

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: P155604

Luminaire Tested: **TLM-F04-LED-E1-T3-7030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P155604
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33672)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: TLM-F04-LED-E1-T3-7030
Description: TALON MEDIUM LED SITE LUMINAIRE
(4) LIGHTBARS WITH AccuLED OPTICS - TYPE 3
Light Source: (28) 3000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9301.0 lumens
Efficiency: N/A
Efficacy: 91.0 lumens/watt
Spacing Criteria (0/90/45): 1.97 / 4.22 / 2.62
Luminous Opening: Rectangular (W 0.67' x L: 1' x H: 0')
CIE Type: Direct

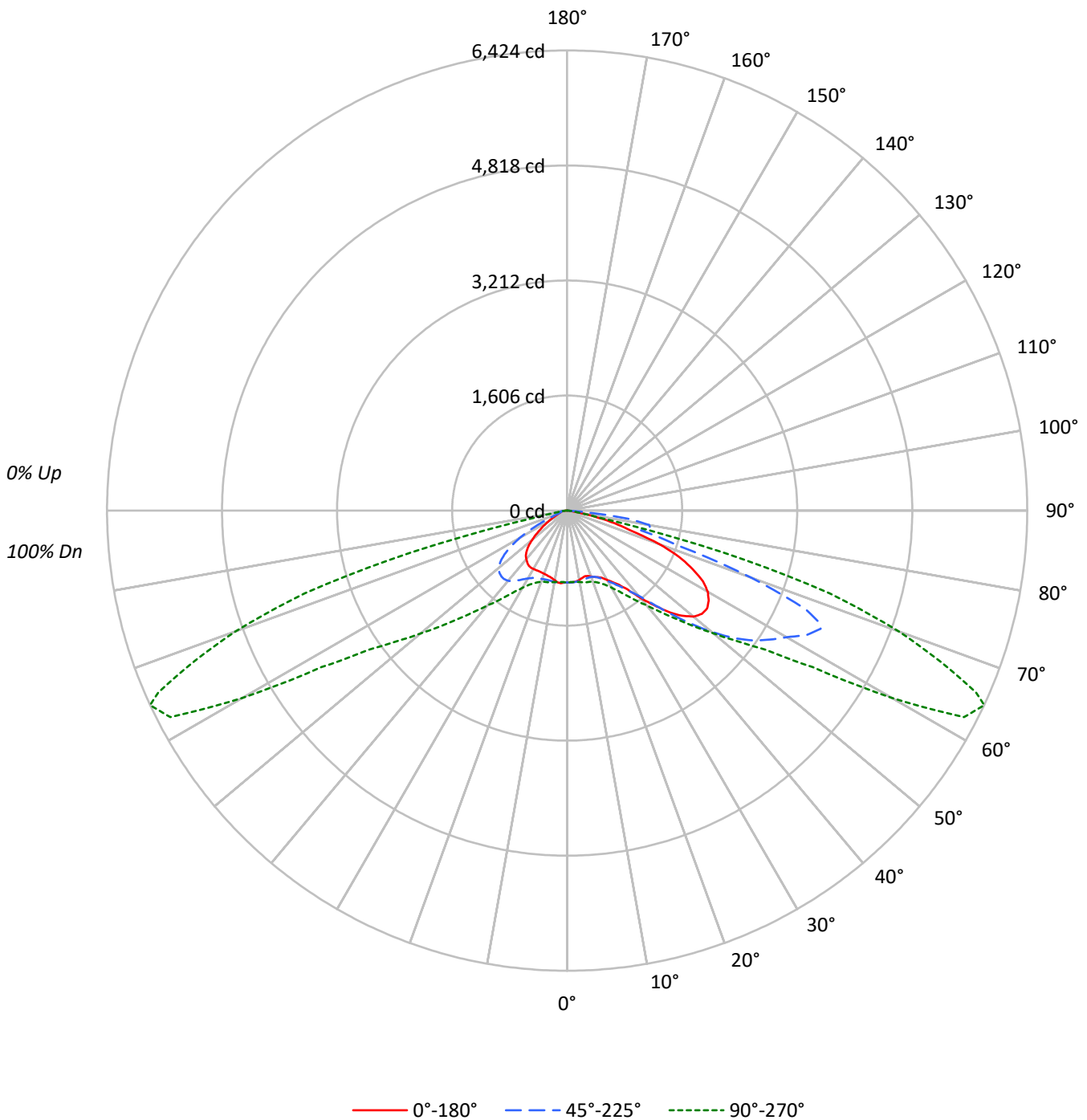
Input Watts (W): 102.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	94	89	102	97	92	87	92	88	84	88	85	82	85	82	79	77
2	92	82	73	65	89	80	71	64	76	69	63	72	66	61	69	64	60	57
3	81	68	57	49	79	66	56	49	63	55	48	60	53	47	57	51	46	43
4	73	57	46	38	70	56	46	38	53	44	37	51	43	36	48	41	36	33
5	65	49	38	30	63	48	38	30	46	37	29	44	35	29	42	34	29	26
6	59	43	32	24	57	42	32	24	40	31	24	38	30	24	36	29	23	21
7	54	38	28	20	52	37	27	20	35	27	20	34	26	20	32	25	20	17
8	50	34	24	17	48	33	24	17	32	23	17	30	23	17	29	22	17	14
9	46	31	21	15	45	30	21	15	29	20	15	28	20	15	27	20	14	12
10	43	28	19	13	42	27	19	13	26	18	13	25	18	13	24	18	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	16102	16102	16102
5°	16164	16148	16408
10°	16023	16516	16121
15°	15784	17239	15885
20°	16758	18098	16037
25°	18177	19852	16537
30°	20719	23088	17475
35°	24843	28312	18377
40°	33270	36244	18596
45°	45454	48264	18203
50°	57515	66635	16006
55°	66819	94865	12727
60°	72809	167779	9659
65°	73489	244204	7299
70°	64413	231297	6092
75°	42557	139967	6238
80°	15534	14229	7346
85°	2599	9456	8147



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	96.0	1.0
10°-20°	283.3	3.0
20°-30°	486.9	5.2
30°-40°	790.6	8.5
40°-50°	1320.0	14.2
50°-60°	2078.5	22.3
60°-70°	2834.3	30.5
70°-80°	1226.9	13.2
80°-90°	184.5	2.0
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°	866.3	9.3
0°-40°	1656.9	17.8
0°-60°	5055.4	54.4
0°-90°	9301.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9301.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1002	1002	1002	1002	1002	
5°	1002	1004	1001	1013	1017	95
15°	949	988	1036	1006	955	273
25°	1025	1032	1120	1040	933	480
35°	1267	1295	1444	1188	937	821
45°	2001	2027	2124	1300	801	1538
55°	2386	3160	3387	1071	454	2104
65°	1933	3906	6424	376	192	1877
75°	686	1068	2255	102	100	733
85°	14	237	51	70	44	37
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1002.3	1002.3	1002.3	1002.3	1002.3	1002.3	1002.3	1002.3	1002.3	1002.3	1002.3
2.5°	1006.3	1010.4	1006.3	1007.3	1008.3	1007.3	1006.3	1006.3	1003.3	1005.3	1007.3
5°	1002.3	1005.3	1004.3	1005.3	1006.3	1005.3	1004.3	1005.3	1003.3	1004.3	1007.3
7.5°	997.3	996.3	997.3	999.3	1001.3	1001.3	1001.3	1002.3	1001.3	1001.3	1004.3
10°	982.2	983.2	985.2	988.2	989.2	992.3	992.3	995.3	996.3	998.3	1002.3
12.5°	963.1	964.1	966.1	968.1	973.2	978.2	978.2	985.2	988.2	993.3	1000.3
15°	949.0	950.0	952.0	954.1	958.1	963.1	966.1	974.2	979.2	988.2	998.3
17.5°	957.1	956.1	958.1	959.1	959.1	963.1	963.1	969.1	975.2	983.2	996.3
20°	980.2	980.2	982.2	982.2	981.2	983.2	979.2	979.2	980.2	984.2	993.3
22.5°	1003.3	1002.3	1006.3	1008.3	1009.3	1012.4	1008.3	1007.3	1002.3	999.3	1002.3
25°	1025.4	1024.4	1029.5	1032.5	1037.5	1040.5	1040.5	1040.5	1036.5	1031.5	1028.4
27.5°	1059.6	1059.6	1064.6	1067.7	1071.7	1077.7	1080.7	1080.7	1081.7	1074.7	1069.7
30°	1116.9	1117.9	1118.9	1122.9	1127.0	1129.0	1133.0	1136.0	1139.0	1135.0	1127.0
32.5°	1185.3	1179.2	1179.2	1185.3	1190.3	1196.3	1198.3	1202.4	1208.4	1205.4	1204.4
35°	1266.7	1264.7	1262.7	1264.7	1270.7	1277.8	1285.8	1292.8	1288.8	1294.9	1291.8
37.5°	1387.3	1389.4	1390.4	1390.4	1389.4	1391.4	1395.4	1402.4	1400.4	1402.4	1406.4
40°	1586.4	1579.4	1572.3	1573.3	1563.3	1565.3	1549.2	1556.2	1557.2	1550.2	1553.2
42.5°	1785.5	1789.5	1792.5	1800.5	1793.5	1789.5	1774.4	1774.4	1766.4	1759.3	1757.3
45°	2000.6	2008.6	2009.6	2025.7	2019.7	2032.8	2043.8	2040.8	2027.7	2026.7	2012.7
47.5°	2172.5	2185.6	2199.7	2218.8	2233.8	2263.0	2297.2	2314.3	2324.3	2332.4	2316.3
50°	2301.2	2307.2	2343.4	2373.6	2406.7	2455.0	2502.3	2563.6	2612.8	2636.0	2658.1
52.5°	2370.6	2385.6	2424.8	2472.1	2530.4	2602.8	2679.2	2776.7	2861.2	2917.5	2967.7
55°	2385.6	2400.7	2444.9	2505.3	2584.7	2682.2	2791.8	2924.5	3051.2	3159.7	3265.3
57.5°	2343.4	2360.5	2407.8	2477.1	2570.6	2689.2	2827.0	3000.9	3175.8	3351.8	3507.6
60°	2266.0	2287.1	2330.3	2398.7	2502.3	2636.0	2800.8	3019.0	3264.3	3533.7	3832.3
62.5°	2138.3	2160.4	2200.7	2276.1	2382.6	2530.4	2721.4	2992.9	3339.7	3763.9	4293.7
65°	1933.2	1943.3	1992.6	2069.0	2163.5	2326.3	2536.4	2864.2	3315.6	3905.7	4635.6
66°	1840.7	1857.8	1888.0	1949.3	2039.8	2192.6	2403.7	2736.5	3224.1	3856.4	4626.5
67.5°	1696.0	1709.1	1729.2	1770.4	1825.7	1938.3	2138.3	2453.0	2944.6	3607.1	4434.5
70°	1371.3	1377.3	1404.4	1418.5	1437.6	1474.8	1547.2	1728.2	2111.2	2733.5	3579.0
72.5°	935.0	952.0	981.2	1021.4	1073.7	1124.0	1158.1	1181.3	1263.7	1630.6	2384.6
75°	685.6	703.7	740.9	794.2	885.7	990.2	1098.8	1149.1	1114.9	1067.7	1328.0
77.5°	398.1	422.2	453.4	504.7	589.1	727.9	913.8	1078.7	1190.3	1197.3	1137.0
80°	167.9	170.9	190.0	216.1	268.4	365.9	510.7	748.0	995.3	1162.2	1201.4
82.5°	38.2	47.3	60.3	71.4	87.5	120.6	178.9	297.6	537.8	843.5	1099.8
85°	14.1	14.1	19.1	28.1	32.2	36.2	47.3	75.4	128.7	237.3	494.6
87.5°	0.0	1.0	2.0	2.0	4.0	5.0	8.0	11.1	10.1	9.0	30.2
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):

	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°	100°
0°	1002.3	1002.3	1002.3	1002.3	1002.3	1002.3	1002.3	1002.3	1002.3	1002.3	1002.3
2.5°	1005.3	1004.3	1002.3	1002.3	1002.3	1002.3	1000.3	1001.3	999.3	1000.3	1000.3
5°	1004.3	1004.3	1003.3	1001.3	1002.3	1002.3	1003.3	1001.3	1001.3	1002.3	1001.3
7.5°	1004.3	1003.3	1003.3	1003.3	1004.3	1003.3	1004.3	1004.3	1004.3	1005.3	1005.3
10°	1004.3	1004.3	1006.3	1007.3	1007.3	1008.3	1011.4	1011.4	1012.4	1013.4	1015.4
12.5°	1005.3	1009.3	1012.4	1015.4	1016.4	1018.4	1023.4	1023.4	1025.4	1028.4	1029.5
15°	1006.3	1012.4	1018.4	1020.4	1022.4	1026.4	1031.5	1033.5	1036.5	1039.5	1041.5
17.5°	1005.3	1013.4	1020.4	1023.4	1026.4	1031.5	1037.5	1039.5	1043.5	1047.5	1051.6
20°	1004.3	1015.4	1026.4	1030.5	1034.5	1041.5	1049.6	1054.6	1058.6	1064.6	1068.7
22.5°	1010.4	1023.4	1038.5	1044.5	1051.6	1060.6	1071.7	1077.7	1082.7	1088.8	1091.8
25°	1029.5	1039.5	1057.6	1067.7	1076.7	1091.8	1106.9	1113.9	1119.9	1125.0	1126.0
27.5°	1061.6	1064.6	1086.8	1099.8	1112.9	1137.0	1155.1	1160.1	1171.2	1175.2	1174.2
30°	1113.9	1108.9	1127.0	1147.1	1166.2	1199.4	1221.5	1234.5	1244.6	1244.6	1236.5
32.5°	1189.3	1181.3	1186.3	1209.4	1231.5	1279.8	1305.9	1323.0	1330.0	1328.0	1310.9
35°	1287.8	1282.8	1279.8	1297.9	1333.1	1389.4	1423.5	1432.6	1443.6	1441.6	1419.5
37.5°	1404.4	1400.4	1400.4	1421.5	1455.7	1539.2	1576.3	1582.4	1581.4	1565.3	1524.1
40°	1542.2	1540.2	1531.1	1543.2	1572.3	1680.9	1731.2	1739.2	1728.2	1702.0	1653.8
42.5°	1740.2	1728.2	1700.0	1707.0	1729.2	1834.7	1900.1	1922.2	1911.1	1885.0	1806.6
45°	1998.6	1985.5	1938.3	1932.2	1944.3	2036.8	2121.2	2126.3	2124.3	2091.1	1998.6
47.5°	2302.2	2282.1	2231.8	2215.7	2211.7	2297.2	2378.6	2386.6	2381.6	2332.4	2208.7
50°	2630.9	2601.8	2568.6	2557.5	2541.5	2602.8	2685.2	2686.2	2666.1	2597.8	2482.1
52.5°	2981.8	2971.7	2965.7	2954.6	2947.6	3000.9	3051.2	3021.0	2990.8	2919.5	2818.9
55°	3335.7	3376.9	3419.1	3423.1	3435.2	3492.5	3491.5	3409.1	3386.9	3347.7	3248.2
57.5°	3711.7	3864.5	3997.2	4038.4	4078.6	4185.2	4175.1	4093.7	4065.5	4017.3	3934.8
60°	4223.4	4635.6	5018.6	5110.1	5173.4	5301.1	5289.0	5163.3	5221.7	5217.6	5111.1
62.5°	4940.2	5625.8	6199.8	6340.6	6384.8	6398.9	6322.5	6186.8	6244.1	6308.4	5980.7
65°	5425.7	6232.0	6821.1	6929.7	6935.7	6767.8	6597.9	6438.1	6424.0	6368.7	5900.3
66°	5436.8	6262.2	6853.3	6958.9	6921.7	6692.4	6477.3	6316.5	6247.1	6125.4	5639.9
67.5°	5241.8	6074.2	6710.5	6822.1	6740.7	6416.0	6119.4	5912.3	5776.6	5579.6	5151.3
70°	4402.3	5227.7	6011.8	6219.9	6246.1	5761.5	5350.3	5107.0	4924.1	4653.6	4284.7
72.5°	3273.3	4019.3	4711.0	4910.0	5011.5	4624.5	4277.7	4092.7	3842.4	3557.8	3295.5
75°	2051.9	2578.7	3042.1	3181.9	3086.3	2786.8	2578.7	2501.2	2254.9	2085.0	1965.4
77.5°	1173.2	1338.1	1375.3	1322.0	1209.4	925.9	658.5	487.6	423.2	468.5	516.7
80°	1145.1	1049.6	836.4	735.9	666.5	458.4	269.4	185.0	153.8	157.8	170.9
82.5°	1240.6	1331.0	1095.8	893.7	750.0	506.7	279.5	148.8	100.5	118.6	133.7
85°	806.3	1121.9	1010.4	851.5	689.7	433.3	230.2	77.4	51.3	67.4	92.5
87.5°	81.4	89.5	76.4	103.5	77.4	36.2	18.1	11.1	10.1	12.1	18.1
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°	1002.3	1002.3	1002.3	1002.3	1002.3	1002.3	1002.3	1002.3	1002.3	1002.3	1002.3
2.5°	1001.3	1001.3	1002.3	1003.3	1004.3	1005.3	1005.3	1005.3	1005.3	1007.3	1006.3
5°	1003.3	1005.3	1007.3	1008.3	1010.4	1010.4	1013.4	1012.4	1012.4	1015.4	1016.4
7.5°	1007.3	1010.4	1014.4	1013.4	1017.4	1016.4	1018.4	1018.4	1015.4	1016.4	1014.4
10°	1016.4	1020.4	1022.4	1019.4	1020.4	1016.4	1015.4	1010.4	1004.3	1001.3	997.3
12.5°	1031.5	1035.5	1035.5	1030.5	1024.4	1015.4	1008.3	997.3	988.2	983.2	978.2
15°	1044.5	1048.6	1047.5	1039.5	1030.5	1016.4	1006.3	993.3	980.2	972.1	967.1
17.5°	1054.6	1056.6	1053.6	1042.5	1032.5	1019.4	1009.3	995.3	980.2	970.1	961.1
20°	1069.7	1067.7	1060.6	1046.5	1035.5	1023.4	1015.4	1003.3	986.2	973.2	960.1
22.5°	1091.8	1083.7	1070.7	1055.6	1044.5	1033.5	1025.4	1012.4	995.3	979.2	964.1
25°	1120.9	1104.9	1086.8	1070.7	1060.6	1048.6	1039.5	1025.4	1007.3	989.2	971.1
27.5°	1163.2	1135.0	1111.9	1097.8	1086.8	1071.7	1060.6	1042.5	1023.4	1002.3	982.2
30°	1210.4	1172.2	1150.1	1139.0	1127.0	1110.9	1093.8	1070.7	1048.6	1025.4	1001.3
32.5°	1271.7	1225.5	1204.4	1193.3	1177.2	1157.1	1137.0	1110.9	1079.7	1049.6	1020.4
35°	1352.2	1304.9	1282.8	1265.7	1243.6	1217.4	1188.3	1153.1	1110.9	1070.7	1033.5
37.5°	1438.6	1387.3	1366.2	1348.1	1315.0	1280.8	1239.6	1188.3	1131.0	1077.7	1031.5
40°	1548.2	1500.9	1473.8	1442.6	1403.4	1344.1	1279.8	1205.4	1132.0	1066.6	1012.4
42.5°	1686.9	1639.7	1599.5	1550.2	1481.8	1390.4	1298.9	1202.4	1113.9	1039.5	981.2
45°	1870.9	1813.6	1744.2	1657.8	1547.2	1419.5	1299.9	1183.3	1079.7	997.3	935.0
47.5°	2096.1	2008.6	1895.0	1749.3	1590.4	1427.6	1283.8	1145.1	1026.4	937.0	867.6
50°	2363.5	2225.8	2038.8	1824.7	1612.5	1415.5	1243.6	1087.8	951.0	855.5	773.1
52.5°	2669.1	2443.9	2168.5	1879.0	1611.5	1375.3	1175.2	1001.3	852.5	746.0	667.5
55°	3028.0	2693.3	2302.2	1919.2	1583.4	1300.9	1070.7	879.7	730.9	632.3	560.0
57.5°	3553.8	3097.4	2535.4	1981.5	1527.1	1186.3	928.9	733.9	603.2	509.7	448.4
60°	4514.9	3772.0	2955.7	2107.2	1440.6	1018.4	763.0	578.1	468.5	393.1	351.9
62.5°	5238.7	4293.7	3182.9	2079.0	1266.7	811.3	566.0	421.2	344.8	293.6	267.4
65°	5135.2	4131.9	2940.6	1790.5	993.3	572.0	376.0	286.5	237.3	213.1	198.0
66°	4901.0	3920.8	2730.5	1611.5	858.5	475.5	309.6	240.3	204.1	187.0	176.9
67.5°	4456.6	3528.7	2354.5	1321.0	659.5	344.8	233.2	190.0	165.9	158.8	151.8
70°	3704.6	2813.9	1652.8	769.1	336.8	192.0	147.8	132.7	126.7	125.7	123.7
72.5°	2839.0	1991.5	973.2	363.9	174.9	127.7	114.6	109.6	107.6	107.6	108.6
75°	1740.2	1118.9	430.3	177.9	122.6	107.6	101.5	99.5	98.5	99.5	98.5
77.5°	581.1	355.9	184.0	134.7	111.6	99.5	95.5	93.5	93.5	93.5	93.5
80°	177.9	154.8	140.7	124.7	105.6	94.5	88.5	87.5	88.5	89.5	86.5
82.5°	133.7	126.7	118.6	110.6	95.5	84.4	82.4	82.4	82.4	79.4	75.4
85°	98.5	97.5	80.4	75.4	70.4	70.4	70.4	70.4	67.4	62.3	58.3
87.5°	18.1	17.1	18.1	19.1	28.1	30.2	30.2	32.2	35.2	33.2	33.2
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: P155604

CATALOG NUMBER: TLM-F04-LED-E1-T3-7030

CANDELA DISTRIBUTION (continued):

	160°	165°	170°	175°	180°
0°	1002.3	1002.3	1002.3	1002.3	1002.3
2.5°	1006.3	1005.3	1008.3	1006.3	1007.3
5°	1015.4	1014.4	1016.4	1014.4	1017.4
7.5°	1012.4	1010.4	1009.3	1010.4	1011.4
10°	991.3	989.2	988.2	987.2	988.2
12.5°	973.2	969.1	969.1	967.1	968.1
15°	960.1	957.1	956.1	954.1	955.1
17.5°	954.1	949.0	947.0	945.0	945.0
20°	950.0	944.0	941.0	939.0	938.0
22.5°	950.0	941.0	937.0	935.0	933.9
25°	954.1	943.0	937.0	933.9	932.9
27.5°	962.1	948.0	941.0	937.0	937.0
30°	976.2	958.1	948.0	943.0	942.0
32.5°	990.2	966.1	952.0	946.0	944.0
35°	997.3	966.1	949.0	939.0	937.0
37.5°	989.2	953.0	931.9	916.9	913.8
40°	964.1	925.9	902.8	888.7	886.7
42.5°	930.9	893.7	866.6	856.5	853.5
45°	885.7	841.5	814.3	800.2	801.2
47.5°	808.3	763.0	738.9	725.8	727.9
50°	716.8	672.6	651.5	637.4	640.4
52.5°	616.3	576.1	555.9	548.9	546.9
55°	510.7	479.5	465.5	457.4	454.4
57.5°	414.2	392.1	382.0	372.0	373.0
60°	326.7	315.7	312.7	301.6	300.6
62.5°	257.4	250.3	247.3	239.3	240.3
65°	195.0	193.0	195.0	190.0	192.0
66°	175.9	176.9	176.9	173.9	175.9
67.5°	151.8	153.8	156.8	153.8	155.8
70°	125.7	127.7	129.7	129.7	129.7
72.5°	109.6	111.6	112.6	112.6	112.6
75°	100.5	101.5	102.5	100.5	100.5
77.5°	94.5	94.5	92.5	91.5	90.5
80°	85.5	84.4	81.4	79.4	79.4
82.5°	71.4	69.4	67.4	64.3	64.3
85°	54.3	52.3	50.3	46.2	44.2
87.5°	28.1	29.2	28.1	23.1	20.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)