

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: P156624

Luminaire Tested: **TLM-F02-LED-E1-T4-7030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P156624
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-T4-7030
Description: TALON MEDIUM LED SITE LUMINAIRE
(2) LIGHTBARS WITH AccuLED OPTICS - TYPE 4
Light Source: (14) 3000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4557.2 lumens
Efficiency: N/A
Efficacy: 82.9 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

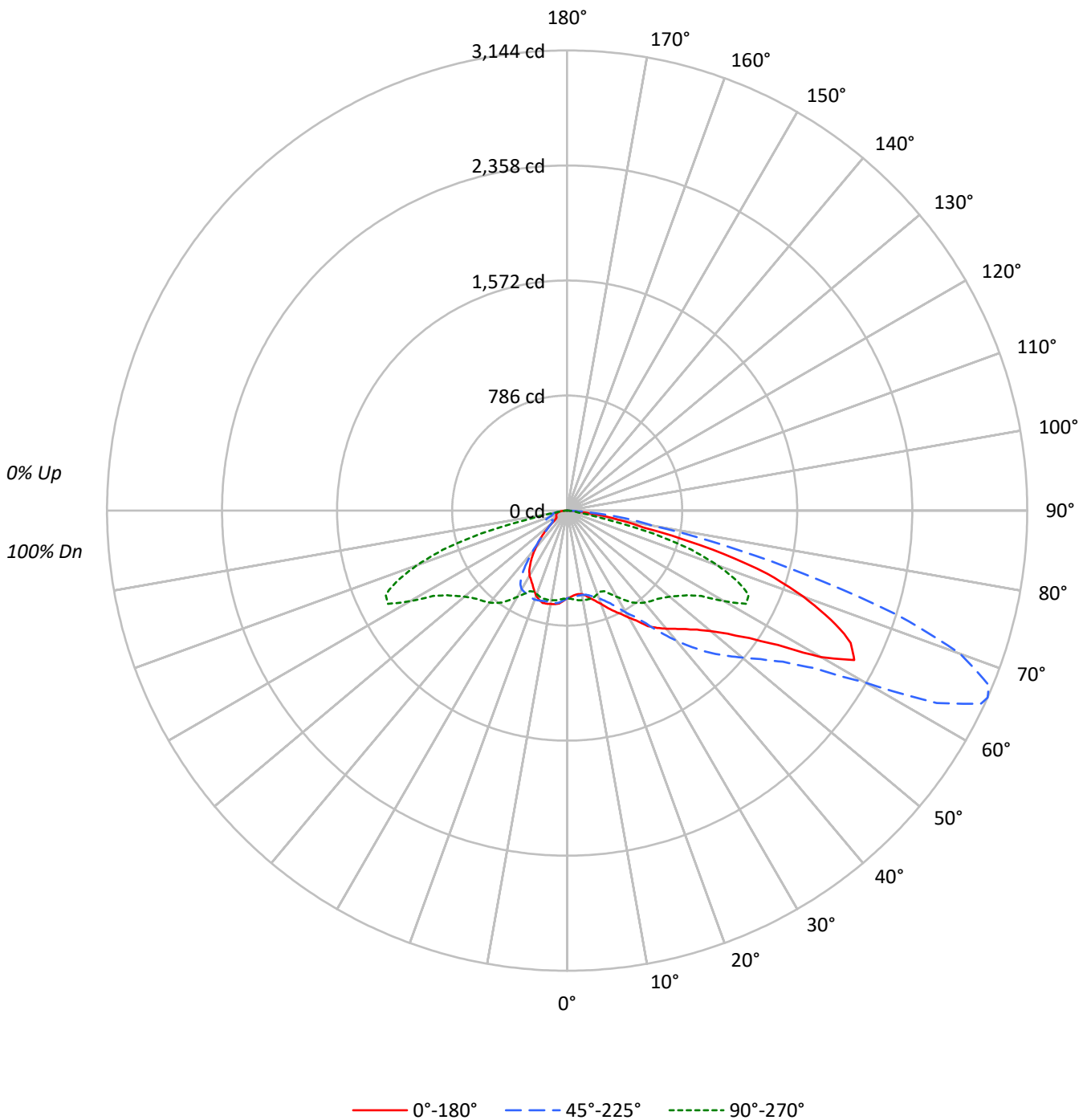
Input Watts (W): 55
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102
1	105	99	93	88	102	96	91	87	92	88	84	88	84	81	84	81	79
2	92	81	72	65	89	79	71	64	76	69	62	72	66	61	69	64	59
3	82	68	58	49	79	66	57	49	63	55	48	60	53	47	57	51	46
4	73	58	47	39	70	57	46	38	54	45	38	51	43	37	49	42	36
5	66	50	39	31	64	49	39	31	47	38	31	45	36	30	42	35	30
6	60	44	34	26	58	43	33	26	41	32	25	39	31	25	38	30	25
7	55	39	29	22	53	38	29	22	37	28	22	35	27	21	34	27	21
8	51	35	26	19	49	35	25	19	33	25	19	32	24	18	31	23	18
9	47	32	23	16	46	31	23	16	30	22	16	29	22	16	28	21	16
10	44	29	21	15	43	29	20	15	28	20	14	27	19	14	26	19	14

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	19594	19594	19594
5°	18961	20012	20870
10°	19180	20611	21459
15°	21014	21031	22017
20°	23555	21077	21462
25°	27262	21907	20100
30°	31807	25653	19329
35°	38370	30466	17393
40°	44841	34975	14362
45°	52845	39578	10923
50°	64968	46421	6988
55°	86410	57283	5232
60°	130478	80736	5506
65°	164997	105521	6360
70°	163662	104266	7572
75°	129807	77216	9313
80°	65819	16248	11608
85°	9581	13361	14858



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	58.3	1.3
10°-20°	177.1	3.9
20°-30°	305.0	6.7
30°-40°	461.5	10.1
40°-50°	598.2	13.1
50°-60°	824.7	18.1
60°-70°	1281.3	28.1
70°-80°	745.1	16.3
80°-90°	105.9	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°	540.5	11.9
0°-40°	1002.0	22.0
0°-60°	2424.9	53.2
0°-90°	4557.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4557.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	601	601	601	601	601	
5°	579	588	611	631	637	55
15°	622	601	623	639	652	178
25°	758	700	609	636	558	353
35°	964	942	765	540	437	602
45°	1146	1371	858	226	237	895
55°	1520	1800	1007	117	92	1407
65°	2138	3121	1367	165	82	2023
75°	1030	1678	613	104	74	1061
85°	26	175	36	42	40	111
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°	600.7	600.7	600.7	600.7	600.7	600.7	600.7	600.7	600.7	600.7	600.7	600.7
2.5°	589.6	591.6	590.1	590.6	590.6	591.1	591.1	591.6	591.1	592.6	593.6	593.6
5°	579.1	580.1	579.6	580.6	581.6	583.6	583.1	585.6	586.1	587.6	590.1	590.1
7.5°	575.0	574.0	574.5	576.1	577.1	578.1	579.1	581.1	582.6	586.1	588.1	588.1
10°	579.1	578.6	579.1	580.1	580.1	580.6	579.6	581.6	582.6	585.6	587.6	587.6
12.5°	595.7	595.7	594.6	594.6	593.6	592.6	590.1	588.6	588.1	588.6	589.6	589.6
15°	622.3	621.3	619.3	617.8	615.8	612.2	608.7	605.7	603.7	600.7	599.7	599.7
17.5°	648.4	646.9	644.9	642.9	640.4	636.9	631.3	627.8	622.3	618.8	616.8	616.8
20°	678.6	675.6	673.1	670.6	665.5	664.5	659.0	653.0	646.4	638.4	637.4	637.4
22.5°	717.8	712.8	709.8	708.3	703.2	701.7	692.7	684.1	676.1	665.5	663.0	663.0
25°	757.5	752.5	751.0	749.0	745.4	743.4	734.9	725.3	714.8	700.2	697.2	697.2
27.5°	796.2	796.7	792.7	794.2	793.2	789.7	781.1	771.6	763.5	746.5	742.9	742.9
30°	844.5	841.5	839.4	842.5	838.9	839.4	831.9	826.9	813.8	803.8	796.7	796.7
32.5°	894.7	894.2	897.3	899.3	898.8	897.8	891.7	886.7	875.1	860.6	857.5	857.5
35°	963.6	966.6	969.1	978.2	978.2	984.7	978.7	972.7	959.1	941.5	935.5	935.5
37.5°	1010.4	1011.4	1021.4	1033.5	1048.6	1062.6	1066.6	1068.2	1062.6	1049.6	1040.5	1040.5
40°	1053.1	1055.1	1071.2	1089.8	1111.9	1139.5	1156.1	1163.7	1165.2	1159.1	1139.5	1139.5
42.5°	1095.8	1098.8	1115.4	1142.6	1173.2	1208.4	1237.6	1256.2	1266.7	1266.7	1255.1	1255.1
45°	1145.6	1149.6	1167.7	1197.3	1233.0	1277.3	1317.5	1353.2	1370.3	1371.3	1360.2	1360.2
47.5°	1204.4	1207.9	1229.0	1259.2	1295.9	1340.6	1391.4	1432.1	1463.8	1465.8	1456.7	1456.7
50°	1280.3	1285.3	1302.9	1330.0	1367.7	1413.0	1463.8	1520.6	1553.7	1561.8	1552.2	1552.2
52.5°	1380.8	1381.8	1396.4	1421.5	1458.2	1501.5	1555.2	1617.1	1660.8	1667.3	1651.7	1651.7
55°	1519.5	1518.0	1527.6	1554.7	1582.4	1616.1	1671.9	1741.2	1790.0	1800.0	1783.9	1783.9
57.5°	1708.0	1706.5	1714.6	1721.1	1772.9	1805.6	1860.4	1926.7	1974.0	2003.1	1975.5	1975.5
60°	2000.1	1998.6	2011.7	2049.9	2088.6	2136.3	2189.6	2269.0	2335.4	2343.9	2316.8	2316.8
62.5°	2211.7	2219.3	2247.9	2292.6	2371.1	2464.6	2562.1	2666.6	2802.8	2846.1	2833.0	2833.0
65°	2137.8	2152.9	2192.6	2260.5	2365.0	2494.2	2647.0	2836.5	3019.0	3121.0	3118.0	3118.0
66°	2071.5	2088.1	2136.8	2202.2	2312.7	2454.0	2620.9	2827.5	3031.6	3144.2	3151.2	3151.2
67.5°	1950.8	1969.4	2017.2	2094.6	2202.2	2352.5	2531.9	2756.6	2987.3	3118.5	3137.1	3137.1
70°	1716.1	1737.2	1771.9	1835.7	1941.8	2076.0	2265.0	2466.1	2707.8	2858.1	2880.8	2880.8
72.5°	1434.6	1453.2	1491.9	1544.2	1631.1	1715.6	1863.9	2012.2	2185.1	2356.5	2339.9	2339.9
75°	1030.0	1038.0	1061.1	1117.9	1164.7	1240.6	1359.7	1481.3	1599.5	1677.9	1688.9	1688.9
77.5°	535.3	556.4	589.1	652.0	702.7	771.1	848.5	940.0	1026.4	1098.3	1078.7	1078.7
80°	350.4	359.4	388.6	420.7	457.9	501.7	553.4	587.6	598.7	594.1	598.7	598.7
82.5°	202.1	218.7	257.4	282.0	309.6	324.7	365.9	405.1	427.3	399.6	389.6	389.6
85°	25.6	33.2	104.6	131.7	150.8	173.4	186.0	209.6	195.5	174.9	213.1	213.1
87.5°	5.5	5.0	7.0	15.1	15.6	13.1	24.6	26.1	16.1	8.0	10.1	10.1
90°	0.0	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°	600.7	600.7	600.7	600.7	600.7	600.7	600.7	600.7	600.7	600.7	600.7
2.5°	594.6	595.2	596.2	597.7	598.7	599.7	600.7	602.2	603.2	604.2	606.2
5°	592.1	594.1	596.2	598.2	600.7	604.7	607.2	609.2	611.2	615.3	616.8
7.5°	590.6	594.1	597.2	600.7	604.7	608.2	612.7	615.3	618.3	620.8	623.8
10°	589.6	594.6	597.7	602.7	607.2	610.7	615.8	618.8	622.3	625.3	626.8
12.5°	591.6	594.1	597.2	602.2	607.7	612.7	618.3	620.8	623.8	626.3	626.8
15°	600.2	600.2	600.7	604.7	610.2	614.3	618.8	621.3	622.8	624.3	624.3
17.5°	615.8	612.2	609.7	610.2	613.8	616.3	618.8	618.8	617.8	617.3	616.3
20°	633.9	629.3	624.3	620.8	619.8	617.8	616.3	611.2	607.2	603.7	601.2
22.5°	660.0	653.0	645.9	639.4	633.4	625.8	617.3	607.2	597.7	591.1	587.1
25°	692.2	686.6	678.1	668.0	660.5	646.4	635.4	620.8	608.7	600.2	593.1
27.5°	737.9	731.4	723.3	714.3	703.2	687.6	674.1	657.0	642.4	629.8	620.8
30°	794.7	786.2	780.1	769.1	761.5	743.9	730.4	709.3	681.1	661.0	648.4
32.5°	853.0	843.5	838.4	829.9	821.4	810.8	790.2	757.5	721.3	688.6	667.0
35°	930.9	920.9	911.8	904.3	891.7	872.1	854.0	814.8	765.1	719.3	683.1
37.5°	1028.9	1012.4	989.7	970.6	948.5	920.4	892.7	852.5	795.7	736.4	688.1
40°	1133.5	1104.3	1072.2	1036.5	998.3	957.6	925.9	885.2	821.4	751.0	684.6
42.5°	1242.6	1196.3	1151.6	1101.3	1048.1	999.8	958.6	913.8	840.5	755.0	670.6
45°	1350.7	1298.9	1231.0	1165.2	1097.8	1038.0	991.8	941.5	858.0	756.5	652.0
47.5°	1440.1	1386.8	1309.4	1227.0	1147.1	1079.2	1024.9	970.6	881.7	767.1	647.4
50°	1534.6	1469.8	1383.8	1286.3	1195.8	1119.9	1062.1	1005.8	914.8	794.2	662.0
52.5°	1637.7	1563.3	1462.7	1353.7	1254.6	1169.7	1106.9	1049.1	957.1	832.4	689.7
55°	1763.3	1672.4	1563.3	1440.1	1334.1	1240.1	1170.7	1102.3	1007.3	877.6	724.3
57.5°	1955.4	1843.8	1721.1	1580.9	1463.2	1352.2	1269.2	1190.3	1085.2	945.0	771.6
60°	2302.7	2183.6	2024.2	1854.3	1716.1	1586.4	1464.8	1366.7	1237.6	1077.7	876.1
62.5°	2800.3	2642.0	2429.4	2191.6	2010.6	1823.7	1686.4	1540.7	1380.3	1207.9	999.3
65°	3076.8	2884.8	2600.3	2324.3	2091.6	1888.5	1714.1	1545.2	1367.2	1202.4	1027.9
66°	3111.0	2910.9	2615.4	2324.8	2080.5	1871.9	1688.4	1513.5	1331.6	1174.2	1015.9
67.5°	3096.9	2892.3	2587.7	2281.1	2032.8	1808.6	1619.1	1437.6	1256.2	1109.4	975.7
70°	2866.2	2672.2	2373.1	2076.0	1840.2	1619.1	1438.1	1259.7	1093.3	967.6	869.1
72.5°	2380.1	2214.2	1954.4	1721.1	1536.1	1353.7	1200.4	1030.0	889.2	796.2	737.9
75°	1718.1	1617.6	1380.8	1247.1	1084.7	963.6	814.8	713.8	612.7	567.5	557.5
77.5°	1085.2	950.0	799.7	658.5	541.4	448.9	349.4	296.6	247.3	242.3	292.5
80°	549.4	494.6	381.0	303.6	255.4	206.6	163.4	123.7	86.5	104.1	124.7
82.5°	359.9	300.1	235.2	193.5	168.4	139.7	108.6	75.4	55.3	62.3	85.5
85°	194.5	165.9	133.7	105.6	85.5	76.4	51.3	36.2	35.7	38.2	48.8
87.5°	14.1	14.1	11.1	10.1	12.1	10.1	9.0	9.0	8.5	9.0	12.1
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°	600.7	600.7	600.7	600.7	600.7	600.7	600.7	600.7	600.7	600.7	600.7
2.5°	607.2	608.7	609.2	611.7	613.2	614.3	615.3	615.3	615.8	617.3	617.8
5°	618.8	621.3	624.3	626.3	627.3	630.3	631.3	631.3	632.3	634.4	635.9
7.5°	625.8	629.3	632.3	633.4	635.4	636.4	637.9	638.9	638.9	640.9	641.9
10°	628.3	630.3	633.4	633.4	635.4	635.4	636.9	637.4	637.4	639.4	640.9
12.5°	628.3	629.3	631.8	631.8	633.4	633.9	635.9	637.4	637.9	640.4	642.4
15°	625.3	626.3	628.3	628.8	632.3	634.4	638.9	641.9	641.9	644.4	645.4
17.5°	616.8	619.3	623.3	627.3	633.9	638.4	643.9	646.4	644.4	642.9	641.4
20°	602.7	607.2	616.8	626.8	638.4	644.4	647.4	644.9	637.9	630.8	626.3
22.5°	588.6	597.7	613.8	628.8	641.9	645.9	644.4	635.4	623.8	615.3	609.2
25°	595.2	605.7	621.3	634.9	643.4	642.4	636.4	623.8	611.2	600.2	590.1
27.5°	622.3	633.9	642.4	646.9	645.9	638.9	629.3	615.3	600.2	585.6	571.5
30°	647.9	654.0	656.0	652.5	644.4	632.9	620.8	604.7	584.6	566.5	550.4
32.5°	659.5	653.5	643.9	634.4	621.3	611.2	594.6	577.1	551.9	530.3	514.2
35°	659.5	635.4	611.2	591.1	571.5	559.0	539.9	516.2	493.1	475.0	462.4
37.5°	644.9	598.7	559.0	526.3	501.7	488.1	459.4	438.3	418.7	412.7	404.6
40°	618.3	549.9	492.6	449.9	418.7	398.6	370.0	355.4	347.8	344.8	343.3
42.5°	582.6	495.6	419.2	366.4	332.8	310.1	291.0	282.0	281.5	281.0	281.0
45°	544.4	437.3	347.8	285.0	255.4	235.2	226.2	222.7	225.7	225.2	225.7
47.5°	520.8	393.1	282.5	215.6	193.0	180.0	175.4	176.9	179.5	178.4	178.4
50°	517.7	370.5	238.8	167.9	150.8	144.3	143.3	143.3	144.8	143.8	143.3
52.5°	528.8	366.9	216.1	144.3	130.7	125.2	124.2	123.7	123.2	120.1	117.6
55°	547.9	375.0	209.6	138.2	124.2	118.1	116.6	115.6	113.6	109.6	105.1
57.5°	586.1	400.1	215.6	141.2	126.2	121.1	119.6	119.6	115.6	109.1	102.5
60°	678.1	464.0	240.3	152.8	135.7	130.7	131.7	131.2	125.2	115.6	105.6
62.5°	796.7	547.4	272.4	168.9	147.8	146.8	151.8	150.8	140.7	126.2	111.6
65°	851.5	586.6	281.5	172.4	150.3	154.8	164.9	163.9	151.3	131.2	112.6
66°	852.5	586.6	277.5	169.4	146.8	152.3	162.4	161.9	149.3	129.2	110.6
67.5°	831.9	570.5	265.9	163.4	139.7	143.8	152.8	152.3	140.7	124.2	106.6
70°	754.5	510.7	236.3	152.8	130.2	128.2	131.2	129.2	121.6	110.1	98.0
72.5°	646.4	428.8	206.1	144.8	123.7	115.6	113.6	112.1	106.1	99.5	92.0
75°	509.2	339.3	181.0	138.7	117.6	107.1	103.5	101.5	97.5	93.0	87.0
77.5°	314.2	242.8	157.8	130.7	113.1	102.5	100.0	97.0	91.0	85.5	80.9
80°	140.2	150.3	129.7	114.1	101.0	91.5	87.5	82.9	76.9	73.4	70.9
82.5°	93.5	97.0	94.0	85.5	76.4	68.9	62.8	62.8	61.8	58.8	57.8
85°	59.8	60.3	58.3	52.8	49.3	44.7	42.2	42.7	44.7	44.2	43.7
87.5°	13.6	13.6	16.1	15.1	17.6	18.6	20.1	21.6	24.6	24.6	26.1
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: P156624

CATALOG NUMBER: TLM-F02-LED-E1-T4-7030

CANDELA DISTRIBUTION (continued):

	160°	165°	170°	175°	180°
0°	600.7	600.7	600.7	600.7	600.7
2.5°	618.3	619.3	620.3	618.8	619.3
5°	635.9	635.4	637.9	636.4	637.4
7.5°	641.4	641.9	643.9	643.9	644.4
10°	641.9	642.9	645.4	646.9	647.9
12.5°	644.4	646.4	650.4	651.5	651.5
15°	646.4	647.4	649.9	650.9	652.0
17.5°	639.4	637.4	638.4	638.9	638.4
20°	621.8	619.8	619.3	617.3	618.3
22.5°	602.7	597.2	593.6	589.6	589.6
25°	579.6	571.0	564.0	556.9	558.5
27.5°	558.0	546.9	539.9	535.3	534.3
30°	536.8	525.3	518.7	513.2	513.2
32.5°	501.7	493.6	485.1	481.6	481.0
35°	452.9	447.9	440.8	439.3	436.8
37.5°	398.1	396.6	390.6	390.1	387.6
40°	340.8	341.8	339.8	338.8	337.3
42.5°	283.5	288.5	287.5	287.0	286.0
45°	228.7	232.2	232.7	234.2	236.8
47.5°	180.0	181.0	182.0	181.5	182.0
50°	140.7	138.2	137.7	136.2	137.7
52.5°	113.6	109.6	107.6	105.6	104.6
55°	100.0	96.0	94.0	93.0	92.0
57.5°	96.5	92.5	89.5	87.5	87.0
60°	97.5	91.5	87.5	84.9	84.4
62.5°	100.0	92.0	86.5	83.9	83.4
65°	99.5	91.0	86.0	82.9	82.4
66°	98.0	90.0	84.9	82.4	81.9
67.5°	95.5	88.5	83.9	81.9	80.9
70°	91.0	86.5	82.9	80.4	79.4
72.5°	87.0	83.4	80.4	77.9	77.4
75°	82.4	79.4	76.4	74.4	73.9
77.5°	76.9	73.9	71.9	70.4	69.9
80°	67.9	65.8	63.8	61.8	61.8
82.5°	56.3	54.8	52.8	51.3	50.8
85°	43.2	43.2	41.7	40.2	39.7
87.5°	25.6	25.1	25.1	23.6	23.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)