

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: P156619

Luminaire Tested: **TLM-E02-LED-E1-T4-7030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P156619
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-E02-LED-E1-T4-7030
Description: TALON MEDIUM LED SITE LUMINAIRE
(2) LIGHTBARS WITH AccuLED OPTICS - TYPE 4
Light Source: (42) 3000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5520.4 lumens
Efficiency: N/A
Efficacy: 106.0 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

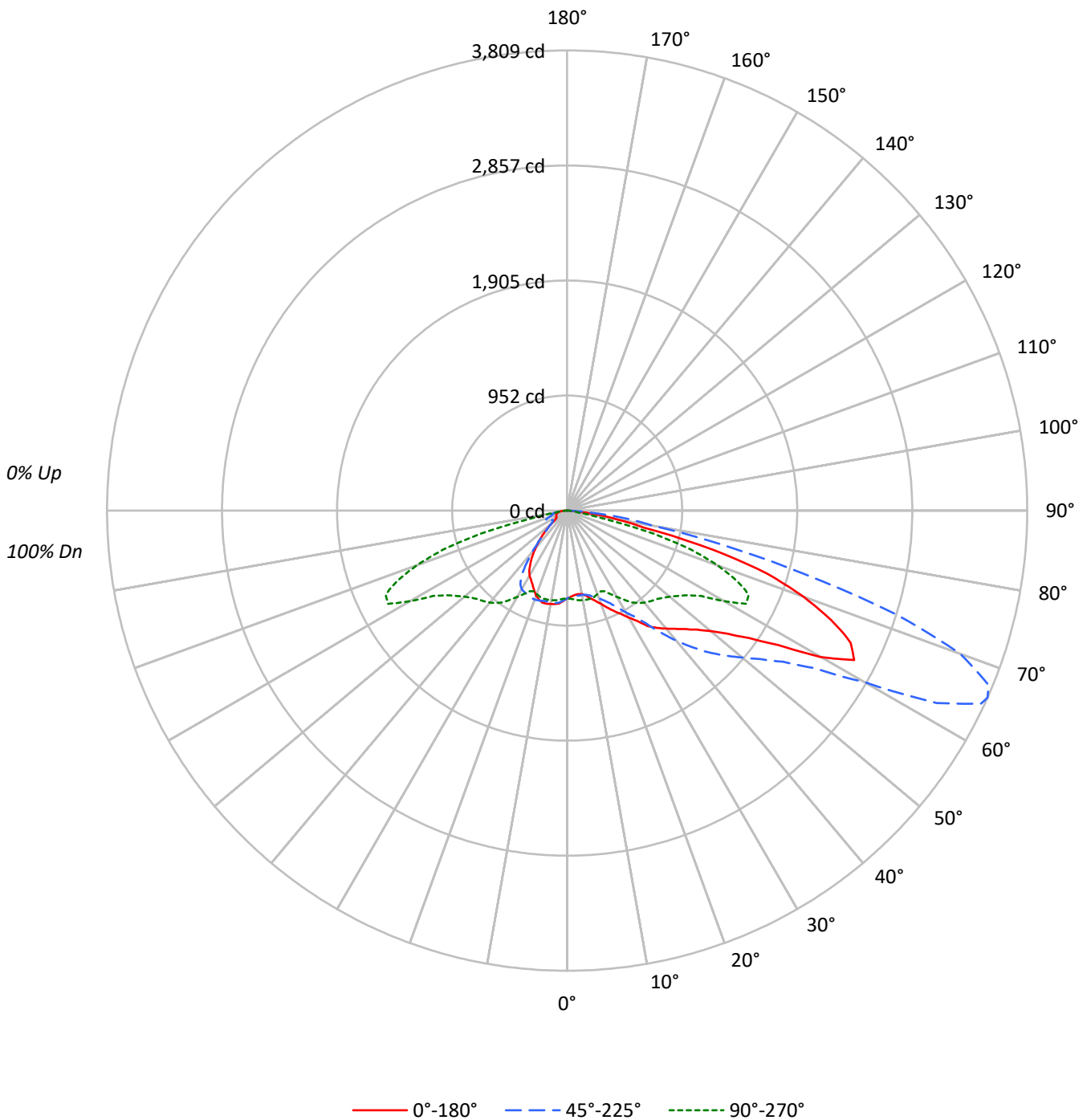
Input Watts (W): 52.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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					100			
1	105	99	93	88	102	96	91	87	92	88	84	88	84	81	84	81	79	76					76			
2	92	81	72	65	89	79	71	64	76	69	62	72	66	61	69	64	59	57					57			
3	82	68	58	49	79	66	57	49	63	55	48	60	53	47	57	51	46	43					43			
4	73	58	47	39	70	57	46	38	54	45	38	51	43	37	49	42	36	34					34			
5	66	50	39	31	64	49	39	31	47	38	31	45	36	30	42	35	30	27					27			
6	60	44	34	26	58	43	33	26	41	32	25	39	31	25	38	30	25	22					22			
7	55	39	29	22	53	38	29	22	37	28	22	35	27	21	34	27	21	19					19			
8	51	35	26	19	49	35	25	19	33	25	19	32	24	18	31	23	18	16					16			
9	47	32	23	16	46	31	23	16	30	22	16	29	22	16	28	21	16	14					14			
10	44	29	21	15	43	29	20	15	28	20	14	27	19	14	26	19	14	12					12			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	23733	23733	23733
5°	22969	24243	25280
10°	23234	24967	25997
15°	25455	25475	26667
20°	28533	25534	25995
25°	33024	26539	24347
30°	38530	31077	23416
35°	46481	36900	21068
40°	54315	42363	17398
45°	64013	47946	13230
50°	78700	56235	8464
55°	104676	69390	6335
60°	158053	97795	6674
65°	199875	127826	7710
70°	198252	126306	9174
75°	157230	93536	11279
80°	79719	19667	14069
85°	11639	16168	18001



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	70.7	1.3
10°-20°	214.5	3.9
20°-30°	369.5	6.7
30°-40°	559.0	10.1
40°-50°	724.6	13.1
50°-60°	999.0	18.1
60°-70°	1552.1	28.1
70°-80°	902.6	16.3
80°-90°	128.3	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°	654.7	11.9
0°-40°	1213.7	22.0
0°-60°	2937.3	53.2
0°-90°	5520.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5520.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	728	728	728	728	728	
5°	702	712	740	765	772	67
15°	754	728	754	774	790	216
25°	918	848	737	771	676	428
35°	1167	1140	927	654	529	729
45°	1388	1661	1039	274	287	1085
55°	1841	2180	1220	141	111	1705
65°	2590	3781	1656	200	100	2451
75°	1248	2032	742	125	90	1285
85°	31	212	43	51	48	134
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°	727.6	727.6	727.6	727.6	727.6	727.6	727.6	727.6	727.6	727.6	727.6
2.5°	714.2	716.7	714.8	715.5	715.5	716.1	716.1	716.7	716.1	717.9	719.1
5°	701.5	702.7	702.1	703.3	704.5	706.9	706.3	709.4	710.0	711.8	714.8
7.5°	696.6	695.4	696.0	697.8	699.0	700.2	701.5	703.9	705.7	710.0	712.4
10°	701.5	700.8	701.5	702.7	702.7	703.3	702.1	704.5	705.7	709.4	711.8
12.5°	721.5	721.5	720.3	720.3	719.1	717.9	714.8	713.0	712.4	713.0	714.2
15°	753.8	752.6	750.2	748.3	745.9	741.6	737.4	733.7	731.3	727.6	726.4
17.5°	785.5	783.7	781.2	778.8	775.7	771.5	764.8	760.5	753.8	749.6	747.1
20°	822.0	818.4	815.3	812.3	806.2	805.0	798.3	791.0	783.0	773.3	772.1
22.5°	869.5	863.4	859.8	857.9	851.9	850.0	839.1	828.7	819.0	806.2	803.1
25°	917.6	911.5	909.7	907.3	903.0	900.6	890.2	878.6	865.9	848.2	844.5
27.5°	964.5	965.1	960.2	962.1	960.8	956.6	946.2	934.7	924.9	904.2	900.0
30°	1023.0	1019.3	1016.9	1020.5	1016.3	1016.9	1007.7	1001.6	985.8	973.6	965.1
32.5°	1083.8	1083.2	1086.9	1089.3	1088.7	1087.5	1080.2	1074.1	1060.1	1042.4	1038.8
35°	1167.3	1170.9	1174.0	1184.9	1184.9	1192.8	1185.5	1178.2	1161.8	1140.5	1133.2
37.5°	1223.9	1225.1	1237.3	1251.9	1270.2	1287.2	1292.1	1293.9	1287.2	1271.4	1260.4
40°	1275.6	1278.1	1297.6	1320.1	1346.9	1380.4	1400.5	1409.6	1411.4	1404.1	1380.4
42.5°	1327.4	1331.1	1351.1	1384.0	1421.2	1463.8	1499.1	1521.6	1534.4	1534.4	1520.4
45°	1387.7	1392.6	1414.5	1450.4	1493.6	1547.2	1595.9	1639.2	1659.9	1661.1	1647.7
47.5°	1458.9	1463.2	1488.8	1525.3	1569.7	1623.9	1685.4	1734.8	1773.1	1775.6	1764.6
50°	1550.9	1557.0	1578.3	1611.2	1656.8	1711.6	1773.1	1841.9	1882.1	1891.9	1880.3
52.5°	1672.6	1673.9	1691.5	1722.0	1766.4	1818.8	1883.9	1958.8	2011.8	2019.7	2000.8
55°	1840.7	1838.9	1850.4	1883.3	1916.8	1957.6	2025.2	2109.2	2168.3	2180.5	2161.0
57.5°	2069.0	2067.2	2077.0	2084.9	2147.6	2187.2	2253.5	2333.9	2391.2	2426.5	2393.0
60°	2422.8	2421.0	2436.8	2483.1	2530.0	2587.8	2652.4	2748.6	2829.0	2839.3	2806.4
62.5°	2679.2	2688.3	2723.0	2777.2	2872.2	2985.4	3103.6	3230.2	3395.2	3447.6	3431.8
65°	2589.7	2607.9	2656.0	2738.2	2864.9	3021.4	3206.5	3436.0	3657.1	3780.7	3777.0
66°	2509.3	2529.4	2588.4	2667.6	2801.5	2972.7	3174.8	3425.1	3672.3	3808.7	3817.2
67.5°	2363.1	2385.7	2443.5	2537.3	2667.6	2849.7	3067.0	3339.2	3618.7	3777.6	3800.1
70°	2078.8	2104.4	2146.4	2223.7	2352.2	2514.8	2743.7	2987.3	3280.1	3462.2	3489.6
72.5°	1737.8	1760.3	1807.2	1870.5	1975.9	2078.2	2257.8	2437.4	2646.9	2854.5	2834.4
75°	1247.6	1257.4	1285.4	1354.2	1410.8	1502.8	1647.1	1794.4	1937.5	2032.5	2045.9
77.5°	648.5	674.1	713.6	789.7	851.2	934.1	1027.8	1138.6	1243.4	1330.4	1306.7
80°	424.4	435.4	470.7	509.6	554.7	607.7	670.4	711.8	725.2	719.7	725.2
82.5°	244.8	264.9	311.8	341.6	375.1	393.3	443.3	490.8	517.6	484.1	471.9
85°	31.1	40.2	126.7	159.5	182.7	210.1	225.3	253.9	236.9	211.9	258.2
87.5°	6.7	6.1	8.5	18.3	18.9	15.8	29.8	31.7	19.5	9.7	12.2
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):

	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°
0°	727.6	727.6	727.6	727.6	727.6	727.6	727.6	727.6	727.6	727.6	727.6
2.5°	720.3	720.9	722.2	724.0	725.2	726.4	727.6	729.5	730.7	731.9	734.3
5°	717.3	719.7	722.2	724.6	727.6	732.5	735.6	738.0	740.4	745.3	747.1
7.5°	715.5	719.7	723.4	727.6	732.5	736.8	742.2	745.3	748.9	752.0	755.6
10°	714.2	720.3	724.0	730.1	735.6	739.8	745.9	749.6	753.8	757.5	759.3
12.5°	716.7	719.7	723.4	729.5	736.2	742.2	748.9	752.0	755.6	758.7	759.3
15°	727.0	727.0	727.6	732.5	739.2	744.1	749.6	752.6	754.4	756.3	756.3
17.5°	745.9	741.6	738.6	739.2	743.5	746.5	749.6	749.6	748.3	747.7	746.5
20°	767.8	762.3	756.3	752.0	750.8	748.3	746.5	740.4	735.6	731.3	728.2
22.5°	799.5	791.0	782.4	774.5	767.2	758.1	747.7	735.6	724.0	716.1	711.2
25°	838.5	831.8	821.4	809.2	800.1	783.0	769.6	752.0	737.4	727.0	718.5
27.5°	893.9	885.9	876.2	865.2	851.9	833.0	816.5	795.8	778.2	763.0	752.0
30°	962.7	952.3	945.0	931.6	922.5	901.2	884.7	859.2	825.1	800.7	785.5
32.5°	1033.3	1021.7	1015.6	1005.3	994.9	982.2	957.2	917.6	873.8	834.2	808.0
35°	1127.7	1115.5	1104.5	1095.4	1080.2	1056.4	1034.5	987.0	926.7	871.3	827.5
37.5°	1246.4	1226.3	1198.9	1175.8	1149.0	1114.9	1081.4	1032.7	963.9	892.0	833.6
40°	1373.1	1337.8	1298.8	1255.6	1209.3	1160.0	1121.6	1072.3	994.9	909.7	829.3
42.5°	1505.2	1449.2	1395.0	1334.1	1269.6	1211.1	1161.2	1107.0	1018.1	914.6	812.3
45°	1636.1	1573.4	1491.2	1411.4	1329.8	1257.4	1201.4	1140.5	1039.4	916.4	789.7
47.5°	1744.5	1680.0	1586.2	1486.3	1389.5	1307.3	1241.5	1175.8	1068.0	929.2	784.3
50°	1859.0	1780.4	1676.3	1558.2	1448.6	1356.6	1286.6	1218.4	1108.2	962.1	801.9
52.5°	1983.8	1893.7	1771.9	1639.8	1519.8	1416.9	1340.8	1270.8	1159.3	1008.3	835.4
55°	2136.0	2025.8	1893.7	1744.5	1616.0	1502.2	1418.1	1335.3	1220.2	1063.1	877.4
57.5°	2368.6	2233.4	2084.9	1915.0	1772.5	1637.9	1537.5	1441.9	1314.6	1144.7	934.7
60°	2789.4	2645.1	2452.0	2246.2	2078.8	1921.7	1774.3	1655.6	1499.1	1305.5	1061.3
62.5°	3392.2	3200.4	2942.8	2654.8	2435.6	2209.1	2042.9	1866.3	1672.0	1463.2	1210.5
65°	3727.1	3494.5	3149.8	2815.6	2533.6	2287.6	2076.3	1871.8	1656.2	1456.5	1245.2
66°	3768.5	3526.1	3168.1	2816.2	2520.2	2267.5	2045.3	1833.4	1613.0	1422.4	1230.6
67.5°	3751.4	3503.6	3134.6	2763.2	2462.4	2190.8	1961.3	1741.5	1521.6	1343.8	1181.9
70°	3471.9	3236.9	2874.6	2514.8	2229.2	1961.3	1742.1	1525.9	1324.4	1172.1	1052.8
72.5°	2883.1	2682.2	2367.4	2084.9	1860.8	1639.8	1454.1	1247.6	1077.1	964.5	893.9
75°	2081.2	1959.4	1672.6	1510.7	1314.0	1167.3	987.0	864.6	742.2	687.4	675.3
77.5°	1314.6	1150.8	968.8	797.7	655.8	543.7	423.2	359.3	299.6	293.5	354.4
80°	665.5	599.2	461.5	367.8	309.3	250.3	197.9	149.8	104.7	126.0	151.0
82.5°	436.0	363.5	285.0	234.4	204.0	169.3	131.5	91.3	67.0	75.5	103.5
85°	235.6	200.9	162.0	127.9	103.5	92.6	62.1	43.8	43.2	46.3	59.1
87.5°	17.0	17.0	13.4	12.2	14.6	12.2	11.0	11.0	10.4	11.0	14.6
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°	727.6	727.6	727.6	727.6	727.6	727.6	727.6	727.6	727.6	727.6	727.6
2.5°	735.6	737.4	738.0	741.0	742.9	744.1	745.3	745.3	745.9	747.7	748.3
5°	749.6	752.6	756.3	758.7	759.9	763.6	764.8	764.8	766.0	768.4	770.3
7.5°	758.1	762.3	766.0	767.2	769.6	770.9	772.7	773.9	773.9	776.3	777.6
10°	761.1	763.6	767.2	767.2	769.6	769.6	771.5	772.1	772.1	774.5	776.3
12.5°	761.1	762.3	765.4	765.4	767.2	767.8	770.3	772.1	772.7	775.7	778.2
15°	757.5	758.7	761.1	761.7	766.0	768.4	773.9	777.6	777.6	780.6	781.8
17.5°	747.1	750.2	755.0	759.9	767.8	773.3	780.0	783.0	780.6	778.8	777.0
20°	730.1	735.6	747.1	759.3	773.3	780.6	784.3	781.2	772.7	764.2	758.7
22.5°	713.0	724.0	743.5	761.7	777.6	782.4	780.6	769.6	755.6	745.3	738.0
25°	720.9	733.7	752.6	769.0	779.4	778.2	770.9	755.6	740.4	727.0	714.8
27.5°	753.8	767.8	778.2	783.7	782.4	773.9	762.3	745.3	727.0	709.4	692.3
30°	784.9	792.2	794.6	790.4	780.6	766.6	752.0	732.5	708.2	686.2	666.7
32.5°	798.9	791.6	780.0	768.4	752.6	740.4	720.3	699.0	668.6	642.4	622.9
35°	798.9	769.6	740.4	716.1	692.3	677.1	654.0	625.3	597.3	575.4	560.2
37.5°	781.2	725.2	677.1	637.5	607.7	591.2	556.5	531.0	507.2	499.9	490.2
40°	748.9	666.1	596.7	545.0	507.2	482.9	448.2	430.5	421.4	417.7	415.9
42.5°	705.7	600.4	507.8	443.9	403.1	375.7	352.6	341.6	341.0	340.4	340.4
45°	659.4	529.7	421.4	345.2	309.3	285.0	274.0	269.7	273.4	272.8	273.4
47.5°	630.8	476.2	342.2	261.2	233.8	218.0	212.5	214.3	217.4	216.2	216.2
50°	627.2	448.8	289.2	203.4	182.7	174.8	173.5	173.5	175.4	174.1	173.5
52.5°	640.6	444.5	261.8	174.8	158.3	151.6	150.4	149.8	149.2	145.5	142.5
55°	663.7	454.2	253.9	167.4	150.4	143.1	141.3	140.0	137.6	132.7	127.3
57.5°	710.0	484.7	261.2	171.1	152.8	146.7	144.9	144.9	140.0	132.1	124.2
60°	821.4	562.0	291.1	185.1	164.4	158.3	159.5	158.9	151.6	140.0	127.9
62.5°	965.1	663.1	330.0	204.6	179.0	177.8	183.9	182.7	170.5	152.8	135.2
65°	1031.5	710.6	341.0	208.9	182.1	187.5	199.7	198.5	183.3	158.9	136.4
66°	1032.7	710.6	336.1	205.2	177.8	184.5	196.7	196.1	180.8	156.5	134.0
67.5°	1007.7	691.1	322.1	197.9	169.3	174.1	185.1	184.5	170.5	150.4	129.1
70°	914.0	618.6	286.2	185.1	157.7	155.3	158.9	156.5	147.4	133.3	118.7
72.5°	783.0	519.4	249.6	175.4	149.8	140.0	137.6	135.8	128.5	120.6	111.4
75°	616.8	411.0	219.2	168.1	142.5	129.7	125.4	123.0	118.1	112.6	105.3
77.5°	380.6	294.1	191.2	158.3	137.0	124.2	121.2	117.5	110.2	103.5	98.0
80°	169.9	182.1	157.1	138.2	122.4	110.8	105.9	100.5	93.2	88.9	85.9
82.5°	113.3	117.5	113.9	103.5	92.6	83.4	76.1	76.1	74.9	71.2	70.0
85°	72.5	73.1	70.6	63.9	59.7	54.2	51.1	51.8	54.2	53.6	53.0
87.5°	16.4	16.4	19.5	18.3	21.3	22.5	24.4	26.2	29.8	29.8	31.7
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: P156619

CATALOG NUMBER: TLM-E02-LED-E1-T4-7030

CANDELA DISTRIBUTION (continued):

	160°	165°	170°	175°	180°
0°	727.6	727.6	727.6	727.6	727.6
2.5°	748.9	750.2	751.4	749.6	750.2
5°	770.3	769.6	772.7	770.9	772.1
7.5°	777.0	777.6	780.0	780.0	780.6
10°	777.6	778.8	781.8	783.7	784.9
12.5°	780.6	783.0	787.9	789.1	789.1
15°	783.0	784.3	787.3	788.5	789.7
17.5°	774.5	772.1	773.3	773.9	773.3
20°	753.2	750.8	750.2	747.7	748.9
22.5°	730.1	723.4	719.1	714.2	714.2
25°	702.1	691.7	683.2	674.7	676.5
27.5°	675.9	662.5	654.0	648.5	647.3
30°	650.3	636.3	628.4	621.7	621.7
32.5°	607.7	597.9	587.6	583.3	582.7
35°	548.6	542.5	534.0	532.2	529.1
37.5°	482.2	480.4	473.1	472.5	469.5
40°	412.8	414.1	411.6	410.4	408.6
42.5°	343.4	349.5	348.3	347.7	346.5
45°	277.0	281.3	281.9	283.7	286.8
47.5°	218.0	219.2	220.4	219.8	220.4
50°	170.5	167.4	166.8	165.0	166.8
52.5°	137.6	132.7	130.3	127.9	126.7
55°	121.2	116.3	113.9	112.6	111.4
57.5°	116.9	112.0	108.4	105.9	105.3
60°	118.1	110.8	105.9	102.9	102.3
62.5°	121.2	111.4	104.7	101.7	101.1
65°	120.6	110.2	104.1	100.5	99.9
66°	118.7	109.0	102.9	99.9	99.3
67.5°	115.7	107.2	101.7	99.3	98.0
70°	110.2	104.7	100.5	97.4	96.2
72.5°	105.3	101.1	97.4	94.4	93.8
75°	99.9	96.2	92.6	90.1	89.5
77.5°	93.2	89.5	87.1	85.2	84.6
80°	82.2	79.8	77.3	74.9	74.9
82.5°	68.2	66.4	63.9	62.1	61.5
85°	52.4	52.4	50.5	48.7	48.1
87.5°	31.1	30.4	30.4	28.6	28.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)