

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: P156621

Luminaire Tested: **TLM-E02-LED-E1-T4-7050**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P156621
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-T4-7050
Description: TALON MEDIUM LED SITE LUMINAIRE
(2) LIGHTBARS WITH AccuLED OPTICS - TYPE 4
Light Source: (42) 5000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6201.9 lumens
Efficiency: N/A
Efficacy: 119.0 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

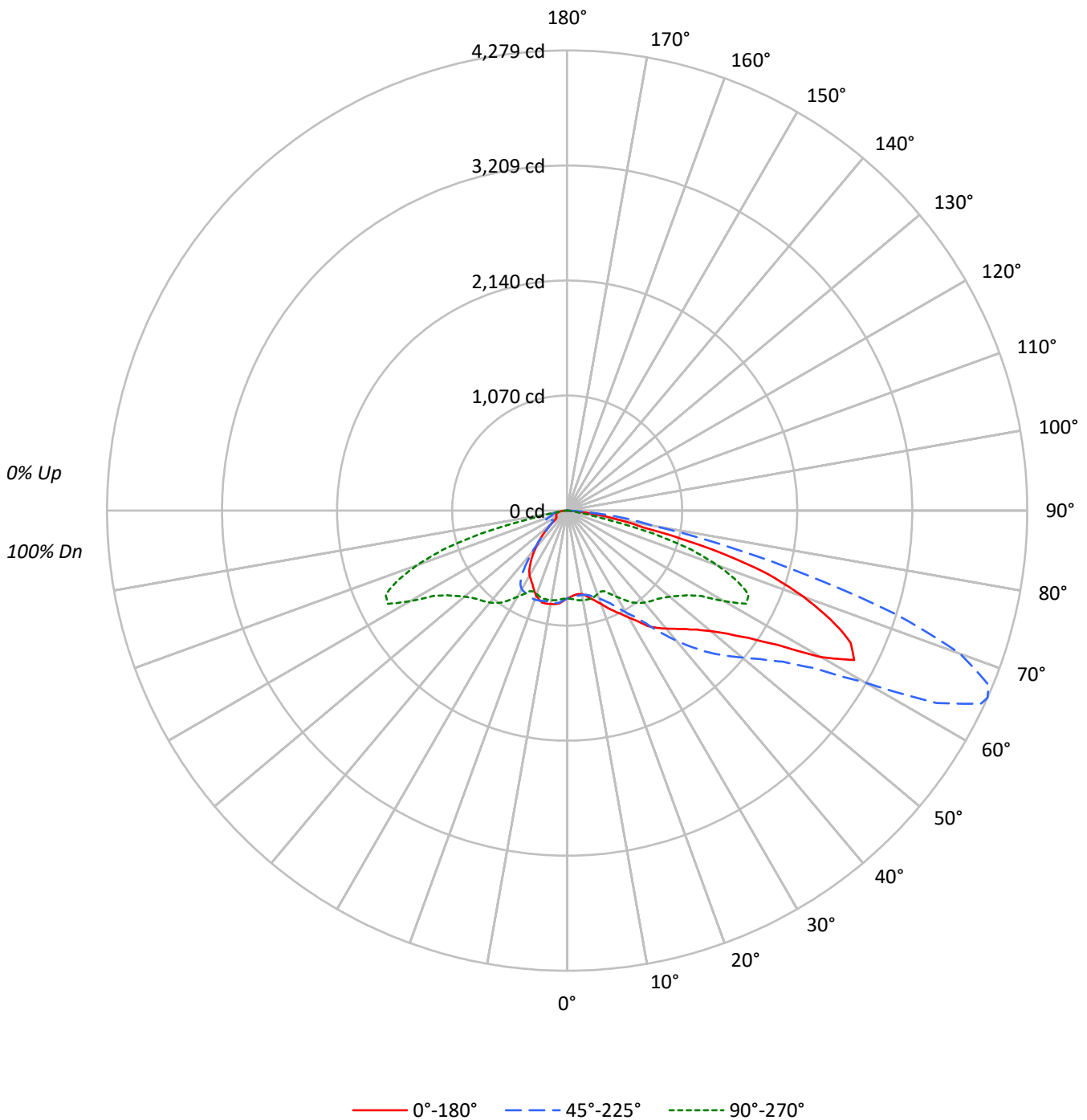
Input Watts (W): 52.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	26665	26665	26665
5°	25801	27235	28401
10°	26099	28050	29206
15°	28599	28622	29959
20°	32056	28685	29206
25°	37102	29814	27352
30°	43283	34911	26304
35°	52219	41460	23672
40°	61021	47596	19544
45°	71915	53864	14863
50°	88412	63177	9510
55°	117597	77960	7120
60°	177565	109870	7496
65°	224549	143610	8660
70°	222723	141899	10309
75°	176651	105093	12678
80°	89562	22109	15797
85°	13061	18188	20209



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	79.4	1.3
10°-20°	241.0	3.9
20°-30°	415.1	6.7
30°-40°	628.1	10.1
40°-50°	814.1	13.1
50°-60°	1122.3	18.1
60°-70°	1743.7	28.1
70°-80°	1014.0	16.3
80°-90°	144.2	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°	735.5	11.9
0°-40°	1363.6	22.0
0°-60°	3300.0	53.2
0°-90°	6201.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6201.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	818	818	818	818	818	
5°	788	800	832	859	867	75
15°	847	818	848	870	887	243
25°	1031	953	828	866	760	481
35°	1311	1281	1041	735	594	820
45°	1559	1866	1168	308	322	1219
55°	2068	2450	1371	159	125	1915
65°	2909	4247	1861	224	112	2753
75°	1402	2283	834	141	101	1444
85°	35	238	49	58	54	151
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°	817.5	817.5	817.5	817.5	817.5	817.5	817.5	817.5	817.5	817.5	817.5
2.5°	802.4	805.2	803.1	803.8	803.8	804.5	804.5	805.2	804.5	806.5	807.9
5°	788.0	789.4	788.7	790.1	791.5	794.2	793.5	796.9	797.6	799.7	803.1
7.5°	782.6	781.2	781.9	783.9	785.3	786.7	788.0	790.8	792.8	797.6	800.4
10°	788.0	787.4	788.0	789.4	789.4	790.1	788.7	791.5	792.8	796.9	799.7
12.5°	810.6	810.6	809.3	809.3	807.9	806.5	803.1	801.0	800.4	801.0	802.4
15°	846.9	845.5	842.8	840.7	838.0	833.2	828.4	824.3	821.6	817.5	816.1
17.5°	882.5	880.4	877.7	874.9	871.5	866.7	859.2	854.4	846.9	842.1	839.4
20°	923.5	919.4	916.0	912.5	905.7	904.3	896.8	888.6	879.7	868.8	867.4
22.5°	976.9	970.0	965.9	963.9	957.0	955.0	942.6	931.0	920.1	905.7	902.3
25°	1030.9	1024.1	1022.0	1019.3	1014.5	1011.7	1000.1	987.1	972.7	952.9	948.8
27.5°	1083.6	1084.3	1078.8	1080.8	1079.5	1074.7	1063.0	1050.0	1039.1	1015.8	1011.1
30°	1149.2	1145.1	1142.4	1146.5	1141.7	1142.4	1132.1	1125.3	1107.5	1093.8	1084.3
32.5°	1217.6	1217.0	1221.1	1223.8	1223.1	1221.7	1213.5	1206.7	1191.0	1171.1	1167.0
35°	1311.4	1315.5	1318.9	1331.2	1331.2	1340.1	1331.9	1323.7	1305.2	1281.3	1273.1
37.5°	1375.0	1376.3	1390.0	1406.4	1427.0	1446.1	1451.6	1453.6	1446.1	1428.3	1416.0
40°	1433.1	1435.9	1457.8	1483.1	1513.2	1550.8	1573.4	1583.6	1585.7	1577.5	1550.8
42.5°	1491.3	1495.4	1518.0	1554.9	1596.6	1644.5	1684.2	1709.5	1723.9	1723.9	1708.1
45°	1559.0	1564.5	1589.1	1629.5	1678.0	1738.2	1792.9	1841.5	1864.8	1866.1	1851.1
47.5°	1639.0	1643.8	1672.6	1713.6	1763.5	1824.4	1893.5	1948.9	1992.0	1994.7	1982.4
50°	1742.3	1749.2	1773.1	1810.0	1861.4	1922.9	1992.0	2069.3	2114.5	2125.4	2112.4
52.5°	1879.1	1880.5	1900.3	1934.6	1984.5	2043.3	2116.5	2200.7	2260.2	2269.1	2247.9
55°	2067.9	2065.9	2078.9	2115.8	2153.5	2199.3	2275.2	2369.6	2436.0	2449.7	2427.8
57.5°	2324.5	2322.4	2333.4	2342.3	2412.7	2457.2	2531.7	2622.0	2686.3	2726.0	2688.4
60°	2721.9	2719.9	2737.6	2789.6	2842.3	2907.3	2979.8	3087.9	3178.2	3189.8	3152.9
62.5°	3009.9	3020.2	3059.2	3120.0	3226.8	3354.0	3486.7	3629.0	3814.4	3873.2	3855.4
65°	2909.4	2929.9	2983.9	3076.3	3218.6	3394.4	3602.3	3860.2	4108.5	4247.4	4243.3
66°	2819.1	2841.6	2908.0	2996.9	3147.4	3339.6	3566.7	3847.9	4125.6	4278.9	4288.4
67.5°	2654.9	2680.2	2745.2	2850.5	2996.9	3201.4	3445.7	3751.4	4065.4	4244.0	4269.3
70°	2335.4	2364.1	2411.3	2498.2	2642.6	2825.2	3082.4	3356.0	3685.1	3889.6	3920.4
72.5°	1952.3	1977.6	2030.3	2101.5	2219.8	2334.7	2536.5	2738.3	2973.7	3206.9	3184.3
75°	1401.7	1412.6	1444.1	1521.4	1585.0	1688.3	1850.4	2016.0	2176.7	2283.4	2298.5
77.5°	728.5	757.3	801.7	887.2	956.3	1049.4	1154.7	1279.2	1396.9	1494.7	1468.0
80°	476.8	489.1	528.8	572.6	623.2	682.7	753.2	799.7	814.7	808.6	814.7
82.5°	275.0	297.6	350.2	383.8	421.4	441.9	498.0	551.4	581.5	543.8	530.2
85°	34.9	45.1	142.3	179.2	205.2	236.0	253.1	285.3	266.1	238.1	290.0
87.5°	7.5	6.8	9.6	20.5	21.2	17.8	33.5	35.6	21.9	10.9	13.7
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°	817.5	817.5	817.5	817.5	817.5	817.5	817.5	817.5	817.5	817.5	817.5
2.5°	809.3	809.9	811.3	813.4	814.7	816.1	817.5	819.5	820.9	822.3	825.0
5°	805.8	808.6	811.3	814.0	817.5	822.9	826.4	829.1	831.8	837.3	839.4
7.5°	803.8	808.6	812.7	817.5	822.9	827.7	833.9	837.3	841.4	844.8	848.9
10°	802.4	809.3	813.4	820.2	826.4	831.1	838.0	842.1	846.9	851.0	853.0
12.5°	805.2	808.6	812.7	819.5	827.0	833.9	841.4	844.8	848.9	852.4	853.0
15°	816.8	816.8	817.5	822.9	830.5	835.9	842.1	845.5	847.6	849.6	849.6
17.5°	838.0	833.2	829.8	830.5	835.2	838.7	842.1	842.1	840.7	840.0	838.7
20°	862.6	856.5	849.6	844.8	843.5	840.7	838.7	831.8	826.4	821.6	818.1
22.5°	898.2	888.6	879.0	870.1	861.9	851.7	840.0	826.4	813.4	804.5	799.0
25°	942.0	934.4	922.8	909.1	898.9	879.7	864.7	844.8	828.4	816.8	807.2
27.5°	1004.2	995.3	984.4	972.1	957.0	935.8	917.3	894.1	874.2	857.1	844.8
30°	1081.5	1069.9	1061.7	1046.6	1036.4	1012.4	994.0	965.2	926.9	899.6	882.5
32.5°	1160.9	1147.9	1141.0	1129.4	1117.8	1103.4	1075.4	1030.9	981.6	937.2	907.8
35°	1266.9	1253.2	1240.9	1230.6	1213.5	1186.9	1162.2	1108.9	1041.2	978.9	929.7
37.5°	1400.3	1377.7	1346.9	1320.9	1290.8	1252.5	1214.9	1160.2	1082.9	1002.2	936.5
40°	1542.6	1502.9	1459.1	1410.6	1358.6	1303.2	1260.1	1204.6	1117.8	1022.0	931.7
42.5°	1691.0	1628.1	1567.2	1498.8	1426.3	1360.6	1304.5	1243.6	1143.8	1027.5	912.5
45°	1838.1	1767.6	1675.3	1585.7	1494.0	1412.6	1349.7	1281.3	1167.7	1029.5	887.2
47.5°	1959.9	1887.3	1782.0	1669.8	1561.0	1468.7	1394.8	1320.9	1199.9	1043.9	881.1
50°	2088.5	2000.2	1883.2	1750.5	1627.4	1524.1	1445.4	1368.8	1245.0	1080.8	900.9
52.5°	2228.7	2127.5	1990.6	1842.2	1707.4	1591.8	1506.3	1427.7	1302.5	1132.8	938.5
55°	2399.7	2275.9	2127.5	1959.9	1815.5	1687.6	1593.2	1500.2	1370.9	1194.4	985.7
57.5°	2661.0	2509.2	2342.3	2151.4	1991.3	1840.1	1727.3	1619.9	1476.9	1286.1	1050.0
60°	3133.7	2971.6	2754.8	2523.5	2335.4	2158.9	1993.4	1860.0	1684.2	1466.6	1192.3
62.5°	3811.0	3595.5	3306.1	2982.5	2736.3	2481.8	2295.1	2096.7	1878.5	1643.8	1359.9
65°	4187.2	3925.9	3538.7	3163.1	2846.4	2570.1	2332.7	2102.8	1860.7	1636.3	1398.9
66°	4233.7	3961.5	3559.2	3163.8	2831.4	2547.5	2297.8	2059.7	1812.1	1598.0	1382.5
67.5°	4214.6	3936.1	3521.6	3104.3	2766.4	2461.3	2203.4	1956.4	1709.5	1509.7	1327.8
70°	3900.6	3636.5	3229.5	2825.2	2504.4	2203.4	1957.1	1714.3	1487.9	1316.8	1182.8
72.5°	3239.1	3013.3	2659.7	2342.3	2090.5	1842.2	1633.6	1401.7	1210.1	1083.6	1004.2
75°	2338.2	2201.3	1879.1	1697.2	1476.2	1311.4	1108.9	971.4	833.9	772.3	758.6
77.5°	1476.9	1292.9	1088.4	896.1	736.7	610.9	475.4	403.6	336.6	329.7	398.1
80°	747.7	673.1	518.5	413.2	347.5	281.2	222.3	168.3	117.7	141.6	169.6
82.5°	489.8	408.4	320.1	263.4	229.2	190.2	147.8	102.6	75.2	84.8	116.3
85°	264.7	225.7	182.0	143.7	116.3	104.0	69.8	49.3	48.6	52.0	66.4
87.5°	19.2	19.2	15.0	13.7	16.4	13.7	12.3	12.3	11.6	12.3	16.4
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°	817.5	817.5	817.5	817.5	817.5	817.5	817.5	817.5	817.5	817.5	817.5
2.5°	826.4	828.4	829.1	832.5	834.6	835.9	837.3	837.3	838.0	840.0	840.7
5°	842.1	845.5	849.6	852.4	853.7	857.8	859.2	859.2	860.6	863.3	865.3
7.5°	851.7	856.5	860.6	861.9	864.7	866.0	868.1	869.5	869.5	872.2	873.6
10°	855.1	857.8	861.9	861.9	864.7	864.7	866.7	867.4	867.4	870.1	872.2
12.5°	855.1	856.5	859.9	859.9	861.9	862.6	865.3	867.4	868.1	871.5	874.2
15°	851.0	852.4	855.1	855.8	860.6	863.3	869.5	873.6	873.6	877.0	878.3
17.5°	839.4	842.8	848.2	853.7	862.6	868.8	876.3	879.7	877.0	874.9	872.9
20°	820.2	826.4	839.4	853.0	868.8	877.0	881.1	877.7	868.1	858.5	852.4
22.5°	801.0	813.4	835.2	855.8	873.6	879.0	877.0	864.7	848.9	837.3	829.1
25°	809.9	824.3	845.5	864.0	875.6	874.2	866.0	848.9	831.8	816.8	803.1
27.5°	846.9	862.6	874.2	880.4	879.0	869.5	856.5	837.3	816.8	796.9	777.8
30°	881.8	890.0	892.7	887.9	877.0	861.2	844.8	822.9	795.6	770.9	749.1
32.5°	897.5	889.3	876.3	863.3	845.5	831.8	809.3	785.3	751.1	721.7	699.8
35°	897.5	864.7	831.8	804.5	777.8	760.7	734.7	702.5	671.1	646.4	629.3
37.5°	877.7	814.7	760.7	716.2	682.7	664.2	625.2	596.5	569.8	561.6	550.7
40°	841.4	748.4	670.4	612.2	569.8	542.5	503.5	483.6	473.4	469.3	467.2
42.5°	792.8	674.5	570.5	498.7	452.9	422.1	396.1	383.8	383.1	382.4	382.4
45°	740.8	595.1	473.4	387.9	347.5	320.1	307.8	303.0	307.1	306.5	307.1
47.5°	708.7	534.9	384.4	293.5	262.7	244.9	238.7	240.8	244.2	242.8	242.8
50°	704.6	504.2	324.9	228.5	205.2	196.3	195.0	195.0	197.0	195.6	195.0
52.5°	719.6	499.4	294.2	196.3	177.9	170.3	169.0	168.3	167.6	163.5	160.1
55°	745.6	510.3	285.3	188.1	169.0	160.8	158.7	157.3	154.6	149.1	143.0
57.5°	797.6	544.5	293.5	192.2	171.7	164.9	162.8	162.8	157.3	148.4	139.6
60°	922.8	631.4	327.0	208.0	184.7	177.9	179.2	178.5	170.3	157.3	143.7
62.5°	1084.3	745.0	370.8	229.8	201.1	199.7	206.6	205.2	191.5	171.7	151.9
65°	1158.8	798.3	383.1	234.6	204.5	210.7	224.4	223.0	205.9	178.5	153.2
66°	1160.2	798.3	377.6	230.5	199.7	207.3	221.0	220.3	203.2	175.8	150.5
67.5°	1132.1	776.4	361.9	222.3	190.2	195.6	208.0	207.3	191.5	169.0	145.0
70°	1026.8	695.0	321.5	208.0	177.2	174.4	178.5	175.8	165.5	149.8	133.4
72.5°	879.7	583.5	280.5	197.0	168.3	157.3	154.6	152.5	144.3	135.4	125.2
75°	693.0	461.7	246.3	188.8	160.1	145.7	140.9	138.2	132.7	126.6	118.3
77.5°	427.5	330.4	214.8	177.9	153.9	139.6	136.1	132.0	123.8	116.3	110.1
80°	190.9	204.5	176.5	155.3	137.5	124.5	119.0	112.9	104.7	99.9	96.5
82.5°	127.2	132.0	127.9	116.3	104.0	93.7	85.5	85.5	84.1	80.0	78.7
85°	81.4	82.1	79.4	71.8	67.0	60.9	57.5	58.1	60.9	60.2	59.5
87.5°	18.5	18.5	21.9	20.5	23.9	25.3	27.4	29.4	33.5	33.5	35.6
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: P156621

CATALOG NUMBER: TLM-E02-LED-E1-T4-7050

CANDELA DISTRIBUTION (continued):

	160°	165°	170°	175°	180°
0°	817.5	817.5	817.5	817.5	817.5
2.5°	841.4	842.8	844.1	842.1	842.8
5°	865.3	864.7	868.1	866.0	867.4
7.5°	872.9	873.6	876.3	876.3	877.0
10°	873.6	874.9	878.3	880.4	881.8
12.5°	877.0	879.7	885.2	886.6	886.6
15°	879.7	881.1	884.5	885.9	887.2
17.5°	870.1	867.4	868.8	869.5	868.8
20°	846.2	843.5	842.8	840.0	841.4
22.5°	820.2	812.7	807.9	802.4	802.4
25°	788.7	777.1	767.5	757.9	760.0
27.5°	759.3	744.3	734.7	728.5	727.2
30°	730.6	714.9	706.0	698.4	698.4
32.5°	682.7	671.8	660.1	655.3	654.7
35°	616.3	609.5	599.9	597.9	594.5
37.5°	541.8	539.7	531.5	530.8	527.4
40°	463.8	465.2	462.4	461.1	459.0
42.5°	385.8	392.7	391.3	390.6	389.2
45°	311.3	316.0	316.7	318.8	322.2
47.5°	244.9	246.3	247.6	246.9	247.6
50°	191.5	188.1	187.4	185.4	187.4
52.5°	154.6	149.1	146.4	143.7	142.3
55°	136.1	130.7	127.9	126.6	125.2
57.5°	131.3	125.9	121.8	119.0	118.3
60°	132.7	124.5	119.0	115.6	114.9
62.5°	136.1	125.2	117.7	114.2	113.6
65°	135.4	123.8	117.0	112.9	112.2
66°	133.4	122.4	115.6	112.2	111.5
67.5°	130.0	120.4	114.2	111.5	110.1
70°	123.8	117.7	112.9	109.5	108.1
72.5°	118.3	113.6	109.5	106.0	105.3
75°	112.2	108.1	104.0	101.2	100.6
77.5°	104.7	100.6	97.8	95.8	95.1
80°	92.3	89.6	86.9	84.1	84.1
82.5°	76.6	74.6	71.8	69.8	69.1
85°	58.8	58.8	56.8	54.7	54.0
87.5°	34.9	34.2	34.2	32.2	32.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)