

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: P156618

Luminaire Tested: **TLM-E02-LED-E1-T4-8030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P156618
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-T4-8030
Description: TALON MEDIUM LED SITE LUMINAIRE
(2) LIGHTBARS WITH AccuLED OPTICS - TYPE 4
Light Source: (42) 3000K CCT, 80 CRI LEDs
Ballast/Driver: -

Summary

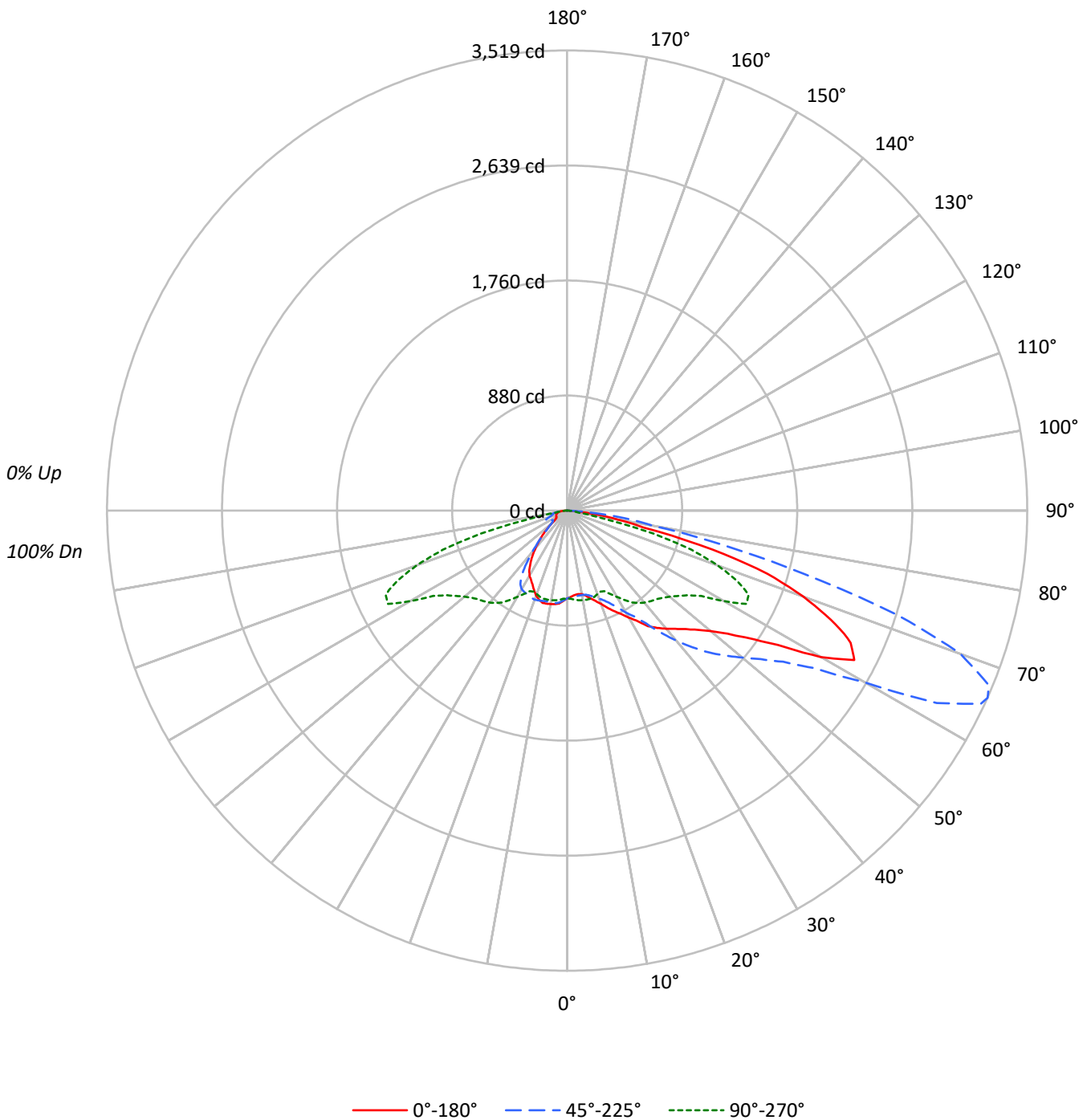
Lumens per Lamp: N/A
Luminaire Lumens: 5101.2 lumens
Efficiency: N/A
Efficacy: 97.9 lumens/watt
Spacing Criteria (0/90/45): 1.73 / 2.02 / 2.64
Luminous Opening: Rectangular (W 0.33' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 52.1
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	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°	21932	21932	21932
5°	21224	22402	23362
10°	21469	23072	24023
15°	23523	23540	24644
20°	26367	23593	24024
25°	30516	24524	22497
30°	35604	28715	21638
35°	42949	34101	19472
40°	50193	39148	16074
45°	59151	44307	12224
50°	72722	51962	7825
55°	96726	64124	5857
60°	146050	90371	6165
65°	184693	118117	7124
70°	183193	116712	8478
75°	145295	86441	10422
80°	73671	18183	12998
85°	10741	14933	16654



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	65.3	1.3
10°-20°	198.2	3.9
20°-30°	341.5	6.7
30°-40°	516.6	10.1
40°-50°	669.6	13.1
50°-60°	923.1	18.1
60°-70°	1434.2	28.1
70°-80°	834.0	16.3
80°-90°	118.6	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°	605.0	11.9
0°-40°	1121.6	22.0
0°-60°	2714.3	53.2
0°-90°	5101.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5101.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	672	672	672	672	672	
5°	648	658	684	707	714	62
15°	697	672	697	715	730	200
25°	848	784	681	712	625	395
35°	1079	1054	856	604	489	674
45°	1282	1535	960	253	265	1002
55°	1701	2015	1128	130	103	1575
65°	2393	3494	1530	185	92	2265
75°	1153	1878	686	116	83	1187
85°	29	196	40	47	44	124
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°	672.4	672.4	672.4	672.4	672.4	672.4	672.4	672.4	672.4	672.4	672.4
2.5°	660.0	662.3	660.6	661.1	661.1	661.7	661.7	662.3	661.7	663.4	664.5
5°	648.2	649.3	648.7	649.9	651.0	653.2	652.7	655.5	656.1	657.8	660.6
7.5°	643.7	642.6	643.1	644.8	645.9	647.1	648.2	650.4	652.1	656.1	658.3
10°	648.2	647.6	648.2	649.3	649.3	649.9	648.7	651.0	652.1	655.5	657.8
12.5°	666.8	666.8	665.6	665.6	664.5	663.4	660.6	658.9	658.3	658.9	660.0
15°	696.6	695.4	693.2	691.5	689.3	685.3	681.4	678.0	675.8	672.4	671.3
17.5°	725.8	724.1	721.9	719.6	716.8	712.9	706.7	702.8	696.6	692.6	690.4
20°	759.6	756.2	753.4	750.6	745.0	743.8	737.6	730.9	723.6	714.6	713.5
22.5°	803.5	797.9	794.5	792.8	787.2	785.5	775.3	765.8	756.8	745.0	742.1
25°	847.9	842.3	840.6	838.4	834.4	832.2	822.6	811.9	800.1	783.8	780.4
27.5°	891.3	891.8	887.3	889.0	887.9	883.9	874.4	863.7	854.7	835.6	831.6
30°	945.3	941.9	939.6	943.0	939.1	939.6	931.2	925.6	910.9	899.7	891.8
32.5°	1001.5	1001.0	1004.3	1006.6	1006.0	1004.9	998.2	992.5	979.6	963.3	959.9
35°	1078.6	1082.0	1084.8	1094.9	1094.9	1102.3	1095.5	1088.7	1073.6	1053.9	1047.1
37.5°	1130.9	1132.1	1143.3	1156.8	1173.7	1189.5	1194.0	1195.7	1189.5	1174.8	1164.7
40°	1178.8	1181.0	1199.0	1219.8	1244.6	1275.6	1294.1	1302.6	1304.2	1297.5	1275.6
42.5°	1226.6	1230.0	1248.5	1278.9	1313.2	1352.6	1385.3	1406.1	1417.9	1417.9	1405.0
45°	1282.3	1286.8	1307.1	1340.3	1380.2	1429.7	1474.7	1514.7	1533.8	1534.9	1522.6
47.5°	1348.1	1352.1	1375.7	1409.5	1450.5	1500.6	1557.4	1603.0	1638.5	1640.7	1630.6
50°	1433.1	1438.7	1458.4	1488.8	1531.0	1581.6	1638.5	1702.0	1739.2	1748.2	1737.5
52.5°	1545.6	1546.8	1563.1	1591.2	1632.3	1680.7	1740.9	1810.1	1859.0	1866.3	1848.9
55°	1700.9	1699.2	1709.9	1740.3	1771.3	1809.0	1871.4	1949.1	2003.6	2014.9	1996.9
57.5°	1911.9	1910.2	1919.2	1926.5	1984.5	2021.1	2082.4	2156.7	2209.6	2242.2	2211.3
60°	2238.8	2237.1	2251.8	2294.5	2337.9	2391.3	2450.9	2539.9	2614.1	2623.7	2593.3
62.5°	2475.7	2484.1	2516.2	2566.3	2654.1	2758.7	2867.9	2984.9	3137.4	3185.8	3171.2
65°	2393.0	2409.9	2454.3	2530.3	2647.3	2791.9	2963.0	3175.1	3379.3	3493.6	3490.2
66°	2318.7	2337.3	2391.9	2465.0	2588.8	2746.9	2933.7	3165.0	3393.4	3519.4	3527.3
67.5°	2183.7	2204.5	2258.0	2344.6	2465.0	2633.3	2834.1	3085.6	3343.9	3490.7	3511.6
70°	1920.9	1944.6	1983.4	2054.8	2173.6	2323.8	2535.3	2760.4	3031.1	3199.3	3224.6
72.5°	1605.8	1626.7	1670.0	1728.5	1825.8	1920.4	2086.3	2252.3	2445.9	2637.8	2619.2
75°	1152.9	1161.9	1187.8	1251.4	1303.7	1388.6	1522.0	1658.2	1790.4	1878.2	1890.5
77.5°	599.2	622.9	659.4	729.8	786.6	863.1	949.8	1052.2	1149.0	1229.4	1207.5
80°	392.2	402.3	434.9	470.9	512.6	561.5	619.5	657.8	670.1	665.1	670.1
82.5°	226.2	244.8	288.1	315.7	346.6	363.5	409.6	453.5	478.3	447.3	436.1
85°	28.7	37.1	117.0	147.4	168.8	194.1	208.2	234.6	218.9	195.8	238.6
87.5°	6.2	5.6	7.9	16.9	17.4	14.6	27.6	29.3	18.0	9.0	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):

	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°
0°	672.4	672.4	672.4	672.4	672.4	672.4	672.4	672.4	672.4	672.4	672.4
2.5°	665.6	666.2	667.3	669.0	670.1	671.3	672.4	674.1	675.2	676.3	678.6
5°	662.8	665.1	667.3	669.6	672.4	676.9	679.7	681.9	684.2	688.7	690.4
7.5°	661.1	665.1	668.4	672.4	676.9	680.8	685.9	688.7	692.1	694.9	698.3
10°	660.0	665.6	669.0	674.6	679.7	683.6	689.3	692.6	696.6	699.9	701.6
12.5°	662.3	665.1	668.4	674.1	680.3	685.9	692.1	694.9	698.3	701.1	701.6
15°	671.8	671.8	672.4	676.9	683.1	687.6	692.6	695.4	697.1	698.8	698.8
17.5°	689.3	685.3	682.5	683.1	687.0	689.8	692.6	692.6	691.5	690.9	689.8
20°	709.5	704.5	698.8	694.9	693.8	691.5	689.8	684.2	679.7	675.8	672.9
22.5°	738.8	730.9	723.0	715.7	709.0	700.5	690.9	679.7	669.0	661.7	657.2
25°	774.8	768.6	759.0	747.8	739.3	723.6	711.2	694.9	681.4	671.8	663.9
27.5°	826.0	818.7	809.7	799.5	787.2	769.7	754.5	735.4	719.1	705.0	694.9
30°	889.6	880.0	873.2	860.9	852.4	832.7	817.5	793.9	762.4	739.9	725.8
32.5°	954.8	944.1	938.5	929.0	919.4	907.6	884.5	847.9	807.4	770.8	746.7
35°	1042.0	1030.8	1020.7	1012.2	998.2	976.2	956.0	912.1	856.4	805.2	764.7
37.5°	1151.8	1133.2	1107.9	1086.5	1061.7	1030.2	999.3	954.3	890.7	824.3	770.3
40°	1268.8	1236.2	1200.2	1160.2	1117.4	1071.9	1036.4	990.8	919.4	840.6	766.3
42.5°	1390.9	1339.1	1289.1	1232.8	1173.1	1119.1	1073.0	1022.9	940.8	845.1	750.6
45°	1511.9	1453.9	1378.0	1304.2	1228.9	1161.9	1110.1	1053.9	960.5	846.8	729.8
47.5°	1612.0	1552.4	1465.7	1373.5	1284.0	1208.0	1147.3	1086.5	986.9	858.6	724.7
50°	1717.8	1645.2	1549.0	1439.8	1338.6	1253.6	1188.9	1125.9	1024.0	889.0	741.0
52.5°	1833.1	1749.9	1637.3	1515.2	1404.4	1309.3	1239.0	1174.3	1071.3	931.8	772.0
55°	1973.8	1872.0	1749.9	1612.0	1493.3	1388.1	1310.4	1233.9	1127.6	982.4	810.8
57.5°	2188.7	2063.8	1926.5	1769.6	1637.9	1513.6	1420.7	1332.4	1214.8	1057.8	863.7
60°	2577.5	2444.2	2265.8	2075.7	1920.9	1775.8	1639.6	1529.9	1385.3	1206.3	980.7
62.5°	3134.6	2957.3	2719.3	2453.2	2250.6	2041.3	1887.7	1724.6	1545.1	1352.1	1118.6
65°	3444.0	3229.1	2910.6	2601.7	2341.2	2113.9	1918.7	1729.6	1530.4	1345.9	1150.6
66°	3482.3	3258.4	2927.5	2602.3	2328.9	2095.3	1890.0	1694.2	1490.5	1314.4	1137.1
67.5°	3466.6	3237.5	2896.6	2553.4	2275.4	2024.5	1812.3	1609.2	1406.1	1241.8	1092.1
70°	3208.3	2991.1	2656.3	2323.8	2059.9	1812.3	1609.8	1410.0	1223.8	1083.1	972.8
72.5°	2664.2	2478.5	2187.6	1926.5	1719.5	1515.2	1343.6	1152.9	995.3	891.3	826.0
75°	1923.2	1810.6	1545.6	1396.0	1214.2	1078.6	912.1	799.0	685.9	635.2	624.0
77.5°	1214.8	1063.4	895.2	737.1	606.0	502.5	391.0	332.0	276.8	271.2	327.5
80°	615.0	553.7	426.5	339.8	285.8	231.3	182.9	138.4	96.8	116.5	139.5
82.5°	402.9	335.9	263.3	216.6	188.5	156.4	121.5	84.4	61.9	69.8	95.7
85°	217.7	185.7	149.7	118.2	95.7	85.5	57.4	40.5	39.9	42.8	54.6
87.5°	15.8	15.8	12.4	11.3	13.5	11.3	10.1	10.1	9.6	10.1	13.5
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°	672.4	672.4	672.4	672.4	672.4	672.4	672.4	672.4	672.4	672.4	672.4
2.5°	679.7	681.4	681.9	684.8	686.4	687.6	688.7	688.7	689.3	690.9	691.5
5°	692.6	695.4	698.8	701.1	702.2	705.6	706.7	706.7	707.8	710.1	711.8
7.5°	700.5	704.5	707.8	709.0	711.2	712.3	714.0	715.1	715.1	717.4	718.5
10°	703.3	705.6	709.0	709.0	711.2	711.2	712.9	713.5	713.5	715.7	717.4
12.5°	703.3	704.5	707.3	707.3	709.0	709.5	711.8	713.5	714.0	716.8	719.1
15°	699.9	701.1	703.3	703.9	707.8	710.1	715.1	718.5	718.5	721.3	722.5
17.5°	690.4	693.2	697.7	702.2	709.5	714.6	720.8	723.6	721.3	719.6	718.0
20°	674.6	679.7	690.4	701.6	714.6	721.3	724.7	721.9	714.0	706.1	701.1
22.5°	658.9	669.0	687.0	703.9	718.5	723.0	721.3	711.2	698.3	688.7	681.9
25°	666.2	678.0	695.4	710.6	720.2	719.1	712.3	698.3	684.2	671.8	660.6
27.5°	696.6	709.5	719.1	724.1	723.0	715.1	704.5	688.7	671.8	655.5	639.7
30°	725.3	732.0	734.3	730.3	721.3	708.4	694.9	676.9	654.4	634.1	616.1
32.5°	738.2	731.5	720.8	710.1	695.4	684.2	665.6	645.9	617.8	593.6	575.6
35°	738.2	711.2	684.2	661.7	639.7	625.7	604.3	577.9	552.0	531.7	517.6
37.5°	721.9	670.1	625.7	589.1	561.5	546.3	514.3	490.6	468.7	461.9	452.9
40°	692.1	615.6	551.4	503.6	468.7	446.2	414.1	397.8	389.4	386.0	384.3
42.5°	652.1	554.8	469.3	410.2	372.5	347.2	325.8	315.7	315.1	314.5	314.5
45°	609.4	489.5	389.4	319.0	285.8	263.3	253.2	249.3	252.6	252.1	252.6
47.5°	582.9	440.0	316.2	241.4	216.1	201.4	196.4	198.1	200.9	199.7	199.7
50°	579.5	414.7	267.3	187.9	168.8	161.5	160.4	160.4	162.0	160.9	160.4
52.5°	591.9	410.7	241.9	161.5	146.3	140.1	139.0	138.4	137.9	134.5	131.7
55°	613.3	419.7	234.6	154.7	139.0	132.2	130.5	129.4	127.2	122.7	117.6
57.5°	656.1	447.9	241.4	158.1	141.2	135.6	133.9	133.9	129.4	122.1	114.8
60°	759.0	519.3	269.0	171.0	151.9	146.3	147.4	146.9	140.1	129.4	118.2
62.5°	891.8	612.7	305.0	189.1	165.4	164.3	169.9	168.8	157.5	141.2	124.9
65°	953.1	656.6	315.1	193.0	168.2	173.3	184.6	183.4	169.4	146.9	126.0
66°	954.3	656.6	310.6	189.6	164.3	170.5	181.7	181.2	167.1	144.6	123.8
67.5°	931.2	638.6	297.6	182.9	156.4	160.9	171.0	170.5	157.5	139.0	119.3
70°	844.6	571.7	264.5	171.0	145.7	143.5	146.9	144.6	136.2	123.2	109.7
72.5°	723.6	479.9	230.7	162.0	138.4	129.4	127.2	125.5	118.7	111.4	103.0
75°	570.0	379.8	202.6	155.3	131.7	119.8	115.9	113.7	109.2	104.1	97.3
77.5°	351.7	271.8	176.7	146.3	126.6	114.8	112.0	108.6	101.8	95.7	90.6
80°	157.0	168.2	145.2	127.7	113.1	102.4	97.9	92.8	86.1	82.1	79.3
82.5°	104.7	108.6	105.2	95.7	85.5	77.1	70.3	70.3	69.2	65.8	64.7
85°	67.0	67.5	65.3	59.1	55.1	50.1	47.3	47.8	50.1	49.5	49.0
87.5°	15.2	15.2	18.0	16.9	19.7	20.8	22.5	24.2	27.6	27.6	29.3
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: P156618

CATALOG NUMBER: TLM-E02-LED-E1-T4-8030

CANDELA DISTRIBUTION (continued):

	160°	165°	170°	175°	180°
0°	672.4	672.4	672.4	672.4	672.4
2.5°	692.1	693.2	694.3	692.6	693.2
5°	711.8	711.2	714.0	712.3	713.5
7.5°	718.0	718.5	720.8	720.8	721.3
10°	718.5	719.6	722.5	724.1	725.3
12.5°	721.3	723.6	728.1	729.2	729.2
15°	723.6	724.7	727.5	728.6	729.8
17.5°	715.7	713.5	714.6	715.1	714.6
20°	696.0	693.8	693.2	690.9	692.1
22.5°	674.6	668.4	664.5	660.0	660.0
25°	648.7	639.2	631.3	623.4	625.1
27.5°	624.6	612.2	604.3	599.2	598.1
30°	600.9	588.0	580.7	574.5	574.5
32.5°	561.5	552.5	543.0	539.0	538.5
35°	507.0	501.3	493.5	491.8	489.0
37.5°	445.6	443.9	437.2	436.6	433.8
40°	381.5	382.6	380.4	379.2	377.5
42.5°	317.3	323.0	321.8	321.3	320.2
45°	256.0	259.9	260.5	262.2	265.0
47.5°	201.4	202.6	203.7	203.1	203.7
50°	157.5	154.7	154.2	152.5	154.2
52.5°	127.2	122.7	120.4	118.2	117.0
55°	112.0	107.5	105.2	104.1	103.0
57.5°	108.0	103.5	100.2	97.9	97.3
60°	109.2	102.4	97.9	95.1	94.5
62.5°	112.0	103.0	96.8	94.0	93.4
65°	111.4	101.8	96.2	92.8	92.3
66°	109.7	100.7	95.1	92.3	91.7
67.5°	106.9	99.0	94.0	91.7	90.6
70°	101.8	96.8	92.8	90.0	88.9
72.5°	97.3	93.4	90.0	87.2	86.6
75°	92.3	88.9	85.5	83.3	82.7
77.5°	86.1	82.7	80.5	78.8	78.2
80°	76.0	73.7	71.5	69.2	69.2
82.5°	63.0	61.3	59.1	57.4	56.8
85°	48.4	48.4	46.7	45.0	44.5
87.5°	28.7	28.1	28.1	26.4	26.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)