

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: P156627

Luminaire Tested: **TLM-F02-LED-E1-T4-7060**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P156627
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-T4-7060
Description: TALON MEDIUM LED SITE LUMINAIRE
(2) LIGHTBARS WITH AccuLED OPTICS - TYPE 4
Light Source: (14) 5700K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5119.8 lumens
Efficiency: N/A
Efficacy: 93.1 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

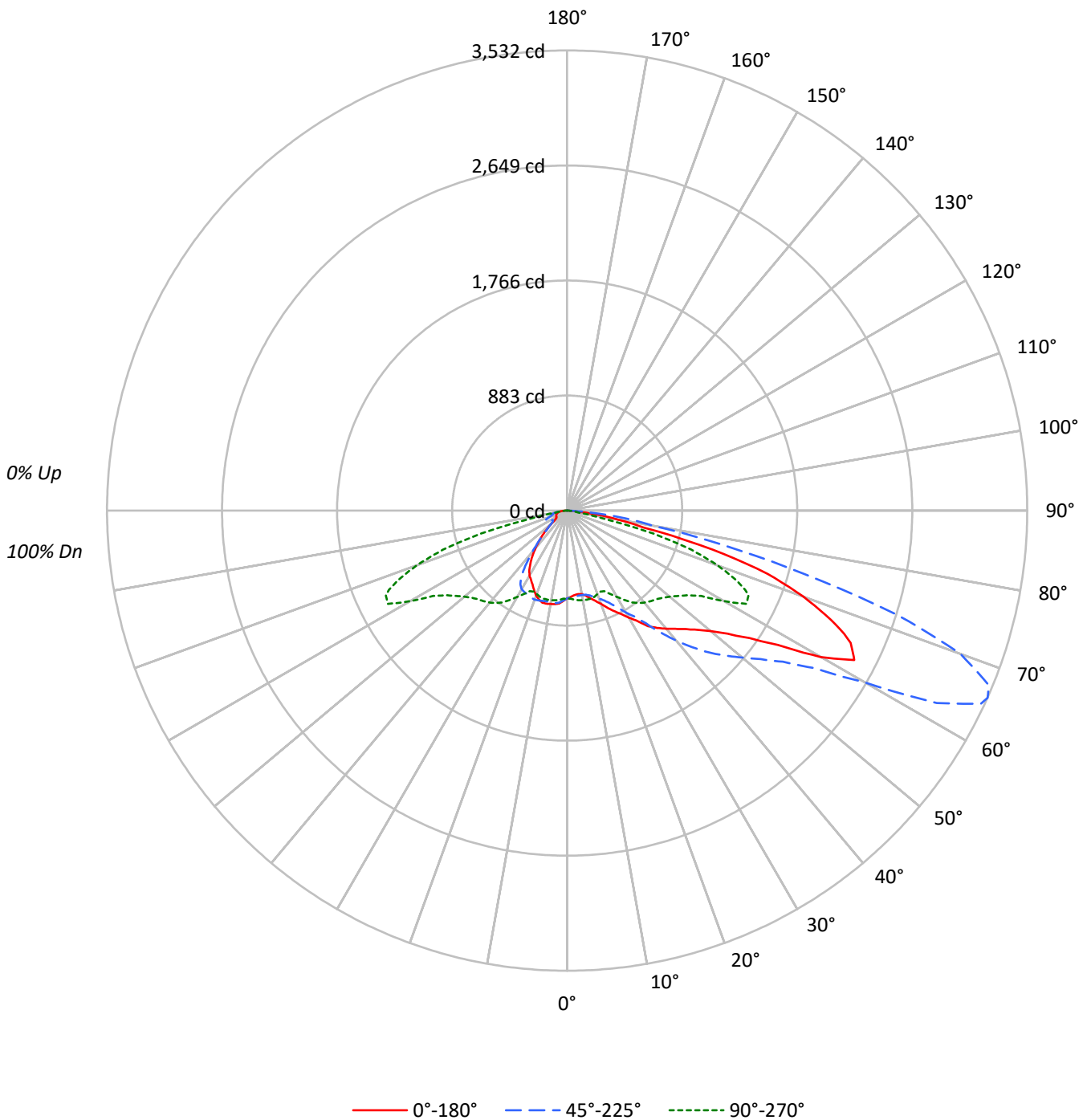
Input Watts (W): 55
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	22011	22011	22011
5°	21302	22484	23447
10°	21549	23155	24109
15°	23608	23628	24732
20°	26464	23680	24110
25°	30627	24613	22580
30°	35732	28820	21717
35°	43108	34225	19539
40°	50376	39288	16133
45°	59368	44468	12270
50°	72986	52155	7850
55°	97079	64357	5874
60°	146585	90697	6191
65°	185365	118549	7147
70°	183861	117141	8507
75°	145825	86756	10460
80°	73933	18239	13055
85°	10778	15007	16691



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	65.5	1.3
10°-20°	199.0	3.9
20°-30°	342.7	6.7
30°-40°	518.5	10.1
40°-50°	672.0	13.1
50°-60°	926.5	18.1
60°-70°	1439.5	28.1
70°-80°	837.1	16.3
80°-90°	119.0	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°	607.2	11.9
0°-40°	1125.7	22.0
0°-60°	2724.2	53.2
0°-90°	5119.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5119.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	675	675	675	675	675	
5°	651	660	687	709	716	62
15°	699	675	700	718	732	200
25°	851	787	684	715	627	397
35°	1083	1058	860	606	491	677
45°	1287	1540	964	254	266	1006
55°	1707	2022	1132	131	103	1581
65°	2402	3506	1536	185	93	2273
75°	1157	1885	688	116	83	1192
85°	29	196	40	47	45	125
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°	674.8	674.8	674.8	674.8	674.8	674.8	674.8	674.8	674.8	674.8	674.8
2.5°	662.4	664.7	663.0	663.5	663.5	664.1	664.1	664.7	664.1	665.8	666.9
5°	650.6	651.7	651.1	652.2	653.4	655.6	655.1	657.9	658.5	660.2	663.0
7.5°	646.0	644.9	645.5	647.2	648.3	649.4	650.6	652.8	654.5	658.5	660.7
10°	650.6	650.0	650.6	651.7	651.7	652.2	651.1	653.4	654.5	657.9	660.2
12.5°	669.2	669.2	668.1	668.1	666.9	665.8	663.0	661.3	660.7	661.3	662.4
15°	699.1	698.0	695.7	694.0	691.8	687.8	683.9	680.5	678.2	674.8	673.7
17.5°	728.5	726.8	724.5	722.3	719.4	715.5	709.3	705.3	699.1	695.2	692.9
20°	762.4	759.0	756.2	753.3	747.7	746.6	740.3	733.6	726.2	717.2	716.1
22.5°	806.4	800.8	797.4	795.7	790.0	788.3	778.2	768.6	759.5	747.7	744.9
25°	851.0	845.4	843.7	841.4	837.5	835.2	825.6	814.9	803.0	786.7	783.3
27.5°	894.5	895.1	890.6	892.3	891.1	887.2	877.6	866.8	857.8	838.6	834.7
30°	948.7	945.3	943.1	946.5	942.5	943.1	934.6	929.0	914.3	903.0	895.1
32.5°	1005.2	1004.6	1008.0	1010.3	1009.7	1008.6	1001.8	996.2	983.2	966.8	963.4
35°	1082.6	1086.0	1088.8	1098.9	1098.9	1106.3	1099.5	1092.7	1077.5	1057.7	1050.9
37.5°	1135.1	1136.2	1147.5	1161.1	1178.0	1193.8	1198.3	1200.0	1193.8	1179.1	1169.0
40°	1183.1	1185.3	1203.4	1224.3	1249.2	1280.2	1298.8	1307.3	1309.0	1302.2	1280.2
42.5°	1231.1	1234.5	1253.1	1283.6	1318.0	1357.6	1390.3	1411.2	1423.1	1423.1	1410.1
45°	1287.0	1291.5	1311.8	1345.2	1385.3	1434.9	1480.1	1520.2	1539.4	1540.5	1528.1
47.5°	1353.1	1357.0	1380.7	1414.6	1455.8	1506.1	1563.1	1608.9	1644.5	1646.7	1636.6
50°	1438.3	1444.0	1463.7	1494.2	1536.6	1587.4	1644.5	1708.3	1745.5	1754.6	1743.8
52.5°	1551.3	1552.4	1568.8	1597.0	1638.2	1686.8	1747.2	1816.7	1865.8	1873.2	1855.7
55°	1707.1	1705.4	1716.2	1746.7	1777.7	1815.6	1878.2	1956.2	2011.0	2022.3	2004.2
57.5°	1918.9	1917.2	1926.2	1933.6	1991.8	2028.5	2090.0	2164.6	2217.6	2250.4	2219.3
60°	2247.0	2245.3	2260.0	2302.9	2346.4	2400.0	2459.9	2549.1	2623.7	2633.3	2602.8
62.5°	2484.8	2493.2	2525.4	2575.7	2663.8	2768.8	2878.4	2995.8	3148.9	3197.4	3182.7
65°	2401.7	2418.7	2463.3	2539.5	2657.0	2802.1	2973.8	3186.7	3391.7	3506.3	3502.9
66°	2327.2	2345.8	2400.6	2474.0	2598.3	2756.9	2944.4	3176.5	3405.8	3532.3	3540.2
67.5°	2191.7	2212.6	2266.2	2353.2	2474.0	2642.9	2844.5	3096.9	3356.1	3503.5	3524.4
70°	1927.9	1951.7	1990.6	2062.3	2181.5	2332.3	2544.6	2770.5	3042.1	3211.0	3236.4
72.5°	1611.7	1632.6	1676.1	1734.8	1832.5	1927.4	2094.0	2260.6	2454.8	2647.4	2628.8
75°	1157.1	1166.1	1192.1	1255.9	1308.4	1393.7	1527.6	1664.2	1796.9	1885.0	1897.4
77.5°	601.4	625.1	661.8	732.4	789.5	866.3	953.2	1056.0	1153.2	1233.9	1211.9
80°	393.6	403.8	436.5	472.7	514.5	563.6	621.8	660.2	672.6	667.5	672.6
82.5°	227.0	245.7	289.1	316.8	347.9	364.8	411.1	455.2	480.0	449.0	437.7
85°	28.8	37.3	117.5	148.0	169.4	194.8	208.9	235.5	219.7	196.5	239.4
87.5°	6.2	5.6	7.9	16.9	17.5	14.7	27.7	29.4	18.1	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°	674.8	674.8	674.8	674.8	674.8	674.8	674.8	674.8	674.8	674.8	674.8
2.5°	668.1	668.6	669.8	671.4	672.6	673.7	674.8	676.5	677.7	678.8	681.0
5°	665.2	667.5	669.8	672.0	674.8	679.4	682.2	684.4	686.7	691.2	692.9
7.5°	663.5	667.5	670.9	674.8	679.4	683.3	688.4	691.2	694.6	697.4	700.8
10°	662.4	668.1	671.4	677.1	682.2	686.1	691.8	695.2	699.1	702.5	704.2
12.5°	664.7	667.5	670.9	676.5	682.7	688.4	694.6	697.4	700.8	703.6	704.2
15°	674.3	674.3	674.8	679.4	685.6	690.1	695.2	698.0	699.7	701.4	701.4
17.5°	691.8	687.8	685.0	685.6	689.5	692.3	695.2	695.2	694.0	693.5	692.3
20°	712.1	707.0	701.4	697.4	696.3	694.0	692.3	686.7	682.2	678.2	675.4
22.5°	741.5	733.6	725.7	718.3	711.5	703.1	693.5	682.2	671.4	664.1	659.6
25°	777.6	771.4	761.8	750.5	742.0	726.2	713.8	697.4	683.9	674.3	666.4
27.5°	829.0	821.7	812.6	802.5	790.0	772.5	757.3	738.1	721.7	707.6	697.4
30°	892.8	883.2	876.4	864.0	855.5	835.8	820.5	796.8	765.2	742.6	728.5
32.5°	958.3	947.6	941.9	932.3	922.7	910.9	887.7	851.0	810.4	773.7	749.4
35°	1045.9	1034.6	1024.4	1015.9	1001.8	979.8	959.5	915.4	859.5	808.1	767.5
37.5°	1156.0	1137.3	1111.9	1090.5	1065.6	1034.0	1002.9	957.8	893.9	827.3	773.1
40°	1273.4	1240.7	1204.5	1164.4	1121.5	1075.8	1040.2	994.5	922.7	843.7	769.1
42.5°	1396.0	1344.0	1293.8	1237.3	1177.4	1123.2	1076.9	1026.7	944.2	848.2	753.3
45°	1517.4	1459.2	1383.0	1309.0	1233.3	1166.1	1114.2	1057.7	964.0	849.9	732.4
47.5°	1617.9	1558.1	1471.1	1378.5	1288.7	1212.4	1151.5	1090.5	990.5	861.8	727.4
50°	1724.1	1651.2	1554.7	1445.1	1343.5	1258.2	1193.2	1130.0	1027.8	892.3	743.7
52.5°	1839.8	1756.3	1643.3	1520.8	1409.5	1314.1	1243.5	1178.6	1075.2	935.2	774.8
55°	1981.0	1878.8	1756.3	1617.9	1498.8	1393.2	1315.2	1238.4	1131.7	986.0	813.8
57.5°	2196.7	2071.4	1933.6	1776.0	1643.9	1519.1	1425.9	1337.3	1219.2	1061.7	866.8
60°	2587.0	2453.1	2274.1	2083.2	1927.9	1782.2	1645.6	1535.5	1390.3	1210.8	984.3
62.5°	3146.0	2968.2	2729.3	2462.2	2258.9	2048.8	1894.6	1730.9	1550.7	1357.0	1122.7
65°	3456.6	3240.9	2921.3	2611.3	2349.8	2121.6	1925.7	1735.9	1536.0	1350.8	1154.8
66°	3495.0	3270.3	2938.2	2611.8	2337.4	2103.0	1896.9	1700.4	1495.9	1319.2	1141.3
67.5°	3479.2	3249.4	2907.2	2562.7	2283.7	2031.9	1819.0	1615.1	1411.2	1246.3	1096.1
70°	3220.0	3002.0	2666.0	2332.3	2067.4	1819.0	1615.7	1415.2	1228.3	1087.1	976.4
72.5°	2673.9	2487.6	2195.6	1933.6	1725.8	1520.8	1348.5	1157.1	999.0	894.5	829.0
75°	1930.2	1817.3	1551.3	1401.1	1218.7	1082.6	915.4	801.9	688.4	637.6	626.3
77.5°	1219.2	1067.3	898.5	739.8	608.2	504.3	392.5	333.2	277.8	272.2	328.7
80°	617.2	555.7	428.1	341.1	286.9	232.1	183.5	138.9	97.1	116.9	140.0
82.5°	404.3	337.1	264.3	217.4	189.2	157.0	122.0	84.7	62.1	70.0	96.0
85°	218.5	186.4	150.2	118.6	96.0	85.8	57.6	40.7	40.1	42.9	54.8
87.5°	15.8	15.8	12.4	11.3	13.6	11.3	10.2	10.2	9.6	10.2	13.6
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°	674.8	674.8	674.8	674.8	674.8	674.8	674.8	674.8	674.8	674.8	674.8
2.5°	682.2	683.9	684.4	687.3	689.0	690.1	691.2	691.2	691.8	693.5	694.0
5°	695.2	698.0	701.4	703.6	704.8	708.2	709.3	709.3	710.4	712.7	714.4
7.5°	703.1	707.0	710.4	711.5	713.8	714.9	716.6	717.8	717.8	720.0	721.1
10°	705.9	708.2	711.5	711.5	713.8	713.8	715.5	716.1	716.1	718.3	720.0
12.5°	705.9	707.0	709.8	709.8	711.5	712.1	714.4	716.1	716.6	719.4	721.7
15°	702.5	703.6	705.9	706.5	710.4	712.7	717.8	721.1	721.1	724.0	725.1
17.5°	692.9	695.7	700.2	704.8	712.1	717.2	723.4	726.2	724.0	722.3	720.6
20°	677.1	682.2	692.9	704.2	717.2	724.0	727.4	724.5	716.6	708.7	703.6
22.5°	661.3	671.4	689.5	706.5	721.1	725.7	724.0	713.8	700.8	691.2	684.4
25°	668.6	680.5	698.0	713.2	722.8	721.7	714.9	700.8	686.7	674.3	663.0
27.5°	699.1	712.1	721.7	726.8	725.7	717.8	707.0	691.2	674.3	657.9	642.1
30°	727.9	734.7	737.0	733.0	724.0	711.0	697.4	679.4	656.8	636.4	618.4
32.5°	740.9	734.1	723.4	712.7	698.0	686.7	668.1	648.3	620.1	595.8	577.7
35°	740.9	713.8	686.7	664.1	642.1	628.0	606.5	580.0	554.0	533.7	519.5
37.5°	724.5	672.6	628.0	591.3	563.6	548.3	516.2	492.4	470.4	463.6	454.6
40°	694.6	617.8	553.4	505.4	470.4	447.8	415.6	399.3	390.8	387.4	385.7
42.5°	654.5	556.8	471.0	411.7	373.8	348.4	327.0	316.8	316.2	315.7	315.7
45°	611.6	491.3	390.8	320.2	286.9	264.3	254.1	250.2	253.6	253.0	253.6
47.5°	585.0	441.6	317.4	242.3	216.9	202.2	197.1	198.8	201.6	200.5	200.5
50°	581.7	416.2	268.2	188.6	169.4	162.1	160.9	160.9	162.6	161.5	160.9
52.5°	594.1	412.2	242.8	162.1	146.8	140.6	139.5	138.9	138.4	135.0	132.1
55°	615.5	421.3	235.5	155.3	139.5	132.7	131.0	129.9	127.6	123.1	118.0
57.5°	658.5	449.5	242.3	158.7	141.7	136.1	134.4	134.4	129.9	122.5	115.2
60°	761.8	521.2	269.9	171.7	152.5	146.8	148.0	147.4	140.6	129.9	118.6
62.5°	895.1	615.0	306.1	189.7	166.0	164.9	170.5	169.4	158.1	141.7	125.4
65°	956.6	659.0	316.2	193.7	168.9	173.9	185.2	184.1	170.0	147.4	126.5
66°	957.8	659.0	311.7	190.3	164.9	171.1	182.4	181.8	167.7	145.1	124.2
67.5°	934.6	641.0	298.7	183.5	157.0	161.5	171.7	171.1	158.1	139.5	119.7
70°	847.6	573.8	265.4	171.7	146.3	144.0	147.4	145.1	136.7	123.7	110.1
72.5°	726.2	481.7	231.5	162.6	138.9	129.9	127.6	125.9	119.2	111.8	103.3
75°	572.1	381.2	203.3	155.9	132.1	120.3	116.3	114.1	109.6	104.5	97.7
77.5°	352.9	272.8	177.3	146.8	127.1	115.2	112.4	109.0	102.2	96.0	90.9
80°	157.6	168.9	145.7	128.2	113.5	102.8	98.3	93.2	86.4	82.4	79.6
82.5°	105.0	109.0	105.6	96.0	85.8	77.4	70.6	70.6	69.5	66.1	64.9
85°	67.2	67.8	65.5	59.3	55.3	50.3	47.4	48.0	50.3	49.7	49.1
87.5°	15.2	15.2	18.1	16.9	19.8	20.9	22.6	24.3	27.7	27.7	29.4
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: P156627

CATALOG NUMBER: TLM-F02-LED-E1-T4-7060

CANDELA DISTRIBUTION (continued):

	160°	165°	170°	175°	180°
0°	674.8	674.8	674.8	674.8	674.8
2.5°	694.6	695.7	696.9	695.2	695.7
5°	714.4	713.8	716.6	714.9	716.1
7.5°	720.6	721.1	723.4	723.4	724.0
10°	721.1	722.3	725.1	726.8	727.9
12.5°	724.0	726.2	730.7	731.9	731.9
15°	726.2	727.4	730.2	731.3	732.4
17.5°	718.3	716.1	717.2	717.8	717.2
20°	698.6	696.3	695.7	693.5	694.6
22.5°	677.1	670.9	666.9	662.4	662.4
25°	651.1	641.5	633.6	625.7	627.4
27.5°	626.8	614.4	606.5	601.4	600.3
30°	603.1	590.1	582.8	576.6	576.6
32.5°	563.6	554.6	545.0	541.0	540.4
35°	508.8	503.2	495.3	493.6	490.7
37.5°	447.3	445.6	438.8	438.2	435.4
40°	382.9	384.0	381.7	380.6	378.9
42.5°	318.5	324.1	323.0	322.5	321.3
45°	256.9	260.9	261.5	263.2	266.0
47.5°	202.2	203.3	204.4	203.9	204.4
50°	158.1	155.3	154.7	153.0	154.7
52.5°	127.6	123.1	120.8	118.6	117.5
55°	112.4	107.9	105.6	104.5	103.3
57.5°	108.4	103.9	100.5	98.3	97.7
60°	109.6	102.8	98.3	95.4	94.9
62.5°	112.4	103.3	97.1	94.3	93.7
65°	111.8	102.2	96.6	93.2	92.6
66°	110.1	101.1	95.4	92.6	92.0
67.5°	107.3	99.4	94.3	92.0	90.9
70°	102.2	97.1	93.2	90.4	89.2
72.5°	97.7	93.7	90.4	87.5	87.0
75°	92.6	89.2	85.8	83.6	83.0
77.5°	86.4	83.0	80.8	79.1	78.5
80°	76.2	74.0	71.7	69.5	69.5
82.5°	63.2	61.6	59.3	57.6	57.0
85°	48.6	48.6	46.9	45.2	44.6
87.5°	28.8	28.2	28.2	26.5	26.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)