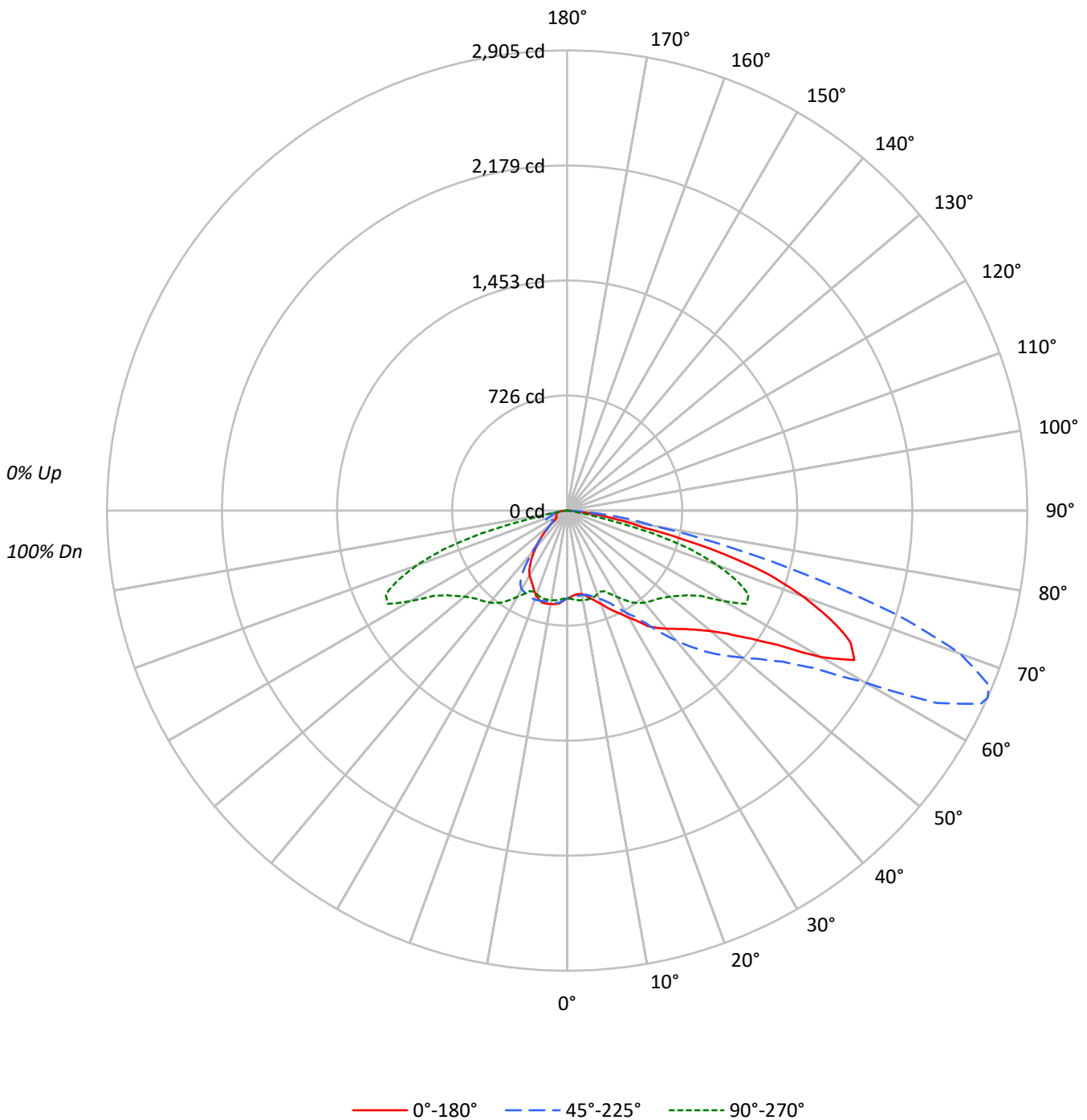
Input Watts (W): 55  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	99	93	88	102	96	91	87	92	88	84	88	84	81	84	81	79	76
2	92	81	72	65	89	79	71	64	76	69	62	72	66	61	69	64	59	57
3	82	68	58	49	79	66	57	49	63	55	48	60	53	47	57	51	46	43
4	73	58	47	39	70	57	46	38	54	45	38	51	43	37	49	42	36	34
5	66	50	39	31	64	49	39	31	47	38	31	45	36	30	42	35	30	27
6	60	44	34	26	58	43	33	26	41	32	25	39	31	25	38	30	25	22
7	55	39	29	22	53	38	29	22	37	28	22	35	27	21	34	27	21	19
8	51	35	26	19	49	35	25	19	33	25	19	32	24	18	31	23	18	16
9	47	32	23	16	46	31	23	16	30	22	16	29	22	16	28	21	16	14
10	44	29	21	15	43	29	20	15	28	20	14	27	19	14	26	19	14	12

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	18106	18106	18106
5°	17521	18493	19285
10°	17723	19045	19830
15°	19417	19434	20342
20°	21767	19476	19831
25°	25193	20244	18571
30°	29389	23706	17860
35°	35455	28152	16071
40°	41434	32318	13272
45°	48832	36575	10093
50°	60036	42899	6460
55°	79854	52932	4834
60°	120569	74604	5088
65°	152470	97510	5881
70°	151235	96351	7000
75°	119939	71356	8608
80°	60804	15008	10726
85°	8870	12350	13735



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	53.9	1.3
10°-20°	163.6	3.9
20°-30°	281.9	6.7
30°-40°	426.5	10.1
40°-50°	552.8	13.1
50°-60°	762.1	18.1
60°-70°	1184.0	28.1
70°-80°	688.5	16.3
80°-90°	97.9	2.3
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°	499.4	11.9
0°-40°	925.9	22.0
0°-60°	2240.7	53.2
0°-90°	4211.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4211.1	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	555	555	555	555	555	
5°	535	543	565	583	589	51
15°	575	555	576	590	602	165
25°	700	647	562	588	516	326
35°	890	870	707	499	404	556
45°	1059	1267	793	209	219	827
55°	1404	1663	931	108	85	1301
65°	1976	2884	1263	152	76	1870
75°	952	1550	566	96	68	980
85°	24	162	33	39	37	102
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	47.5°
0°	555.1	555.1	555.1	555.1	555.1	555.1	555.1	555.1	555.1	555.1	555.1
2.5°	544.8	546.7	545.3	545.8	545.8	546.2	546.2	546.7	546.2	547.6	548.6
5°	535.1	536.0	535.6	536.5	537.4	539.3	538.8	541.1	541.6	543.0	545.3
7.5°	531.4	530.4	530.9	532.3	533.2	534.2	535.1	537.0	538.3	541.6	543.5
10°	535.1	534.6	535.1	536.0	536.0	536.5	535.6	537.4	538.3	541.1	543.0
12.5°	550.4	550.4	549.5	549.5	548.6	547.6	545.3	543.9	543.5	543.9	544.8
15°	575.0	574.1	572.3	570.9	569.0	565.7	562.5	559.7	557.9	555.1	554.1
17.5°	599.2	597.8	595.9	594.1	591.8	588.5	583.4	580.1	575.0	571.8	569.9
20°	627.1	624.3	622.0	619.6	615.0	614.1	608.9	603.4	597.3	589.9	589.0
22.5°	663.3	658.6	655.9	654.5	649.8	648.4	640.1	632.2	624.7	615.0	612.7
25°	700.0	695.3	693.9	692.1	688.8	687.0	679.1	670.3	660.5	647.0	644.2
27.5°	735.8	736.2	732.5	733.9	733.0	729.7	721.8	713.0	705.6	689.8	686.5
30°	780.3	777.6	775.7	778.5	775.2	775.7	768.7	764.1	752.0	742.7	736.2
32.5°	826.8	826.3	829.1	831.0	830.5	829.6	824.0	819.4	808.7	795.2	792.4
35°	890.4	893.2	895.5	903.9	903.9	909.9	904.4	898.8	886.2	870.0	864.4
37.5°	933.6	934.6	943.8	955.0	968.9	981.9	985.6	987.0	981.9	969.9	961.5
40°	973.1	975.0	989.8	1007.0	1027.5	1053.0	1068.3	1075.3	1076.7	1071.1	1053.0
42.5°	1012.6	1015.4	1030.7	1055.8	1084.1	1116.6	1143.6	1160.8	1170.5	1170.5	1159.8
45°	1058.6	1062.3	1079.0	1106.4	1139.4	1180.3	1217.4	1250.4	1266.2	1267.1	1256.9
47.5°	1112.9	1116.2	1135.7	1163.5	1197.5	1238.8	1285.7	1323.3	1352.6	1354.5	1346.1
50°	1183.1	1187.7	1204.0	1229.0	1263.9	1305.7	1352.6	1405.1	1435.7	1443.2	1434.3
52.5°	1276.0	1276.9	1290.4	1313.6	1347.5	1387.4	1437.1	1494.3	1534.7	1540.7	1526.3
55°	1404.2	1402.8	1411.6	1436.7	1462.2	1493.3	1544.9	1609.0	1654.1	1663.3	1648.5
57.5°	1578.3	1576.9	1584.4	1590.4	1638.3	1668.4	1719.1	1780.4	1824.1	1851.0	1825.4
60°	1848.2	1846.8	1858.9	1894.2	1930.0	1974.1	2023.3	2096.7	2158.0	2165.9	2140.8
62.5°	2043.8	2050.7	2077.2	2118.5	2191.0	2277.4	2367.5	2464.1	2590.0	2629.9	2617.9
65°	1975.5	1989.4	2026.1	2088.8	2185.4	2304.8	2446.0	2621.1	2789.7	2884.0	2881.2
66°	1914.2	1929.5	1974.5	2034.9	2137.1	2267.6	2421.9	2612.8	2801.3	2905.4	2911.9
67.5°	1802.7	1819.9	1864.0	1935.5	2034.9	2173.8	2339.6	2547.3	2760.5	2881.7	2898.9
70°	1585.8	1605.3	1637.3	1696.3	1794.3	1918.3	2093.0	2278.8	2502.2	2641.1	2662.0
72.5°	1325.7	1342.8	1378.6	1426.9	1507.3	1585.3	1722.3	1859.4	2019.1	2177.5	2162.2
75°	951.7	959.2	980.5	1033.0	1076.2	1146.4	1256.4	1368.9	1478.0	1550.5	1560.7
77.5°	494.7	514.2	544.4	602.4	649.4	712.5	784.1	868.6	948.5	1014.9	996.8
80°	323.7	332.1	359.1	388.8	423.2	463.6	511.4	543.0	553.2	549.0	553.2
82.5°	186.7	202.1	237.8	260.6	286.1	300.1	338.1	374.4	394.8	369.3	360.0
85°	23.7	30.7	96.6	121.7	139.3	160.2	171.9	193.7	180.7	161.6	196.9
87.5°	5.1	4.6	6.5	13.9	14.4	12.1	22.8	24.2	14.9	7.4	9.3
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):**

	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°
0°	555.1	555.1	555.1	555.1	555.1	555.1	555.1	555.1	555.1	555.1	555.1
2.5°	549.5	550.0	550.9	552.3	553.2	554.1	555.1	556.5	557.4	558.3	560.2
5°	547.2	549.0	550.9	552.7	555.1	558.8	561.1	563.0	564.8	568.5	569.9
7.5°	545.8	549.0	551.8	555.1	558.8	562.0	566.2	568.5	571.3	573.6	576.4
10°	544.8	549.5	552.3	556.9	561.1	564.4	569.0	571.8	575.0	577.8	579.2
12.5°	546.7	549.0	551.8	556.5	561.6	566.2	571.3	573.6	576.4	578.8	579.2
15°	554.6	554.6	555.1	558.8	563.9	567.6	571.8	574.1	575.5	576.9	576.9
17.5°	569.0	565.7	563.4	563.9	567.1	569.5	571.8	571.8	570.9	570.4	569.5
20°	585.7	581.5	576.9	573.6	572.7	570.9	569.5	564.8	561.1	557.9	555.5
22.5°	609.9	603.4	596.9	590.8	585.3	578.3	570.4	561.1	552.3	546.2	542.5
25°	639.6	634.5	626.6	617.3	610.3	597.3	587.1	573.6	562.5	554.6	548.1
27.5°	681.9	675.8	668.4	660.0	649.8	635.4	622.9	607.1	593.6	582.0	573.6
30°	734.4	726.5	720.9	710.7	703.7	687.4	674.9	655.4	629.4	610.8	599.2
32.5°	788.2	779.4	774.8	766.9	759.0	749.2	730.2	700.0	666.5	636.4	616.4
35°	860.2	850.9	842.6	835.6	824.0	805.9	789.2	752.9	707.0	664.7	631.2
37.5°	950.8	935.5	914.6	896.9	876.5	850.5	824.9	787.8	735.3	680.5	635.9
40°	1047.4	1020.5	990.8	957.8	922.5	884.9	855.6	818.0	759.0	693.9	632.6
42.5°	1148.2	1105.5	1064.1	1017.7	968.5	923.9	885.8	844.4	776.6	697.7	619.6
45°	1248.1	1200.2	1137.5	1076.7	1014.4	959.2	916.4	870.0	792.9	699.1	602.4
47.5°	1330.8	1281.5	1210.0	1133.8	1060.0	997.3	947.1	896.9	814.7	708.8	598.3
50°	1418.1	1358.2	1278.7	1188.6	1105.0	1034.9	981.5	929.4	845.4	733.9	611.7
52.5°	1513.3	1444.6	1351.7	1250.9	1159.4	1080.9	1022.8	969.4	884.4	769.2	637.3
55°	1629.4	1545.4	1444.6	1330.8	1232.8	1145.9	1081.8	1018.6	930.8	811.0	669.3
57.5°	1806.9	1703.8	1590.4	1460.8	1352.1	1249.5	1172.8	1099.9	1002.8	873.2	713.0
60°	2127.8	2017.7	1870.5	1713.5	1585.8	1465.9	1353.5	1262.9	1143.6	995.9	809.6
62.5°	2587.7	2441.4	2244.9	2025.2	1858.0	1685.2	1558.4	1423.7	1275.5	1116.2	923.4
65°	2843.1	2665.7	2402.8	2147.8	1932.7	1745.1	1583.9	1427.8	1263.4	1111.1	949.9
66°	2874.7	2689.9	2416.7	2148.3	1922.5	1729.8	1560.2	1398.6	1230.4	1085.0	938.7
67.5°	2861.7	2672.7	2391.2	2107.9	1878.4	1671.2	1496.1	1328.4	1160.8	1025.1	901.6
70°	2648.5	2469.2	2192.9	1918.3	1700.5	1496.1	1328.9	1164.0	1010.3	894.1	803.1
72.5°	2199.4	2046.1	1805.9	1590.4	1419.5	1250.9	1109.2	951.7	821.7	735.8	681.9
75°	1587.6	1494.7	1276.0	1152.4	1002.4	890.4	752.9	659.6	566.2	524.4	515.1
77.5°	1002.8	877.9	739.0	608.5	500.3	414.8	322.8	274.0	228.5	223.9	270.3
80°	507.7	457.1	352.1	280.6	236.0	190.9	151.0	114.3	79.9	96.1	115.2
82.5°	332.6	277.3	217.4	178.8	155.6	129.1	100.3	69.7	51.1	57.6	79.0
85°	179.8	153.3	123.6	97.5	79.0	70.6	47.4	33.4	33.0	35.3	45.1
87.5°	13.0	13.0	10.2	9.3	11.1	9.3	8.4	8.4	7.9	8.4	11.1
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):**

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	555.1	555.1	555.1	555.1	555.1	555.1	555.1	555.1	555.1	555.1	555.1
2.5°	561.1	562.5	563.0	565.3	566.7	567.6	568.5	568.5	569.0	570.4	570.9
5°	571.8	574.1	576.9	578.8	579.7	582.5	583.4	583.4	584.3	586.2	587.6
7.5°	578.3	581.5	584.3	585.3	587.1	588.0	589.4	590.4	590.4	592.2	593.2
10°	580.6	582.5	585.3	585.3	587.1	587.1	588.5	589.0	589.0	590.8	592.2
12.5°	580.6	581.5	583.9	583.9	585.3	585.7	587.6	589.0	589.4	591.8	593.6
15°	577.8	578.8	580.6	581.1	584.3	586.2	590.4	593.2	593.2	595.5	596.4
17.5°	569.9	572.3	576.0	579.7	585.7	589.9	595.0	597.3	595.5	594.1	592.7
20°	556.9	561.1	569.9	579.2	589.9	595.5	598.3	595.9	589.4	582.9	578.8
22.5°	543.9	552.3	567.1	581.1	593.2	596.9	595.5	587.1	576.4	568.5	563.0
25°	550.0	559.7	574.1	586.7	594.5	593.6	588.0	576.4	564.8	554.6	545.3
27.5°	575.0	585.7	593.6	597.8	596.9	590.4	581.5	568.5	554.6	541.1	528.1
30°	598.7	604.3	606.2	602.9	595.5	584.8	573.6	558.8	540.2	523.5	508.6
32.5°	609.4	603.8	595.0	586.2	574.1	564.8	549.5	533.2	510.0	490.0	475.2
35°	609.4	587.1	564.8	546.2	528.1	516.5	498.9	477.0	455.7	438.9	427.3
37.5°	595.9	553.2	516.5	486.3	463.6	451.0	424.5	405.0	386.9	381.3	373.9
40°	571.3	508.2	455.2	415.7	386.9	368.3	341.9	328.4	321.4	318.6	317.2
42.5°	538.3	458.0	387.4	338.6	307.5	286.6	268.9	260.6	260.1	259.7	259.7
45°	503.0	404.1	321.4	263.4	236.0	217.4	209.0	205.8	208.6	208.1	208.6
47.5°	481.2	363.2	261.0	199.3	178.4	166.3	162.1	163.5	165.8	164.9	164.9
50°	478.4	342.3	220.6	155.1	139.3	133.3	132.4	132.4	133.8	132.8	132.4
52.5°	488.6	339.1	199.7	133.3	120.8	115.7	114.7	114.3	113.8	111.0	108.7
55°	506.3	346.5	193.7	127.7	114.7	109.2	107.8	106.8	105.0	101.3	97.1
57.5°	541.6	369.7	199.3	130.5	116.6	111.9	110.5	110.5	106.8	100.8	94.8
60°	626.6	428.7	222.0	141.2	125.4	120.8	121.7	121.2	115.7	106.8	97.5
62.5°	736.2	505.8	251.8	156.1	136.6	135.6	140.3	139.3	130.1	116.6	103.1
65°	786.8	542.1	260.1	159.3	138.9	143.1	152.4	151.4	139.8	121.2	104.0
66°	787.8	542.1	256.4	156.5	135.6	140.7	150.0	149.6	138.0	119.4	102.2
67.5°	768.7	527.2	245.7	151.0	129.1	132.8	141.2	140.7	130.1	114.7	98.5
70°	697.2	471.9	218.3	141.2	120.3	118.4	121.2	119.4	112.4	101.7	90.6
72.5°	597.3	396.2	190.4	133.8	114.3	106.8	105.0	103.6	98.0	92.0	85.0
75°	470.5	313.5	167.2	128.2	108.7	98.9	95.7	93.8	90.1	85.9	80.4
77.5°	290.3	224.3	145.8	120.8	104.5	94.8	92.4	89.6	84.1	79.0	74.8
80°	129.6	138.9	119.8	105.4	93.4	84.5	80.8	76.6	71.1	67.8	65.5
82.5°	86.4	89.6	86.9	79.0	70.6	63.6	58.1	58.1	57.1	54.3	53.4
85°	55.3	55.7	53.9	48.8	45.5	41.3	39.0	39.5	41.3	40.9	40.4
87.5°	12.5	12.5	14.9	13.9	16.3	17.2	18.6	20.0	22.8	22.8	24.2
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: P156623

CATALOG NUMBER: TLM-F02-LED-E1-T4-8030

**CANDELA DISTRIBUTION (continued):**

	160°	165°	170°	175°	180°
0°	555.1	555.1	555.1	555.1	555.1
2.5°	571.3	572.3	573.2	571.8	572.3
5°	587.6	587.1	589.4	588.0	589.0
7.5°	592.7	593.2	595.0	595.0	595.5
10°	593.2	594.1	596.4	597.8	598.7
12.5°	595.5	597.3	601.1	602.0	602.0
15°	597.3	598.3	600.6	601.5	602.4
17.5°	590.8	589.0	589.9	590.4	589.9
20°	574.6	572.7	572.3	570.4	571.3
22.5°	556.9	551.8	548.6	544.8	544.8
25°	535.6	527.7	521.2	514.7	516.0
27.5°	515.6	505.4	498.9	494.7	493.8
30°	496.1	485.4	479.4	474.2	474.2
32.5°	463.6	456.1	448.2	445.0	444.5
35°	418.5	413.9	407.4	406.0	403.6
37.5°	367.9	366.5	360.9	360.4	358.1
40°	314.9	315.9	314.0	313.1	311.7
42.5°	262.0	266.6	265.7	265.2	264.3
45°	211.3	214.6	215.1	216.5	218.8
47.5°	166.3	167.2	168.1	167.7	168.1
50°	130.1	127.7	127.3	125.9	127.3
52.5°	105.0	101.3	99.4	97.5	96.6
55°	92.4	88.7	86.9	85.9	85.0
57.5°	89.2	85.5	82.7	80.8	80.4
60°	90.1	84.5	80.8	78.5	78.0
62.5°	92.4	85.0	79.9	77.6	77.1
65°	92.0	84.1	79.4	76.6	76.2
66°	90.6	83.1	78.5	76.2	75.7
67.5°	88.3	81.8	77.6	75.7	74.8
70°	84.1	79.9	76.6	74.3	73.4
72.5°	80.4	77.1	74.3	72.0	71.5
75°	76.2	73.4	70.6	68.7	68.3
77.5°	71.1	68.3	66.4	65.0	64.6
80°	62.7	60.8	59.0	57.1	57.1
82.5°	52.0	50.6	48.8	47.4	46.9
85°	39.9	39.9	38.6	37.2	36.7
87.5°	23.7	23.2	23.2	21.8	21.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)