

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: P155606

Luminaire Tested: **TLM-F04-LED-E1-T3-7050**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P155606
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-T3-7050
Description: TALON MEDIUM LED SITE LUMINAIRE
(4) LIGHTBARS WITH AccuLED OPTICS - TYPE 3
Light Source: (28) 5000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10449.3 lumens
Efficiency: N/A
Efficacy: 102.2 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

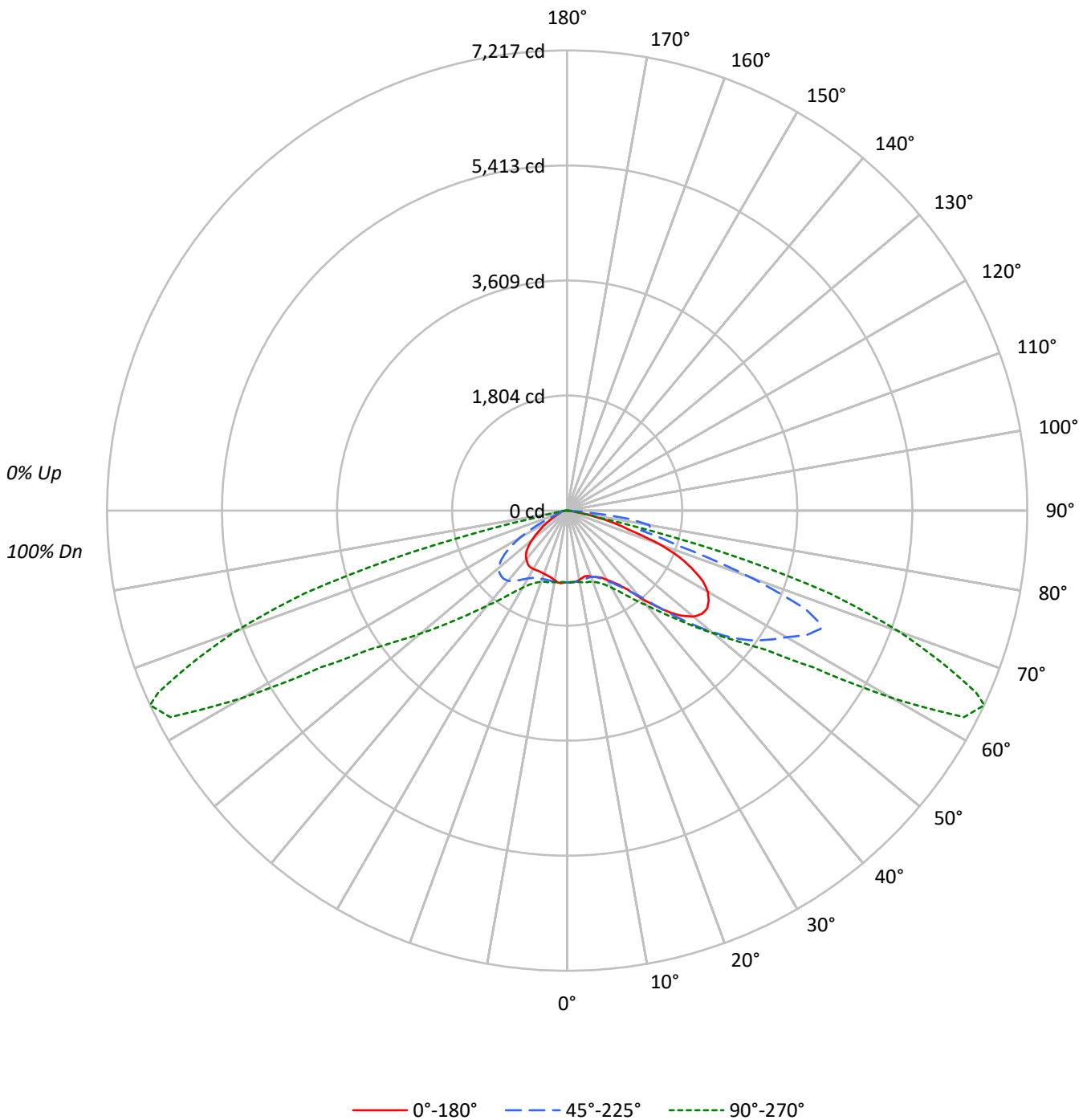
Input Watts (W): 102.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	18090	18090	18090
5°	18159	18141	18433
10°	18002	18553	18111
15°	17733	19367	17846
20°	18827	20333	18016
25°	20421	22303	18579
30°	23278	25938	19632
35°	27910	31809	20644
40°	37376	40717	20892
45°	51066	54222	20453
50°	64616	74863	17980
55°	75068	106579	14299
60°	81796	188491	10851
65°	82563	274353	8200
70°	72361	259852	6844
75°	47814	157248	7008
80°	17449	15987	8253
85°	2912	10617	9161



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	107.9	1.0
10°-20°	318.3	3.0
20°-30°	547.0	5.2
30°-40°	888.2	8.5
40°-50°	1482.9	14.2
50°-60°	2335.1	22.3
60°-70°	3184.1	30.5
70°-80°	1378.4	13.2
80°-90°	207.3	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°	973.2	9.3
0°-40°	1861.5	17.8
0°-60°	5679.5	54.4
0°-90°	10449.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10449.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1126	1126	1126	1126	1126	
5°	1126	1128	1125	1138	1143	107
15°	1066	1110	1164	1131	1073	306
25°	1152	1159	1258	1168	1048	540
35°	1423	1455	1622	1335	1053	922
45°	2248	2277	2386	1460	900	1728
55°	2680	3550	3805	1203	510	2364
65°	2172	4388	7217	422	216	2109
75°	770	1200	2533	114	113	823
85°	16	266	58	79	50	42
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°	1126.0	1126.0	1126.0	1126.0	1126.0	1126.0	1126.0	1126.0	1126.0	1126.0	1126.0
2.5°	1130.6	1135.1	1130.6	1131.7	1132.8	1131.7	1130.6	1130.6	1127.2	1129.4	1131.7
5°	1126.0	1129.4	1128.3	1129.4	1130.6	1129.4	1128.3	1129.4	1127.2	1128.3	1131.7
7.5°	1120.4	1119.3	1120.4	1122.7	1124.9	1124.9	1124.9	1126.0	1124.9	1124.9	1128.3
10°	1103.5	1104.6	1106.8	1110.2	1111.4	1114.8	1114.8	1118.1	1119.3	1121.5	1126.0
12.5°	1082.0	1083.1	1085.4	1087.6	1093.3	1098.9	1098.9	1106.8	1110.2	1115.9	1123.8
15°	1066.2	1067.3	1069.6	1071.8	1076.4	1082.0	1085.4	1094.4	1100.1	1110.2	1121.5
17.5°	1075.2	1074.1	1076.4	1077.5	1077.5	1082.0	1082.0	1088.8	1095.6	1104.6	1119.3
20°	1101.2	1101.2	1103.5	1103.5	1102.3	1104.6	1100.1	1100.1	1101.2	1105.7	1115.9
22.5°	1127.2	1126.0	1130.6	1132.8	1134.0	1137.3	1132.8	1131.7	1126.0	1122.7	1126.0
25°	1152.0	1150.9	1156.5	1159.9	1165.6	1169.0	1169.0	1169.0	1164.4	1158.8	1155.4
27.5°	1190.4	1190.4	1196.1	1199.5	1204.0	1210.8	1214.1	1214.1	1215.3	1207.4	1201.7
30°	1254.8	1255.9	1257.1	1261.6	1266.1	1268.4	1272.9	1276.3	1279.6	1275.1	1266.1
32.5°	1331.6	1324.8	1324.8	1331.6	1337.3	1344.0	1346.3	1350.8	1357.6	1354.2	1353.1
35°	1423.1	1420.8	1418.6	1420.8	1427.6	1435.5	1444.5	1452.5	1447.9	1454.7	1451.3
37.5°	1558.6	1560.9	1562.0	1562.0	1560.9	1563.1	1567.7	1575.6	1573.3	1575.6	1580.1
40°	1782.2	1774.3	1766.4	1767.6	1756.3	1758.5	1740.5	1748.4	1749.5	1741.6	1745.0
42.5°	2005.9	2010.4	2013.8	2022.8	2014.9	2010.4	1993.5	1993.5	1984.4	1976.5	1974.3
45°	2247.6	2256.6	2257.7	2275.8	2269.0	2283.7	2296.1	2292.8	2278.1	2276.9	2261.1
47.5°	2440.7	2455.4	2471.2	2492.7	2509.6	2542.4	2580.8	2600.0	2611.3	2620.3	2602.2
50°	2585.3	2592.1	2632.7	2666.6	2703.9	2758.1	2811.2	2880.1	2935.4	2961.4	2986.2
52.5°	2663.2	2680.1	2724.2	2777.3	2842.8	2924.1	3009.9	3119.5	3214.4	3277.6	3334.1
55°	2680.1	2697.1	2746.8	2814.5	2903.8	3013.3	3136.4	3285.5	3427.8	3549.8	3668.4
57.5°	2632.7	2651.9	2705.0	2782.9	2888.0	3021.2	3176.0	3371.4	3567.9	3765.5	3940.6
60°	2545.7	2569.5	2618.0	2694.8	2811.2	2961.4	3146.6	3391.7	3667.3	3970.0	4305.4
62.5°	2402.3	2427.2	2472.3	2557.0	2676.8	2842.8	3057.4	3362.3	3752.0	4228.6	4823.8
65°	2171.9	2183.2	2238.5	2324.4	2430.5	2613.5	2849.6	3217.8	3724.9	4387.9	5207.8
66°	2068.0	2087.2	2121.1	2190.0	2291.6	2463.3	2700.5	3074.3	3622.1	4332.5	5197.7
67.5°	1905.4	1920.0	1942.6	1988.9	2051.1	2177.5	2402.3	2755.8	3308.1	4052.4	4981.9
70°	1540.5	1547.3	1577.8	1593.6	1615.1	1656.9	1738.2	1941.5	2371.8	3070.9	4020.8
72.5°	1050.4	1069.6	1102.3	1147.5	1206.2	1262.7	1301.1	1327.1	1419.7	1831.9	2679.0
75°	770.3	790.6	832.4	892.3	995.0	1112.5	1234.5	1290.9	1252.5	1199.5	1492.0
77.5°	447.3	474.4	509.4	567.0	661.8	817.7	1026.7	1211.9	1337.3	1345.2	1277.4
80°	188.6	192.0	213.5	242.8	301.6	411.1	573.8	840.3	1118.1	1305.6	1349.7
82.5°	42.9	53.1	67.8	80.2	98.3	135.5	201.0	334.3	604.2	947.6	1235.6
85°	15.8	15.8	21.5	31.6	36.1	40.7	53.1	84.7	144.6	266.5	555.7
87.5°	0.0	1.1	2.3	2.3	4.5	5.6	9.0	12.4	11.3	10.2	33.9
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°	1126.0	1126.0	1126.0	1126.0	1126.0	1126.0	1126.0	1126.0	1126.0	1126.0	1126.0
2.5°	1129.4	1128.3	1126.0	1126.0	1126.0	1126.0	1123.8	1124.9	1122.7	1123.8	1123.8
5°	1128.3	1128.3	1127.2	1124.9	1126.0	1126.0	1127.2	1124.9	1124.9	1126.0	1124.9
7.5°	1128.3	1127.2	1127.2	1127.2	1128.3	1127.2	1128.3	1128.3	1128.3	1129.4	1129.4
10°	1128.3	1128.3	1130.6	1131.7	1131.7	1132.8	1136.2	1136.2	1137.3	1138.5	1140.7
12.5°	1129.4	1134.0	1137.3	1140.7	1141.9	1144.1	1149.8	1149.8	1152.0	1155.4	1156.5
15°	1130.6	1137.3	1144.1	1146.4	1148.6	1153.2	1158.8	1161.1	1164.4	1167.8	1170.1
17.5°	1129.4	1138.5	1146.4	1149.8	1153.2	1158.8	1165.6	1167.8	1172.4	1176.9	1181.4
20°	1128.3	1140.7	1153.2	1157.7	1162.2	1170.1	1179.1	1184.8	1189.3	1196.1	1200.6
22.5°	1135.1	1149.8	1166.7	1173.5	1181.4	1191.6	1204.0	1210.8	1216.4	1223.2	1226.6
25°	1156.5	1167.8	1188.2	1199.5	1209.6	1226.6	1243.5	1251.4	1258.2	1263.8	1265.0
27.5°	1192.7	1196.1	1220.9	1235.6	1250.3	1277.4	1297.7	1303.4	1315.8	1320.3	1319.2
30°	1251.4	1245.8	1266.1	1288.7	1310.1	1347.4	1372.3	1386.9	1398.2	1398.2	1389.2
32.5°	1336.1	1327.1	1332.7	1358.7	1383.6	1437.8	1467.1	1486.3	1494.2	1492.0	1472.8
35°	1446.8	1441.2	1437.8	1458.1	1497.6	1560.9	1599.3	1609.4	1621.9	1619.6	1594.8
37.5°	1577.8	1573.3	1573.3	1597.0	1635.4	1729.2	1771.0	1777.7	1776.6	1758.5	1712.2
40°	1732.6	1730.3	1720.1	1733.7	1766.4	1888.4	1944.9	1953.9	1941.5	1912.1	1857.9
42.5°	1955.1	1941.5	1909.9	1917.8	1942.6	2061.2	2134.6	2159.5	2147.1	2117.7	2029.6
45°	2245.3	2230.6	2177.5	2170.8	2184.3	2288.2	2383.1	2388.8	2386.5	2349.2	2245.3
47.5°	2586.4	2563.8	2507.3	2489.3	2484.8	2580.8	2672.2	2681.3	2675.6	2620.3	2481.4
50°	2955.7	2923.0	2885.7	2873.3	2855.2	2924.1	3016.7	3017.8	2995.3	2918.5	2788.6
52.5°	3349.9	3338.6	3331.8	3319.4	3311.5	3371.4	3427.8	3393.9	3360.1	3279.9	3166.9
55°	3747.5	3793.8	3841.2	3845.7	3859.3	3923.7	3922.5	3829.9	3805.1	3761.0	3649.2
57.5°	4169.9	4341.5	4490.6	4536.9	4582.1	4701.8	4690.5	4599.1	4567.4	4513.2	4420.6
60°	4744.8	5207.8	5638.1	5740.9	5812.1	5955.5	5942.0	5800.8	5866.3	5861.8	5742.0
62.5°	5550.0	6320.3	6965.2	7123.3	7173.0	7188.8	7103.0	6950.5	7014.9	7087.2	6719.0
65°	6095.6	7001.4	7663.2	7785.2	7792.0	7603.4	7412.5	7232.9	7217.1	7155.0	6628.6
66°	6108.0	7035.2	7699.4	7817.9	7776.2	7518.6	7276.9	7096.2	7018.3	6881.6	6336.1
67.5°	5888.9	6824.0	7539.0	7664.3	7572.9	7208.0	6874.9	6642.2	6489.7	6268.4	5787.2
70°	4945.8	5873.1	6754.0	6987.8	7017.2	6472.8	6010.8	5737.5	5532.0	5228.2	4813.6
72.5°	3677.4	4515.5	5292.5	5516.2	5630.2	5195.4	4805.7	4597.9	4316.7	3997.1	3702.3
75°	2305.2	2897.0	3417.7	3574.7	3467.4	3130.8	2897.0	2810.0	2533.3	2342.4	2208.0
77.5°	1318.0	1503.3	1545.1	1485.2	1358.7	1040.2	739.8	547.8	475.5	526.3	580.5
80°	1286.4	1179.1	939.7	826.7	748.8	515.0	302.7	207.8	172.8	177.3	192.0
82.5°	1393.7	1495.4	1231.1	1004.1	842.6	569.2	314.0	167.2	112.9	133.3	150.2
85°	905.8	1260.4	1135.1	956.6	774.8	486.8	258.6	87.0	57.6	75.7	103.9
87.5°	91.5	100.5	85.8	116.3	87.0	40.7	20.3	12.4	11.3	13.6	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°	1126.0	1126.0	1126.0	1126.0	1126.0	1126.0	1126.0	1126.0	1126.0	1126.0	1126.0
2.5°	1124.9	1124.9	1126.0	1127.2	1128.3	1129.4	1129.4	1129.4	1129.4	1131.7	1130.6
5°	1127.2	1129.4	1131.7	1132.8	1135.1	1135.1	1138.5	1137.3	1137.3	1140.7	1141.9
7.5°	1131.7	1135.1	1139.6	1138.5	1143.0	1141.9	1144.1	1144.1	1140.7	1141.9	1139.6
10°	1141.9	1146.4	1148.6	1145.2	1146.4	1141.9	1140.7	1135.1	1128.3	1124.9	1120.4
12.5°	1158.8	1163.3	1163.3	1157.7	1150.9	1140.7	1132.8	1120.4	1110.2	1104.6	1098.9
15°	1173.5	1178.0	1176.9	1167.8	1157.7	1141.9	1130.6	1115.9	1101.2	1092.2	1086.5
17.5°	1184.8	1187.0	1183.6	1171.2	1159.9	1145.2	1134.0	1118.1	1101.2	1089.9	1079.7
20°	1201.7	1199.5	1191.6	1175.7	1163.3	1149.8	1140.7	1127.2	1108.0	1093.3	1078.6
22.5°	1226.6	1217.5	1202.8	1185.9	1173.5	1161.1	1152.0	1137.3	1118.1	1100.1	1083.1
25°	1259.3	1241.2	1220.9	1202.8	1191.6	1178.0	1167.8	1152.0	1131.7	1111.4	1091.0
27.5°	1306.8	1275.1	1249.2	1233.3	1220.9	1204.0	1191.6	1171.2	1149.8	1126.0	1103.5
30°	1359.8	1316.9	1292.1	1279.6	1266.1	1248.0	1228.8	1202.8	1178.0	1152.0	1124.9
32.5°	1428.7	1376.8	1353.1	1340.6	1322.6	1300.0	1277.4	1248.0	1213.0	1179.1	1146.4
35°	1519.1	1466.0	1441.2	1422.0	1397.1	1367.7	1335.0	1295.5	1248.0	1202.8	1161.1
37.5°	1616.2	1558.6	1534.9	1514.6	1477.3	1438.9	1392.6	1335.0	1270.6	1210.8	1158.8
40°	1739.3	1686.2	1655.8	1620.7	1576.7	1510.1	1437.8	1354.2	1271.7	1198.3	1137.3
42.5°	1895.2	1842.1	1796.9	1741.6	1664.8	1562.0	1459.2	1350.8	1251.4	1167.8	1102.3
45°	2101.9	2037.5	1959.6	1862.4	1738.2	1594.8	1460.4	1329.3	1213.0	1120.4	1050.4
47.5°	2354.9	2256.6	2129.0	1965.2	1786.8	1603.8	1442.3	1286.4	1153.2	1052.6	974.7
50°	2655.3	2500.6	2290.5	2049.9	1811.6	1590.2	1397.1	1222.0	1068.4	961.1	868.5
52.5°	2998.6	2745.7	2436.2	2110.9	1810.5	1545.1	1320.3	1124.9	957.8	838.0	749.9
55°	3401.9	3025.8	2586.4	2156.1	1778.9	1461.5	1202.8	988.3	821.1	710.4	629.1
57.5°	3992.5	3479.8	2848.4	2226.1	1715.6	1332.7	1043.6	824.5	677.7	572.6	503.7
60°	5072.3	4237.6	3320.5	2367.3	1618.5	1144.1	857.2	649.4	526.3	441.6	395.3
62.5°	5885.5	4823.8	3575.8	2335.7	1423.1	911.5	635.9	473.2	387.4	329.8	300.4
65°	5769.1	4642.0	3303.6	2011.5	1115.9	642.6	422.4	321.9	266.5	239.4	222.5
66°	5506.0	4404.8	3067.5	1810.5	964.5	534.2	347.9	269.9	229.3	210.1	198.8
67.5°	5006.8	3964.3	2645.1	1484.1	740.9	387.4	262.0	213.5	186.4	178.5	170.5
70°	4162.0	3161.3	1856.8	864.0	378.4	215.7	166.0	149.1	142.3	141.2	138.9
72.5°	3189.5	2237.4	1093.3	408.9	196.5	143.4	128.8	123.1	120.8	120.8	122.0
75°	1955.1	1257.1	483.4	199.9	137.8	120.8	114.1	111.8	110.7	111.8	110.7
77.5°	652.8	399.8	206.7	151.3	125.4	111.8	107.3	105.0	105.0	105.0	105.0
80°	199.9	173.9	158.1	140.0	118.6	106.2	99.4	98.3	99.4	100.5	97.1
82.5°	150.2	142.3	133.3	124.2	107.3	94.9	92.6	92.6	92.6	89.2	84.7
85°	110.7	109.6	90.4	84.7	79.1	79.1	79.1	79.1	75.7	70.0	65.5
87.5°	20.3	19.2	20.3	21.5	31.6	33.9	33.9	36.1	39.5	37.3	37.3
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: P155606

CATALOG NUMBER: TLM-F04-LED-E1-T3-7050

CANDELA DISTRIBUTION (continued):

	160°	165°	170°	175°	180°
0°	1126.0	1126.0	1126.0	1126.0	1126.0
2.5°	1130.6	1129.4	1132.8	1130.6	1131.7
5°	1140.7	1139.6	1141.9	1139.6	1143.0
7.5°	1137.3	1135.1	1134.0	1135.1	1136.2
10°	1113.6	1111.4	1110.2	1109.1	1110.2
12.5°	1093.3	1088.8	1088.8	1086.5	1087.6
15°	1078.6	1075.2	1074.1	1071.8	1073.0
17.5°	1071.8	1066.2	1063.9	1061.7	1061.7
20°	1067.3	1060.5	1057.2	1054.9	1053.8
22.5°	1067.3	1057.2	1052.6	1050.4	1049.2
25°	1071.8	1059.4	1052.6	1049.2	1048.1
27.5°	1080.9	1065.1	1057.2	1052.6	1052.6
30°	1096.7	1076.4	1065.1	1059.4	1058.3
32.5°	1112.5	1085.4	1069.6	1062.8	1060.5
35°	1120.4	1085.4	1066.2	1054.9	1052.6
37.5°	1111.4	1070.7	1047.0	1030.0	1026.7
40°	1083.1	1040.2	1014.2	998.4	996.2
42.5°	1045.9	1004.1	973.6	962.3	958.9
45°	995.0	945.3	914.8	899.0	900.2
47.5°	908.1	857.2	830.1	815.5	817.7
50°	805.3	755.6	731.9	716.1	719.4
52.5°	692.3	647.2	624.6	616.7	614.4
55°	573.8	538.7	522.9	513.9	510.5
57.5°	465.3	440.5	429.2	417.9	419.0
60°	367.1	354.6	351.3	338.8	337.7
62.5°	289.1	281.2	277.8	268.8	269.9
65°	219.1	216.9	219.1	213.5	215.7
66°	197.7	198.8	198.8	195.4	197.7
67.5°	170.5	172.8	176.2	172.8	175.1
70°	141.2	143.4	145.7	145.7	145.7
72.5°	123.1	125.4	126.5	126.5	126.5
75°	112.9	114.1	115.2	112.9	112.9
77.5°	106.2	106.2	103.9	102.8	101.6
80°	96.0	94.9	91.5	89.2	89.2
82.5°	80.2	77.9	75.7	72.3	72.3
85°	61.0	58.7	56.5	52.0	49.7
87.5°	31.6	32.8	31.6	26.0	22.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)