

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: P155598

Luminaire Tested: **TLM-E04-LED-E1-T3-8030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P155598
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-E04-LED-E1-T3-8030
Description: TALON MEDIUM LED SITE LUMINAIRE
(4) LIGHTBARS WITH AccuLED OPTICS - TYPE 3
Light Source: (84) 3000K CCT, 80 CRI LEDs
Ballast/Driver: -

Summary

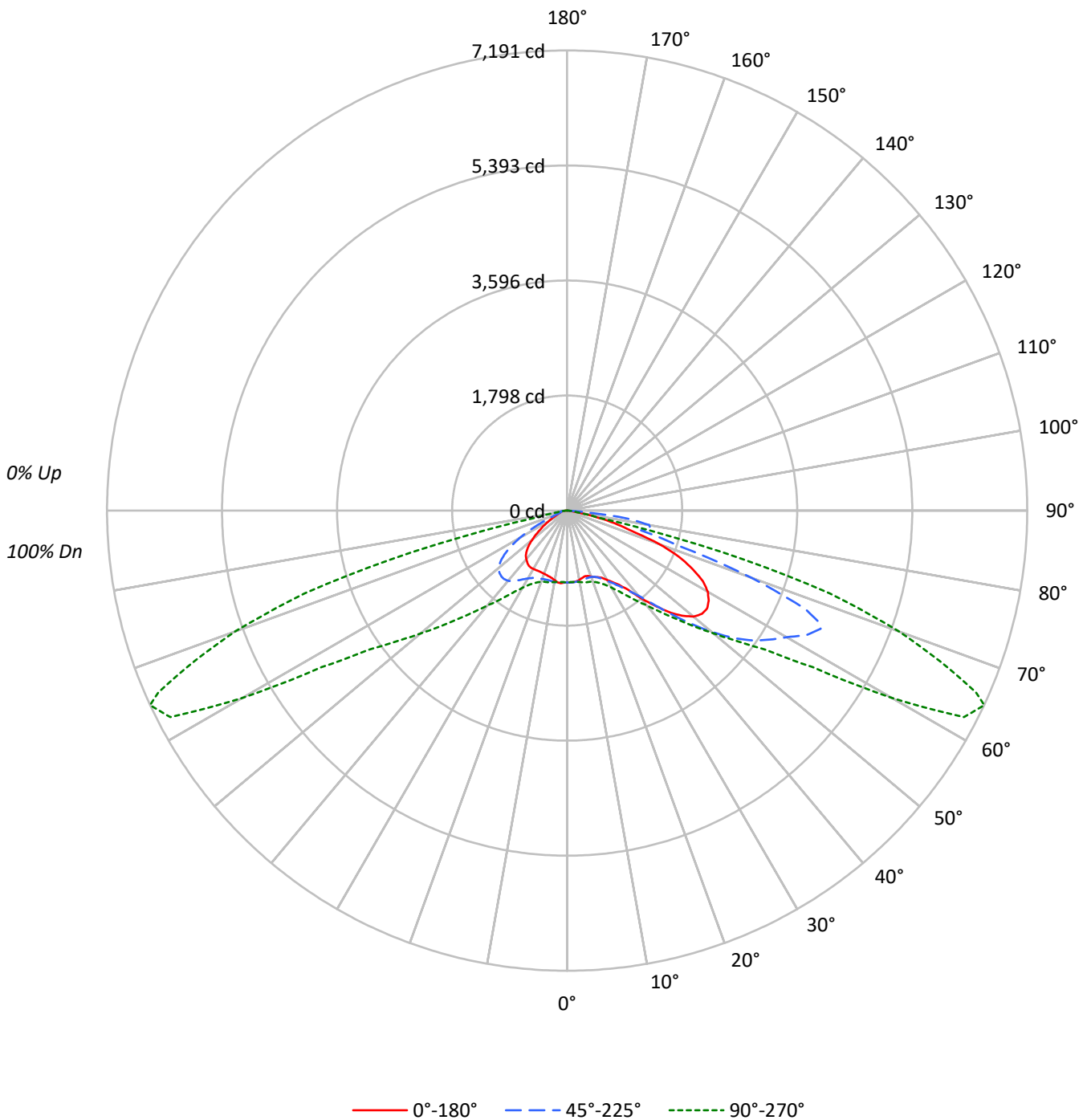
Lumens per Lamp: N/A
Luminaire Lumens: 10411.2 lumens
Efficiency: N/A
Efficacy: 107.1 lumens/watt
Spacing Criteria (0/90/45): 1.97 / 4.22 / 2.62
Luminous Opening: Rectangular (W 0.67' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 97.2
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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102
1	105	99	94	89	102	97	92	87	92	88	84	88	85	82	85	82	79
2	92	82	73	65	89	80	71	64	76	69	63	72	66	61	69	64	60
3	81	68	57	49	79	66	56	49	63	55	48	60	53	47	57	51	46
4	73	57	46	38	70	56	46	38	53	44	37	51	43	36	48	41	36
5	65	49	38	30	63	48	38	30	46	37	29	44	35	29	42	34	29
6	59	43	32	24	57	42	32	24	40	31	24	38	30	24	36	29	23
7	54	38	28	20	52	37	27	20	35	27	20	34	26	20	32	25	20
8	50	34	24	17	48	33	24	17	32	23	17	30	23	17	29	22	17
9	46	31	21	15	45	30	21	15	29	20	15	28	20	15	27	20	14
10	43	28	19	13	42	27	19	13	26	18	13	25	18	13	24	18	13

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	18024	18024	18024
5°	18093	18075	18365
10°	17935	18486	18046
15°	17668	19297	17782
20°	18758	20259	17950
25°	20346	22222	18512
30°	23192	25843	19560
35°	27808	31694	20569
40°	37242	40568	20815
45°	50879	54024	20378
50°	64381	74591	17915
55°	74796	106189	14246
60°	81501	187803	10812
65°	82263	273353	8169
70°	72098	258903	6820
75°	47641	156677	6983
80°	17384	15932	8225
85°	2912	10581	9124



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	107.5	1.0
10°-20°	317.1	3.0
20°-30°	545.1	5.2
30°-40°	885.0	8.5
40°-50°	1477.5	14.2
50°-60°	2326.6	22.3
60°-70°	3172.6	30.5
70°-80°	1373.4	13.2
80°-90°	206.5	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°	969.7	9.3
0°-40°	1854.7	17.8
0°-60°	5658.8	54.4
0°-90°	10411.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10411.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1122	1122	1122	1122	1122	
5°	1122	1124	1121	1134	1139	106
15°	1062	1106	1160	1126	1069	305
25°	1148	1155	1254	1164	1044	538
35°	1418	1449	1616	1330	1049	919
45°	2239	2269	2378	1455	897	1721
55°	2670	3537	3791	1198	509	2355
65°	2164	4372	7191	421	215	2101
75°	768	1195	2524	114	112	820
85°	16	266	57	79	50	41
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°	1121.9	1121.9	1121.9	1121.9	1121.9	1121.9	1121.9	1121.9	1121.9	1121.9	1121.9
2.5°	1126.4	1130.9	1126.4	1127.6	1128.7	1127.6	1126.4	1126.4	1123.1	1125.3	1127.6
5°	1121.9	1125.3	1124.2	1125.3	1126.4	1125.3	1124.2	1125.3	1123.1	1124.2	1127.6
7.5°	1116.3	1115.2	1116.3	1118.6	1120.8	1120.8	1120.8	1121.9	1120.8	1120.8	1124.2
10°	1099.4	1100.6	1102.8	1106.2	1107.3	1110.7	1110.7	1114.1	1115.2	1117.4	1121.9
12.5°	1078.1	1079.2	1081.4	1083.7	1089.3	1094.9	1094.9	1102.8	1106.2	1111.8	1119.7
15°	1062.3	1063.4	1065.7	1067.9	1072.4	1078.1	1081.4	1090.4	1096.1	1106.2	1117.4
17.5°	1071.3	1070.2	1072.4	1073.6	1073.6	1078.1	1078.1	1084.8	1091.6	1100.6	1115.2
20°	1097.2	1097.2	1099.4	1099.4	1098.3	1100.6	1096.1	1096.1	1097.2	1101.7	1111.8
22.5°	1123.1	1121.9	1126.4	1128.7	1129.8	1133.2	1128.7	1127.6	1121.9	1118.6	1121.9
25°	1147.8	1146.7	1152.3	1155.7	1161.3	1164.7	1164.7	1164.7	1160.2	1154.6	1151.2
27.5°	1186.1	1186.1	1191.7	1195.1	1199.6	1206.3	1209.7	1209.7	1210.8	1203.0	1197.3
30°	1250.2	1251.4	1252.5	1257.0	1261.5	1263.7	1268.2	1271.6	1275.0	1270.5	1261.5
32.5°	1326.8	1320.0	1320.0	1326.8	1332.4	1339.1	1341.4	1345.9	1352.6	1349.3	1348.1
35°	1417.9	1415.7	1413.4	1415.7	1422.4	1430.3	1439.3	1447.2	1442.7	1449.4	1446.0
37.5°	1552.9	1555.2	1556.3	1556.3	1555.2	1557.4	1561.9	1569.8	1567.6	1569.8	1574.3
40°	1775.8	1767.9	1760.0	1761.1	1749.9	1752.1	1734.1	1742.0	1743.1	1735.2	1738.6
42.5°	1998.6	2003.1	2006.4	2015.5	2007.6	2003.1	1986.2	1986.2	1977.2	1969.3	1967.1
45°	2239.4	2248.4	2249.5	2267.5	2260.8	2275.4	2287.8	2284.4	2269.8	2268.6	2252.9
47.5°	2431.8	2446.4	2462.2	2483.6	2500.5	2533.1	2571.4	2590.5	2601.7	2610.7	2592.7
50°	2575.9	2582.6	2623.1	2656.9	2694.0	2748.0	2800.9	2869.6	2924.7	2950.6	2975.3
52.5°	2653.5	2670.4	2714.3	2767.2	2832.4	2913.5	2999.0	3108.1	3202.7	3265.7	3321.9
55°	2670.4	2687.3	2736.8	2804.3	2893.2	3002.4	3125.0	3273.6	3415.3	3536.9	3655.0
57.5°	2623.1	2642.3	2695.1	2772.8	2877.4	3010.2	3164.4	3359.1	3554.9	3751.8	3926.2
60°	2536.5	2560.1	2608.5	2685.0	2800.9	2950.6	3135.1	3379.3	3653.9	3955.5	4289.7
62.5°	2393.6	2418.3	2463.3	2547.7	2667.0	2832.4	3046.2	3350.1	3738.3	4213.2	4806.2
65°	2164.0	2175.2	2230.4	2315.9	2421.7	2604.0	2839.2	3206.0	3711.3	4371.9	5188.9
66°	2060.5	2079.6	2113.4	2182.0	2283.3	2454.3	2690.6	3063.1	3608.9	4316.7	5178.7
67.5°	1898.4	1913.0	1935.6	1981.7	2043.6	2169.6	2393.6	2745.8	3296.1	4037.7	4963.8
70°	1534.9	1541.7	1572.1	1587.8	1609.2	1650.8	1731.9	1934.4	2363.2	3059.7	4006.1
72.5°	1046.5	1065.7	1098.3	1143.3	1201.8	1258.1	1296.4	1322.3	1414.5	1825.3	2669.3
75°	767.5	787.7	829.4	889.0	991.4	1108.4	1230.0	1286.2	1248.0	1195.1	1486.5
77.5°	445.6	472.6	507.5	564.9	659.4	814.7	1022.9	1207.5	1332.4	1340.3	1272.7
80°	187.9	191.3	212.7	241.9	300.5	409.6	571.7	837.2	1114.1	1300.9	1344.8
82.5°	42.8	52.9	67.5	79.9	97.9	135.0	200.3	333.1	602.0	944.1	1231.1
85°	15.8	15.8	21.4	31.5	36.0	40.5	52.9	84.4	144.0	265.6	553.7
87.5°	0.0	1.1	2.3	2.3	4.5	5.6	9.0	12.4	11.3	10.1	33.8
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°	1121.9	1121.9	1121.9	1121.9	1121.9	1121.9	1121.9	1121.9	1121.9	1121.9	1121.9
2.5°	1125.3	1124.2	1121.9	1121.9	1121.9	1121.9	1119.7	1120.8	1118.6	1119.7	1119.7
5°	1124.2	1124.2	1123.1	1120.8	1121.9	1121.9	1123.1	1120.8	1120.8	1121.9	1120.8
7.5°	1124.2	1123.1	1123.1	1123.1	1124.2	1123.1	1124.2	1124.2	1124.2	1125.3	1125.3
10°	1124.2	1124.2	1126.4	1127.6	1127.6	1128.7	1132.1	1132.1	1133.2	1134.3	1136.6
12.5°	1125.3	1129.8	1133.2	1136.6	1137.7	1140.0	1145.6	1145.6	1147.8	1151.2	1152.3
15°	1126.4	1133.2	1140.0	1142.2	1144.5	1149.0	1154.6	1156.8	1160.2	1163.6	1165.8
17.5°	1125.3	1134.3	1142.2	1145.6	1149.0	1154.6	1161.3	1163.6	1168.1	1172.6	1177.1
20°	1124.2	1136.6	1149.0	1153.5	1158.0	1165.8	1174.8	1180.5	1185.0	1191.7	1196.2
22.5°	1130.9	1145.6	1162.5	1169.2	1177.1	1187.2	1199.6	1206.3	1212.0	1218.7	1222.1
25°	1152.3	1163.6	1183.8	1195.1	1205.2	1222.1	1239.0	1246.9	1253.6	1259.2	1260.4
27.5°	1188.3	1191.7	1216.5	1231.1	1245.7	1272.7	1293.0	1298.6	1311.0	1315.5	1314.4
30°	1246.9	1241.2	1261.5	1284.0	1305.4	1342.5	1367.3	1381.9	1393.1	1393.1	1384.1
32.5°	1331.3	1322.3	1327.9	1353.8	1378.5	1432.5	1461.8	1480.9	1488.8	1486.5	1467.4
35°	1441.5	1435.9	1432.5	1452.8	1492.2	1555.2	1593.5	1603.6	1616.0	1613.7	1589.0
37.5°	1572.1	1567.6	1567.6	1591.2	1629.5	1722.9	1764.5	1771.3	1770.1	1752.1	1706.0
40°	1726.2	1724.0	1713.9	1727.4	1760.0	1881.5	1937.8	1946.8	1934.4	1905.2	1851.2
42.5°	1947.9	1934.4	1902.9	1910.8	1935.6	2053.7	2126.9	2151.6	2139.2	2110.0	2022.2
45°	2237.1	2222.5	2169.6	2162.9	2176.4	2279.9	2374.4	2380.1	2377.8	2340.7	2237.1
47.5°	2577.0	2554.5	2498.2	2480.2	2475.7	2571.4	2662.5	2671.5	2665.9	2610.7	2472.3
50°	2945.0	2912.3	2875.2	2862.8	2844.8	2913.5	3005.7	3006.9	2984.4	2907.8	2778.4
52.5°	3337.7	3326.4	3319.7	3307.3	3299.4	3359.1	3415.3	3381.6	3347.8	3267.9	3155.4
55°	3733.8	3780.0	3827.2	3831.7	3845.2	3909.4	3908.2	3816.0	3791.2	3747.3	3635.9
57.5°	4154.7	4325.7	4474.3	4520.4	4565.4	4684.7	4673.5	4582.3	4550.8	4496.8	4404.5
60°	4727.5	5188.9	5617.6	5720.0	5790.9	5933.8	5920.3	5779.6	5844.9	5840.4	5721.1
62.5°	5529.8	6297.3	6939.9	7097.4	7146.9	7162.7	7077.1	6925.2	6989.4	7061.4	6694.5
65°	6073.4	6975.9	7635.3	7756.8	7763.6	7575.7	7385.5	7206.6	7190.8	7128.9	6604.5
66°	6085.7	7009.6	7671.3	7789.5	7747.8	7491.3	7250.4	7070.4	6992.7	6856.6	6313.1
67.5°	5867.4	6799.2	7511.5	7636.4	7545.3	7181.8	6849.8	6618.0	6466.1	6245.5	5766.1
70°	4927.8	5851.7	6729.4	6962.4	6991.6	6449.2	5989.0	5716.6	5511.8	5209.1	4796.1
72.5°	3664.0	4499.0	5273.3	5496.1	5609.7	5176.5	4788.2	4581.2	4301.0	3982.5	3688.8
75°	2296.8	2886.4	3405.2	3561.6	3454.7	3119.4	2886.4	2799.8	2524.1	2333.9	2200.0
77.5°	1313.2	1497.8	1539.4	1479.8	1353.8	1036.4	737.1	545.8	473.8	524.4	578.4
80°	1281.7	1174.8	936.3	823.7	746.1	513.1	301.6	207.1	172.2	176.7	191.3
82.5°	1388.6	1489.9	1226.6	1000.4	839.5	567.2	312.8	166.5	112.5	132.8	149.7
85°	902.5	1255.9	1130.9	953.1	772.0	485.0	257.7	86.6	57.4	75.4	103.5
87.5°	91.2	100.2	85.5	115.9	86.6	40.5	20.3	12.4	11.3	13.5	20.3
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):

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	1121.9	1121.9	1121.9	1121.9	1121.9	1121.9	1121.9	1121.9	1121.9	1121.9	1121.9
2.5°	1120.8	1120.8	1121.9	1123.1	1124.2	1125.3	1125.3	1125.3	1125.3	1127.6	1126.4
5°	1123.1	1125.3	1127.6	1128.7	1130.9	1130.9	1134.3	1133.2	1133.2	1136.6	1137.7
7.5°	1127.6	1130.9	1135.4	1134.3	1138.8	1137.7	1140.0	1140.0	1136.6	1137.7	1135.4
10°	1137.7	1142.2	1144.5	1141.1	1142.2	1137.7	1136.6	1130.9	1124.2	1120.8	1116.3
12.5°	1154.6	1159.1	1159.1	1153.5	1146.7	1136.6	1128.7	1116.3	1106.2	1100.6	1094.9
15°	1169.2	1173.7	1172.6	1163.6	1153.5	1137.7	1126.4	1111.8	1097.2	1088.2	1082.6
17.5°	1180.5	1182.7	1179.3	1167.0	1155.7	1141.1	1129.8	1114.1	1097.2	1085.9	1075.8
20°	1197.3	1195.1	1187.2	1171.5	1159.1	1145.6	1136.6	1123.1	1103.9	1089.3	1074.7
22.5°	1222.1	1213.1	1198.5	1181.6	1169.2	1156.8	1147.8	1133.2	1114.1	1096.1	1079.2
25°	1254.7	1236.7	1216.5	1198.5	1187.2	1173.7	1163.6	1147.8	1127.6	1107.3	1087.1
27.5°	1302.0	1270.5	1244.6	1228.9	1216.5	1199.6	1187.2	1167.0	1145.6	1121.9	1099.4
30°	1354.9	1312.1	1287.4	1275.0	1261.5	1243.5	1224.3	1198.5	1173.7	1147.8	1120.8
32.5°	1423.5	1371.8	1348.1	1335.8	1317.8	1295.2	1272.7	1243.5	1208.6	1174.8	1142.2
35°	1513.6	1460.7	1435.9	1416.8	1392.0	1362.8	1330.1	1290.7	1243.5	1198.5	1156.8
37.5°	1610.3	1552.9	1529.3	1509.1	1471.9	1433.7	1387.5	1330.1	1266.0	1206.3	1154.6
40°	1733.0	1680.1	1649.7	1614.8	1570.9	1504.6	1432.5	1349.3	1267.1	1194.0	1133.2
42.5°	1888.3	1835.4	1790.4	1735.2	1658.7	1556.3	1453.9	1345.9	1246.9	1163.6	1098.3
45°	2094.2	2030.1	1952.4	1855.7	1731.9	1589.0	1455.0	1324.5	1208.6	1116.3	1046.5
47.5°	2346.3	2248.4	2121.2	1958.1	1780.3	1598.0	1437.0	1281.7	1149.0	1048.8	971.2
50°	2645.6	2491.5	2282.2	2042.5	1805.0	1584.5	1392.0	1217.6	1064.6	957.6	865.4
52.5°	2987.7	2735.7	2427.3	2103.2	1803.9	1539.4	1315.5	1120.8	954.3	835.0	747.2
55°	3389.5	3014.7	2577.0	2148.2	1772.4	1456.2	1198.5	984.7	818.1	707.8	626.8
57.5°	3978.0	3467.1	2838.1	2218.0	1709.4	1327.9	1039.8	821.5	675.2	570.5	501.9
60°	5053.8	4222.2	3308.4	2358.7	1612.6	1140.0	854.1	647.1	524.4	440.0	393.9
62.5°	5864.0	4806.2	3562.8	2327.2	1417.9	908.1	633.6	471.5	386.0	328.6	299.3
65°	5748.1	4625.1	3291.6	2004.2	1111.8	640.3	420.9	320.7	265.6	238.6	221.7
66°	5485.9	4388.8	3056.4	1803.9	961.0	532.3	346.6	269.0	228.4	209.3	198.1
67.5°	4988.5	3949.9	2635.5	1478.7	738.2	386.0	261.1	212.7	185.7	177.8	169.9
70°	4146.8	3149.8	1850.0	860.9	377.0	214.9	165.4	148.5	141.8	140.7	138.4
72.5°	3177.9	2229.3	1089.3	407.4	195.8	142.9	128.3	122.7	120.4	120.4	121.5
75°	1947.9	1252.5	481.6	199.2	137.3	120.4	113.7	111.4	110.3	111.4	110.3
77.5°	650.4	398.4	205.9	150.8	124.9	111.4	106.9	104.7	104.7	104.7	104.7
80°	199.2	173.3	157.5	139.5	118.2	105.8	99.0	97.9	99.0	100.2	96.8
82.5°	149.7	141.8	132.8	123.8	106.9	94.5	92.3	92.3	92.3	88.9	84.4
85°	110.3	109.2	90.0	84.4	78.8	78.8	78.8	78.8	75.4	69.8	65.3
87.5°	20.3	19.1	20.3	21.4	31.5	33.8	33.8	36.0	39.4	37.1	37.1
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: P155598

CATALOG NUMBER: TLM-E04-LED-E1-T3-8030

CANDELA DISTRIBUTION (continued):

	160°	165°	170°	175°	180°
0°	1121.9	1121.9	1121.9	1121.9	1121.9
2.5°	1126.4	1125.3	1128.7	1126.4	1127.6
5°	1136.6	1135.4	1137.7	1135.4	1138.8
7.5°	1133.2	1130.9	1129.8	1130.9	1132.1
10°	1109.6	1107.3	1106.2	1105.1	1106.2
12.5°	1089.3	1084.8	1084.8	1082.6	1083.7
15°	1074.7	1071.3	1070.2	1067.9	1069.1
17.5°	1067.9	1062.3	1060.1	1057.8	1057.8
20°	1063.4	1056.7	1053.3	1051.1	1049.9
22.5°	1063.4	1053.3	1048.8	1046.5	1045.4
25°	1067.9	1055.6	1048.8	1045.4	1044.3
27.5°	1076.9	1061.2	1053.3	1048.8	1048.8
30°	1092.7	1072.4	1061.2	1055.6	1054.4
32.5°	1108.4	1081.4	1065.7	1058.9	1056.7
35°	1116.3	1081.4	1062.3	1051.1	1048.8
37.5°	1107.3	1066.8	1043.2	1026.3	1022.9
40°	1079.2	1036.4	1010.5	994.8	992.5
42.5°	1042.0	1000.4	970.0	958.8	955.4
45°	991.4	941.9	911.5	895.8	896.9
47.5°	904.8	854.1	827.1	812.5	814.7
50°	802.4	752.8	729.2	713.5	716.8
52.5°	689.8	644.8	622.3	614.4	612.2
55°	571.7	536.8	521.0	512.0	508.6
57.5°	463.6	438.9	427.6	416.4	417.5
60°	365.7	353.4	350.0	337.6	336.5
62.5°	288.1	280.2	276.8	267.8	269.0
65°	218.3	216.1	218.3	212.7	214.9
66°	196.9	198.1	198.1	194.7	196.9
67.5°	169.9	172.2	175.6	172.2	174.4
70°	140.7	142.9	145.2	145.2	145.2
72.5°	122.7	124.9	126.0	126.0	126.0
75°	112.5	113.7	114.8	112.5	112.5
77.5°	105.8	105.8	103.5	102.4	101.3
80°	95.7	94.5	91.2	88.9	88.9
82.5°	79.9	77.6	75.4	72.0	72.0
85°	60.8	58.5	56.3	51.8	49.5
87.5°	31.5	32.6	31.5	25.9	22.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)