

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: P156620

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P156620
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
Description: TALON MEDIUM LED SITE LUMINAIRE
(2) LIGHTBARS WITH AccuLED OPTICS - TYPE 4
Light Source: (42) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

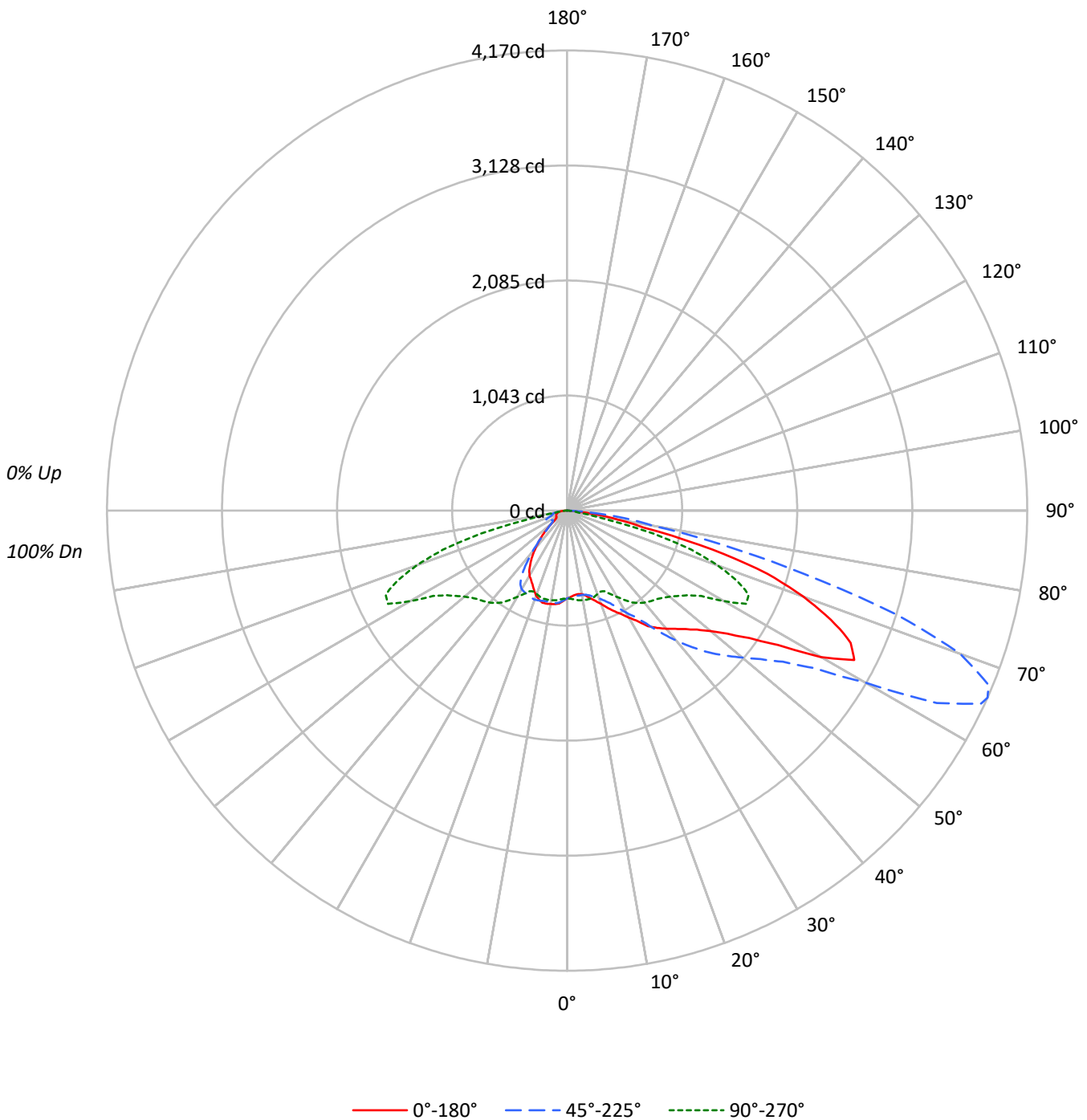
Lumens per Lamp: N/A
Luminaire Lumens: 6044.1 lumens
Efficiency: N/A
Efficacy: 116.0 lumens/watt
Spacing Criteria (0/90/45): 1.73 / 2.02 / 2.64
Luminous Opening: Rectangular (W 0.33' x L: 1' x H: 0')
CIE Type: Direct

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	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°	25987	25987	25987
5°	25146	26544	27677
10°	25437	27335	28461
15°	27869	27893	29200
20°	31240	27953	28463
25°	36159	29055	26658
30°	42184	34022	25638
35°	50889	40404	23067
40°	59471	46382	19046
45°	70083	52494	14484
50°	86164	61568	9271
55°	114605	75975	6938
60°	173051	107072	7306
65°	218830	139952	8436
70°	217059	138284	10042
75°	172151	102421	12351
80°	87289	21545	15403
85°	12724	17702	19723



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	77.4	1.3
10°-20°	234.9	3.9
20°-30°	404.6	6.7
30°-40°	612.1	10.1
40°-50°	793.3	13.1
50°-60°	1093.8	18.1
60°-70°	1699.4	28.1
70°-80°	988.2	16.3
80°-90°	140.5	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°	716.8	11.9
0°-40°	1328.9	22.0
0°-60°	3216.0	53.2
0°-90°	6044.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6044.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	797	797	797	797	797	
5°	768	779	811	837	845	73
15°	825	797	826	847	865	236
25°	1005	929	807	844	741	468
35°	1278	1249	1015	716	579	799
45°	1519	1819	1138	300	314	1187
55°	2015	2387	1336	155	122	1867
65°	2835	4139	1813	219	109	2683
75°	1366	2225	813	137	98	1407
85°	34	232	47	56	53	147
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°	796.7	796.7	796.7	796.7	796.7	796.7	796.7	796.7	796.7	796.7	796.7
2.5°	782.0	784.7	782.7	783.3	783.3	784.0	784.0	784.7	784.0	786.0	787.3
5°	768.0	769.3	768.7	770.0	771.3	774.0	773.3	776.7	777.3	779.3	782.7
7.5°	762.7	761.3	762.0	764.0	765.3	766.7	768.0	770.7	772.7	777.3	780.0
10°	768.0	767.3	768.0	769.3	769.3	770.0	768.7	771.3	772.7	776.7	779.3
12.5°	790.0	790.0	788.7	788.7	787.3	786.0	782.7	780.7	780.0	780.7	782.0
15°	825.3	824.0	821.3	819.3	816.7	812.0	807.3	803.3	800.7	796.7	795.3
17.5°	860.0	858.0	855.3	852.7	849.3	844.7	837.3	832.7	825.3	820.7	818.0
20°	900.0	896.0	892.7	889.3	882.7	881.3	874.0	866.0	857.3	846.7	845.3
22.5°	952.0	945.3	941.3	939.3	932.7	930.7	918.7	907.3	896.7	882.7	879.3
25°	1004.7	998.0	996.0	993.3	988.7	986.0	974.7	962.0	948.0	928.7	924.7
27.5°	1056.0	1056.7	1051.3	1053.3	1052.0	1047.3	1036.0	1023.3	1012.7	990.0	985.3
30°	1120.0	1116.0	1113.3	1117.3	1112.7	1113.3	1103.3	1096.7	1079.3	1066.0	1056.7
32.5°	1186.7	1186.0	1190.0	1192.7	1192.0	1190.7	1182.7	1176.0	1160.7	1141.3	1137.3
35°	1278.0	1282.0	1285.3	1297.3	1297.3	1306.0	1298.0	1290.0	1272.0	1248.7	1240.7
37.5°	1340.0	1341.3	1354.7	1370.7	1390.7	1409.3	1414.7	1416.7	1409.3	1392.0	1380.0
40°	1396.7	1399.3	1420.7	1445.3	1474.7	1511.3	1533.3	1543.3	1545.3	1537.3	1511.3
42.5°	1453.3	1457.3	1479.3	1515.3	1556.0	1602.7	1641.3	1666.0	1680.0	1680.0	1664.7
45°	1519.3	1524.7	1548.7	1588.0	1635.3	1694.0	1747.3	1794.7	1817.3	1818.7	1804.0
47.5°	1597.3	1602.0	1630.0	1670.0	1718.7	1778.0	1845.3	1899.3	1941.3	1944.0	1932.0
50°	1698.0	1704.7	1728.0	1764.0	1814.0	1874.0	1941.3	2016.7	2060.7	2071.3	2058.7
52.5°	1831.3	1832.7	1852.0	1885.3	1934.0	1991.3	2062.7	2144.7	2202.7	2211.3	2190.7
55°	2015.3	2013.3	2026.0	2062.0	2098.7	2143.3	2217.3	2309.3	2374.0	2387.3	2366.0
57.5°	2265.3	2263.3	2274.0	2282.7	2351.3	2394.7	2467.3	2555.3	2618.0	2656.7	2620.0
60°	2652.7	2650.7	2668.0	2718.7	2770.0	2833.3	2904.0	3009.3	3097.3	3108.7	3072.7
62.5°	2933.3	2943.3	2981.3	3040.7	3144.7	3268.7	3398.0	3536.7	3717.3	3774.7	3757.3
65°	2835.3	2855.3	2908.0	2998.0	3136.7	3308.0	3510.7	3762.0	4004.0	4139.3	4135.3
66°	2747.3	2769.3	2834.0	2920.7	3067.3	3254.7	3476.0	3750.0	4020.7	4170.0	4179.3
67.5°	2587.3	2612.0	2675.3	2778.0	2920.7	3120.0	3358.0	3656.0	3962.0	4136.0	4160.7
70°	2276.0	2304.0	2350.0	2434.7	2575.3	2753.3	3004.0	3270.7	3591.3	3790.7	3820.7
72.5°	1902.7	1927.3	1978.7	2048.0	2163.3	2275.3	2472.0	2668.7	2898.0	3125.3	3103.3
75°	1366.0	1376.7	1407.3	1482.7	1544.7	1645.3	1803.3	1964.7	2121.3	2225.3	2240.0
77.5°	710.0	738.0	781.3	864.7	932.0	1022.7	1125.3	1246.7	1361.3	1456.7	1430.7
80°	464.7	476.7	515.3	558.0	607.3	665.3	734.0	779.3	794.0	788.0	794.0
82.5°	268.0	290.0	341.3	374.0	410.7	430.7	485.3	537.3	566.7	530.0	516.7
85°	34.0	44.0	138.7	174.7	200.0	230.0	246.7	278.0	259.3	232.0	282.7
87.5°	7.3	6.7	9.3	20.0	20.7	17.3	32.7	34.7	21.3	10.7	13.3
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°	796.7	796.7	796.7	796.7	796.7	796.7	796.7	796.7	796.7	796.7	796.7
2.5°	788.7	789.3	790.7	792.7	794.0	795.3	796.7	798.7	800.0	801.3	804.0
5°	785.3	788.0	790.7	793.3	796.7	802.0	805.3	808.0	810.7	816.0	818.0
7.5°	783.3	788.0	792.0	796.7	802.0	806.7	812.7	816.0	820.0	823.3	827.3
10°	782.0	788.7	792.7	799.3	805.3	810.0	816.7	820.7	825.3	829.3	831.3
12.5°	784.7	788.0	792.0	798.7	806.0	812.7	820.0	823.3	827.3	830.7	831.3
15°	796.0	796.0	796.7	802.0	809.3	814.7	820.7	824.0	826.0	828.0	828.0
17.5°	816.7	812.0	808.7	809.3	814.0	817.3	820.7	820.7	819.3	818.7	817.3
20°	840.7	834.7	828.0	823.3	822.0	819.3	817.3	810.7	805.3	800.7	797.3
22.5°	875.3	866.0	856.7	848.0	840.0	830.0	818.7	805.3	792.7	784.0	778.7
25°	918.0	910.7	899.3	886.0	876.0	857.3	842.7	823.3	807.3	796.0	786.7
27.5°	978.7	970.0	959.3	947.3	932.7	912.0	894.0	871.3	852.0	835.3	823.3
30°	1054.0	1042.7	1034.7	1020.0	1010.0	986.7	968.7	940.7	903.3	876.7	860.0
32.5°	1131.3	1118.7	1112.0	1100.7	1089.3	1075.3	1048.0	1004.7	956.7	913.3	884.7
35°	1234.7	1221.3	1209.3	1199.3	1182.7	1156.7	1132.7	1080.7	1014.7	954.0	906.0
37.5°	1364.7	1342.7	1312.7	1287.3	1258.0	1220.7	1184.0	1130.7	1055.3	976.7	912.7
40°	1503.3	1464.7	1422.0	1374.7	1324.0	1270.0	1228.0	1174.0	1089.3	996.0	908.0
42.5°	1648.0	1586.7	1527.3	1460.7	1390.0	1326.0	1271.3	1212.0	1114.7	1001.3	889.3
45°	1791.3	1722.7	1632.7	1545.3	1456.0	1376.7	1315.3	1248.7	1138.0	1003.3	864.7
47.5°	1910.0	1839.3	1736.7	1627.3	1521.3	1431.3	1359.3	1287.3	1169.3	1017.3	858.7
50°	2035.3	1949.3	1835.3	1706.0	1586.0	1485.3	1408.7	1334.0	1213.3	1053.3	878.0
52.5°	2172.0	2073.3	1940.0	1795.3	1664.0	1551.3	1468.0	1391.3	1269.3	1104.0	914.7
55°	2338.7	2218.0	2073.3	1910.0	1769.3	1644.7	1552.7	1462.0	1336.0	1164.0	960.7
57.5°	2593.3	2445.3	2282.7	2096.7	1940.7	1793.3	1683.3	1578.7	1439.3	1253.3	1023.3
60°	3054.0	2896.0	2684.7	2459.3	2276.0	2104.0	1942.7	1812.7	1641.3	1429.3	1162.0
62.5°	3714.0	3504.0	3222.0	2906.7	2666.7	2418.7	2236.7	2043.3	1830.7	1602.0	1325.3
65°	4080.7	3826.0	3448.7	3082.7	2774.0	2504.7	2273.3	2049.3	1813.3	1594.7	1363.3
66°	4126.0	3860.7	3468.7	3083.3	2759.3	2482.7	2239.3	2007.3	1766.0	1557.3	1347.3
67.5°	4107.3	3836.0	3432.0	3025.3	2696.0	2398.7	2147.3	1906.7	1666.0	1471.3	1294.0
70°	3801.3	3544.0	3147.3	2753.3	2440.7	2147.3	1907.3	1670.7	1450.0	1283.3	1152.7
72.5°	3156.7	2936.7	2592.0	2282.7	2037.3	1795.3	1592.0	1366.0	1179.3	1056.0	978.7
75°	2278.7	2145.3	1831.3	1654.0	1438.7	1278.0	1080.7	946.7	812.7	752.7	739.3
77.5°	1439.3	1260.0	1060.7	873.3	718.0	595.3	463.3	393.3	328.0	321.3	388.0
80°	728.7	656.0	505.3	402.7	338.7	274.0	216.7	164.0	114.7	138.0	165.3
82.5°	477.3	398.0	312.0	256.7	223.3	185.3	144.0	100.0	73.3	82.7	113.3
85°	258.0	220.0	177.3	140.0	113.3	101.3	68.0	48.0	47.3	50.7	64.7
87.5°	18.7	18.7	14.7	13.3	16.0	13.3	12.0	12.0	11.3	12.0	16.0
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°	796.7	796.7	796.7	796.7	796.7	796.7	796.7	796.7	796.7	796.7	796.7
2.5°	805.3	807.3	808.0	811.3	813.3	814.7	816.0	816.0	816.7	818.7	819.3
5°	820.7	824.0	828.0	830.7	832.0	836.0	837.3	837.3	838.7	841.3	843.3
7.5°	830.0	834.7	838.7	840.0	842.7	844.0	846.0	847.3	847.3	850.0	851.3
10°	833.3	836.0	840.0	840.0	842.7	842.7	844.7	845.3	845.3	848.0	850.0
12.5°	833.3	834.7	838.0	838.0	840.0	840.7	843.3	845.3	846.0	849.3	852.0
15°	829.3	830.7	833.3	834.0	838.7	841.3	847.3	851.3	851.3	854.7	856.0
17.5°	818.0	821.3	826.7	832.0	840.7	846.7	854.0	857.3	854.7	852.7	850.7
20°	799.3	805.3	818.0	831.3	846.7	854.7	858.7	855.3	846.0	836.7	830.7
22.5°	780.7	792.7	814.0	834.0	851.3	856.7	854.7	842.7	827.3	816.0	808.0
25°	789.3	803.3	824.0	842.0	853.3	852.0	844.0	827.3	810.7	796.0	782.7
27.5°	825.3	840.7	852.0	858.0	856.7	847.3	834.7	816.0	796.0	776.7	758.0
30°	859.3	867.3	870.0	865.3	854.7	839.3	823.3	802.0	775.3	751.3	730.0
32.5°	874.7	866.7	854.0	841.3	824.0	810.7	788.7	765.3	732.0	703.3	682.0
35°	874.7	842.7	810.7	784.0	758.0	741.3	716.0	684.7	654.0	630.0	613.3
37.5°	855.3	794.0	741.3	698.0	665.3	647.3	609.3	581.3	555.3	547.3	536.7
40°	820.0	729.3	653.3	596.7	555.3	528.7	490.7	471.3	461.3	457.3	455.3
42.5°	772.7	657.3	556.0	486.0	441.3	411.3	386.0	374.0	373.3	372.7	372.7
45°	722.0	580.0	461.3	378.0	338.7	312.0	300.0	295.3	299.3	298.7	299.3
47.5°	690.7	521.3	374.7	286.0	256.0	238.7	232.7	234.7	238.0	236.7	236.7
50°	686.7	491.3	316.7	222.7	200.0	191.3	190.0	190.0	192.0	190.7	190.0
52.5°	701.3	486.7	286.7	191.3	173.3	166.0	164.7	164.0	163.3	159.3	156.0
55°	726.7	497.3	278.0	183.3	164.7	156.7	154.7	153.3	150.7	145.3	139.3
57.5°	777.3	530.7	286.0	187.3	167.3	160.7	158.7	158.7	153.3	144.7	136.0
60°	899.3	615.3	318.7	202.7	180.0	173.3	174.7	174.0	166.0	153.3	140.0
62.5°	1056.7	726.0	361.3	224.0	196.0	194.7	201.3	200.0	186.7	167.3	148.0
65°	1129.3	778.0	373.3	228.7	199.3	205.3	218.7	217.3	200.7	174.0	149.3
66°	1130.7	778.0	368.0	224.7	194.7	202.0	215.3	214.7	198.0	171.3	146.7
67.5°	1103.3	756.7	352.7	216.7	185.3	190.7	202.7	202.0	186.7	164.7	141.3
70°	1000.7	677.3	313.3	202.7	172.7	170.0	174.0	171.3	161.3	146.0	130.0
72.5°	857.3	568.7	273.3	192.0	164.0	153.3	150.7	148.7	140.7	132.0	122.0
75°	675.3	450.0	240.0	184.0	156.0	142.0	137.3	134.7	129.3	123.3	115.3
77.5°	416.7	322.0	209.3	173.3	150.0	136.0	132.7	128.7	120.7	113.3	107.3
80°	186.0	199.3	172.0	151.3	134.0	121.3	116.0	110.0	102.0	97.3	94.0
82.5°	124.0	128.7	124.7	113.3	101.3	91.3	83.3	83.3	82.0	78.0	76.7
85°	79.3	80.0	77.3	70.0	65.3	59.3	56.0	56.7	59.3	58.7	58.0
87.5°	18.0	18.0	21.3	20.0	23.3	24.7	26.7	28.7	32.7	32.7	34.7
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: P156620

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

CANDELA DISTRIBUTION (continued):

	160°	165°	170°	175°	180°
0°	796.7	796.7	796.7	796.7	796.7
2.5°	820.0	821.3	822.7	820.7	821.3
5°	843.3	842.7	846.0	844.0	845.3
7.5°	850.7	851.3	854.0	854.0	854.7
10°	851.3	852.7	856.0	858.0	859.3
12.5°	854.7	857.3	862.7	864.0	864.0
15°	857.3	858.7	862.0	863.3	864.7
17.5°	848.0	845.3	846.7	847.3	846.7
20°	824.7	822.0	821.3	818.7	820.0
22.5°	799.3	792.0	787.3	782.0	782.0
25°	768.7	757.3	748.0	738.7	740.7
27.5°	740.0	725.3	716.0	710.0	708.7
30°	712.0	696.7	688.0	680.7	680.7
32.5°	665.3	654.7	643.3	638.7	638.0
35°	600.7	594.0	584.7	582.7	579.3
37.5°	528.0	526.0	518.0	517.3	514.0
40°	452.0	453.3	450.7	449.3	447.3
42.5°	376.0	382.7	381.3	380.7	379.3
45°	303.3	308.0	308.7	310.7	314.0
47.5°	238.7	240.0	241.3	240.7	241.3
50°	186.7	183.3	182.7	180.7	182.7
52.5°	150.7	145.3	142.7	140.0	138.7
55°	132.7	127.3	124.7	123.3	122.0
57.5°	128.0	122.7	118.7	116.0	115.3
60°	129.3	121.3	116.0	112.7	112.0
62.5°	132.7	122.0	114.7	111.3	110.7
65°	132.0	120.7	114.0	110.0	109.3
66°	130.0	119.3	112.7	109.3	108.7
67.5°	126.7	117.3	111.3	108.7	107.3
70°	120.7	114.7	110.0	106.7	105.3
72.5°	115.3	110.7	106.7	103.3	102.7
75°	109.3	105.3	101.3	98.7	98.0
77.5°	102.0	98.0	95.3	93.3	92.7
80°	90.0	87.3	84.7	82.0	82.0
82.5°	74.7	72.7	70.0	68.0	67.3
85°	57.3	57.3	55.3	53.3	52.7
87.5°	34.0	33.3	33.3	31.3	31.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)