

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: P155613

Luminaire Tested: **TLM-F05-LED-E1-T3-8030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P155613
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-F05-LED-E1-T3-8030
Description: TALON MEDIUM LED SITE LUMINAIRE
(5) LIGHTBARS WITH AccuLED OPTICS - TYPE 3
Light Source: (35) 3000K CCT, 80 CRI LEDs
Ballast/Driver: -

Summary

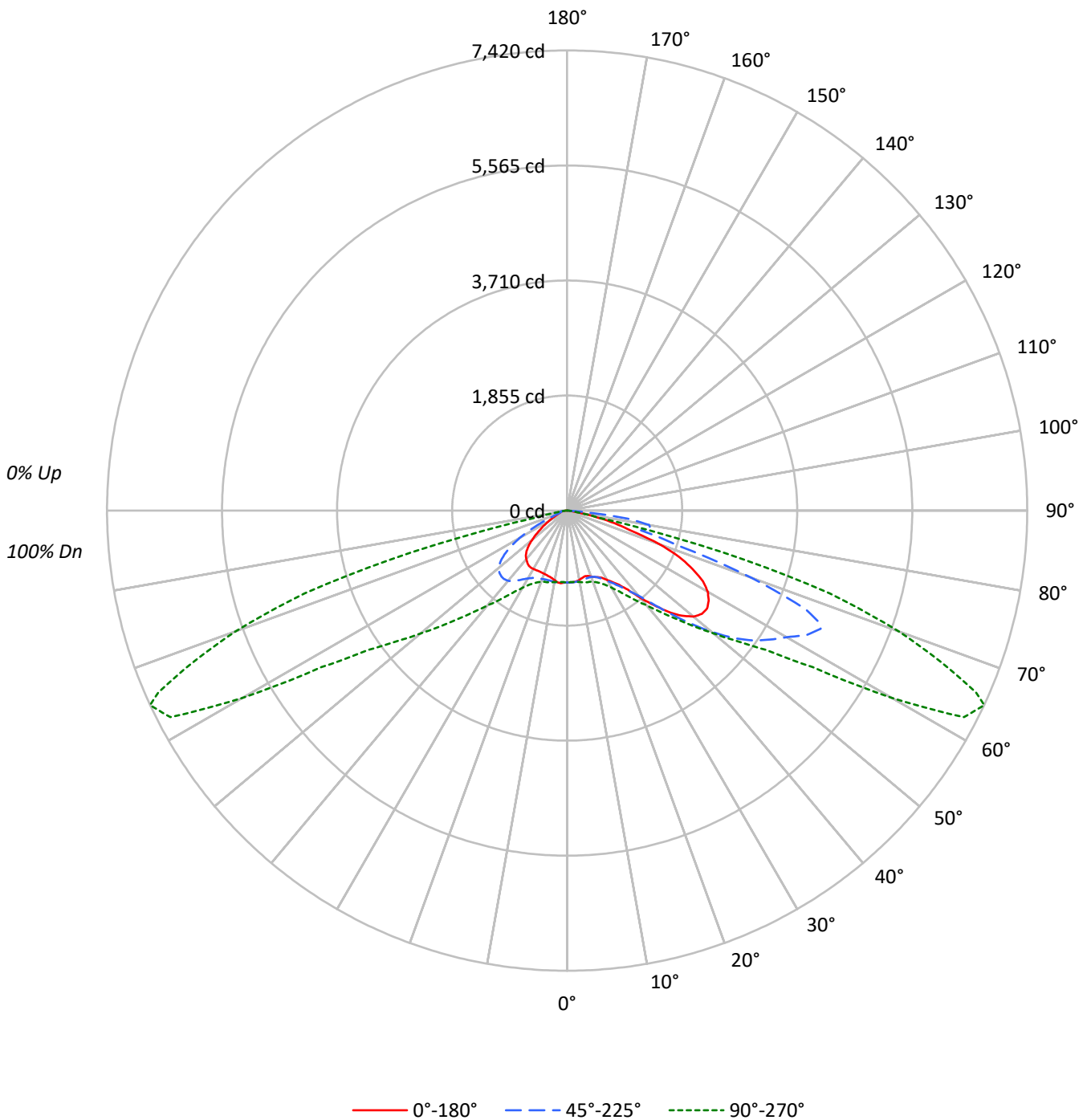
Lumens per Lamp: N/A
Luminaire Lumens: 10743.4 lumens
Efficiency: N/A
Efficacy: 80.6 lumens/watt
Spacing Criteria (0/90/45): 1.97 / 4.22 / 2.62
Luminous Opening: Rectangular (W 0.83' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 133.3
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°	15014	15014	15014
5°	15071	15057	15299
10°	14940	15399	15032
15°	14718	16074	14812
20°	15625	16876	14952
25°	16949	18510	15420
30°	19319	21528	16294
35°	23163	26399	17135
40°	31021	33793	17339
45°	42381	45002	16974
50°	53627	62133	14924
55°	62304	88455	11868
60°	67888	156437	9005
65°	68522	227698	6806
70°	60058	215664	5680
75°	39685	130508	5817
80°	14481	13271	6848
85°	2425	8809	7604



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	110.9	1.0
10°-20°	327.3	3.0
20°-30°	562.4	5.2
30°-40°	913.2	8.5
40°-50°	1524.7	14.2
50°-60°	2400.8	22.3
60°-70°	3273.8	30.5
70°-80°	1417.2	13.2
80°-90°	213.1	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°	1000.6	9.3
0°-40°	1913.8	17.8
0°-60°	5839.3	54.4
0°-90°	10743.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10743.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1158	1158	1158	1158	1158	
5°	1158	1160	1157	1170	1175	110
15°	1096	1142	1197	1162	1103	315
25°	1184	1191	1294	1201	1078	555
35°	1463	1496	1668	1373	1082	948
45°	2311	2341	2454	1502	926	1776
55°	2756	3650	3912	1237	525	2431
65°	2233	4511	7420	434	222	2168
75°	792	1233	2605	117	116	847
85°	16	274	59	81	51	43
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°	1157.7	1157.7	1157.7	1157.7	1157.7	1157.7	1157.7	1157.7	1157.7	1157.7	1157.7
2.5°	1162.4	1167.0	1162.4	1163.5	1164.7	1163.5	1162.4	1162.4	1158.9	1161.2	1163.5
5°	1157.7	1161.2	1160.1	1161.2	1162.4	1161.2	1160.1	1161.2	1158.9	1160.1	1163.5
7.5°	1151.9	1150.8	1151.9	1154.3	1156.6	1156.6	1156.6	1157.7	1156.6	1156.6	1160.1
10°	1134.5	1135.7	1138.0	1141.5	1142.6	1146.1	1146.1	1149.6	1150.8	1153.1	1157.7
12.5°	1112.5	1113.6	1115.9	1118.3	1124.1	1129.9	1129.9	1138.0	1141.5	1147.3	1155.4
15°	1096.2	1097.4	1099.7	1102.0	1106.6	1112.5	1115.9	1125.2	1131.0	1141.5	1153.1
17.5°	1105.5	1104.3	1106.6	1107.8	1107.8	1112.5	1112.5	1119.4	1126.4	1135.7	1150.8
20°	1132.2	1132.2	1134.5	1134.5	1133.4	1135.7	1131.0	1131.0	1132.2	1136.8	1147.3
22.5°	1158.9	1157.7	1162.4	1164.7	1165.9	1169.4	1164.7	1163.5	1157.7	1154.3	1157.7
25°	1184.5	1183.3	1189.1	1192.6	1198.4	1201.9	1201.9	1201.9	1197.2	1191.4	1187.9
27.5°	1223.9	1223.9	1229.7	1233.2	1237.9	1244.8	1248.3	1248.3	1249.5	1241.4	1235.5
30°	1290.1	1291.3	1292.4	1297.1	1301.7	1304.1	1308.7	1312.2	1315.7	1311.0	1301.7
32.5°	1369.1	1362.1	1362.1	1369.1	1374.9	1381.9	1384.2	1388.8	1395.8	1392.3	1391.1
35°	1463.1	1460.8	1458.5	1460.8	1467.8	1475.9	1485.2	1493.3	1488.7	1495.7	1492.2
37.5°	1602.5	1604.8	1606.0	1606.0	1604.8	1607.1	1611.8	1619.9	1617.6	1619.9	1624.6
40°	1832.4	1824.3	1816.2	1817.3	1805.7	1808.0	1789.4	1797.6	1798.7	1790.6	1794.1
42.5°	2062.3	2067.0	2070.5	2079.8	2071.6	2067.0	2049.6	2049.6	2040.3	2032.1	2029.8
45°	2310.8	2320.1	2321.3	2339.9	2332.9	2348.0	2360.8	2357.3	2342.2	2341.0	2324.8
47.5°	2509.4	2524.5	2540.8	2562.8	2580.2	2613.9	2653.4	2673.1	2684.8	2694.0	2675.5
50°	2658.0	2665.0	2706.8	2741.7	2780.0	2835.7	2890.3	2961.1	3018.0	3044.7	3070.3
52.5°	2738.2	2755.6	2800.9	2855.5	2922.8	3006.4	3094.7	3207.3	3304.8	3369.9	3427.9
55°	2755.6	2773.0	2824.1	2893.8	2985.5	3098.2	3224.7	3378.0	3524.3	3649.7	3771.7
57.5°	2706.8	2726.6	2781.1	2861.3	2969.3	3106.3	3265.4	3466.3	3668.3	3871.5	4051.5
60°	2617.4	2641.8	2691.7	2770.7	2890.3	3044.7	3235.2	3487.2	3770.5	4081.7	4426.6
62.5°	2469.9	2495.5	2541.9	2629.0	2752.1	2922.8	3143.4	3457.0	3857.6	4347.6	4959.6
65°	2233.0	2244.6	2301.5	2389.8	2499.0	2687.1	2929.8	3308.3	3829.7	4511.4	5354.4
66°	2126.2	2145.9	2180.8	2251.6	2356.1	2532.6	2776.5	3160.9	3724.1	4454.5	5344.0
67.5°	1959.0	1974.1	1997.3	2044.9	2108.8	2238.8	2469.9	2833.4	3401.2	4166.5	5122.2
70°	1583.9	1590.9	1622.2	1638.5	1660.6	1703.5	1787.1	1996.1	2438.6	3157.4	4134.0
72.5°	1079.9	1099.7	1133.4	1179.8	1240.2	1298.3	1337.7	1364.4	1459.7	1883.5	2754.4
75°	792.0	812.9	855.8	917.4	1023.0	1143.8	1269.2	1327.3	1287.8	1233.2	1534.0
77.5°	459.8	487.7	523.7	582.9	680.5	840.7	1055.6	1246.0	1374.9	1383.0	1313.3
80°	193.9	197.4	219.5	249.7	310.0	422.7	589.9	864.0	1149.6	1342.4	1387.7
82.5°	44.1	54.6	69.7	82.4	101.0	139.3	206.7	343.7	621.3	974.3	1270.4
85°	16.3	16.3	22.1	32.5	37.2	41.8	54.6	87.1	148.6	274.0	571.3
87.5°	0.0	1.2	2.3	2.3	4.6	5.8	9.3	12.8	11.6	10.5	34.8
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°	1157.7	1157.7	1157.7	1157.7	1157.7	1157.7	1157.7	1157.7	1157.7	1157.7	1157.7
2.5°	1161.2	1160.1	1157.7	1157.7	1157.7	1157.7	1155.4	1156.6	1154.3	1155.4	1155.4
5°	1160.1	1160.1	1158.9	1156.6	1157.7	1157.7	1158.9	1156.6	1156.6	1157.7	1156.6
7.5°	1160.1	1158.9	1158.9	1158.9	1160.1	1158.9	1160.1	1160.1	1160.1	1161.2	1161.2
10°	1160.1	1160.1	1162.4	1163.5	1163.5	1164.7	1168.2	1168.2	1169.4	1170.5	1172.8
12.5°	1161.2	1165.9	1169.4	1172.8	1174.0	1176.3	1182.1	1182.1	1184.5	1187.9	1189.1
15°	1162.4	1169.4	1176.3	1178.6	1181.0	1185.6	1191.4	1193.7	1197.2	1200.7	1203.0
17.5°	1161.2	1170.5	1178.6	1182.1	1185.6	1191.4	1198.4	1200.7	1205.4	1210.0	1214.6
20°	1160.1	1172.8	1185.6	1190.3	1194.9	1203.0	1212.3	1218.1	1222.8	1229.7	1234.4
22.5°	1167.0	1182.1	1199.5	1206.5	1214.6	1225.1	1237.9	1244.8	1250.6	1257.6	1261.1
25°	1189.1	1200.7	1221.6	1233.2	1243.7	1261.1	1278.5	1286.6	1293.6	1299.4	1300.6
27.5°	1226.3	1229.7	1255.3	1270.4	1285.5	1313.3	1334.2	1340.1	1352.8	1357.5	1356.3
30°	1286.6	1280.8	1301.7	1325.0	1347.0	1385.3	1410.9	1426.0	1437.6	1437.6	1428.3
32.5°	1373.7	1364.4	1370.2	1397.0	1422.5	1478.2	1508.4	1528.2	1536.3	1534.0	1514.2
35°	1487.5	1481.7	1478.2	1499.1	1539.8	1604.8	1644.3	1654.7	1667.5	1665.2	1639.7
37.5°	1622.2	1617.6	1617.6	1642.0	1681.5	1777.8	1820.8	1827.8	1826.6	1808.0	1760.4
40°	1781.3	1779.0	1768.5	1782.5	1816.2	1941.6	1999.6	2008.9	1996.1	1966.0	1910.2
42.5°	2010.1	1996.1	1963.6	1971.8	1997.3	2119.2	2194.7	2220.3	2207.5	2177.3	2086.7
45°	2308.5	2293.4	2238.8	2231.9	2245.8	2352.6	2450.2	2456.0	2453.7	2415.3	2308.5
47.5°	2659.2	2636.0	2577.9	2559.3	2554.7	2653.4	2747.5	2756.8	2750.9	2694.0	2551.2
50°	3038.9	3005.3	2966.9	2954.2	2935.6	3006.4	3101.6	3102.8	3079.6	3000.6	2867.1
52.5°	3444.2	3432.6	3425.6	3412.8	3404.7	3466.3	3524.3	3489.5	3454.6	3372.2	3256.1
55°	3852.9	3900.6	3949.3	3954.0	3967.9	4034.1	4032.9	3937.7	3912.2	3866.9	3751.9
57.5°	4287.2	4463.8	4617.0	4664.6	4711.1	4834.2	4822.6	4728.5	4696.0	4640.3	4545.0
60°	4878.3	5354.4	5796.8	5902.5	5975.7	6123.1	6109.2	5964.1	6031.4	6026.8	5903.7
62.5°	5706.3	6498.2	7161.3	7323.9	7374.9	7391.2	7302.9	7146.2	7212.4	7286.7	6908.1
65°	6267.1	7198.4	7878.9	8004.3	8011.3	7817.4	7621.1	7436.5	7420.2	7356.4	6815.2
66°	6279.9	7233.3	7916.1	8038.0	7995.0	7730.3	7481.8	7296.0	7215.9	7075.3	6514.5
67.5°	6054.6	7016.1	7751.2	7880.1	7786.0	7410.9	7068.4	6829.2	6672.4	6444.8	5950.1
70°	5085.0	6038.4	6944.1	7184.5	7214.7	6655.0	6180.0	5899.0	5687.7	5375.3	4949.1
72.5°	3781.0	4642.6	5441.5	5671.4	5788.7	5341.6	4941.0	4727.4	4438.2	4109.6	3806.5
75°	2370.1	2978.5	3513.9	3675.3	3565.0	3218.9	2978.5	2889.1	2604.6	2408.4	2270.2
77.5°	1355.2	1545.6	1588.6	1527.0	1397.0	1069.5	760.6	563.2	488.9	541.1	596.9
80°	1322.6	1212.3	966.1	850.0	769.9	529.5	311.2	213.7	177.7	182.3	197.4
82.5°	1433.0	1537.5	1265.7	1032.3	866.3	585.3	322.8	171.9	116.1	137.0	154.4
85°	931.3	1295.9	1167.0	983.6	796.6	500.5	265.9	89.4	59.2	77.8	106.8
87.5°	94.1	103.3	88.3	119.6	89.4	41.8	20.9	12.8	11.6	13.9	20.9
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):

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	1157.7	1157.7	1157.7	1157.7	1157.7	1157.7	1157.7	1157.7	1157.7	1157.7	1157.7
2.5°	1156.6	1156.6	1157.7	1158.9	1160.1	1161.2	1161.2	1161.2	1161.2	1163.5	1162.4
5°	1158.9	1161.2	1163.5	1164.7	1167.0	1167.0	1170.5	1169.4	1169.4	1172.8	1174.0
7.5°	1163.5	1167.0	1171.7	1170.5	1175.2	1174.0	1176.3	1176.3	1172.8	1174.0	1171.7
10°	1174.0	1178.6	1181.0	1177.5	1178.6	1174.0	1172.8	1167.0	1160.1	1156.6	1151.9
12.5°	1191.4	1196.1	1196.1	1190.3	1183.3	1172.8	1164.7	1151.9	1141.5	1135.7	1129.9
15°	1206.5	1211.2	1210.0	1200.7	1190.3	1174.0	1162.4	1147.3	1132.2	1122.9	1117.1
17.5°	1218.1	1220.4	1217.0	1204.2	1192.6	1177.5	1165.9	1149.6	1132.2	1120.6	1110.1
20°	1235.5	1233.2	1225.1	1208.8	1196.1	1182.1	1172.8	1158.9	1139.2	1124.1	1109.0
22.5°	1261.1	1251.8	1236.7	1219.3	1206.5	1193.7	1184.5	1169.4	1149.6	1131.0	1113.6
25°	1294.8	1276.2	1255.3	1236.7	1225.1	1211.2	1200.7	1184.5	1163.5	1142.6	1121.7
27.5°	1343.5	1311.0	1284.3	1268.1	1255.3	1237.9	1225.1	1204.2	1182.1	1157.7	1134.5
30°	1398.1	1354.0	1328.4	1315.7	1301.7	1283.2	1263.4	1236.7	1211.2	1184.5	1156.6
32.5°	1469.0	1415.5	1391.1	1378.4	1359.8	1336.6	1313.3	1283.2	1247.2	1212.3	1178.6
35°	1561.8	1507.3	1481.7	1462.0	1436.4	1406.2	1372.6	1331.9	1283.2	1236.7	1193.7
37.5°	1661.7	1602.5	1578.1	1557.2	1518.9	1479.4	1431.8	1372.6	1306.4	1244.8	1191.4
40°	1788.3	1733.7	1702.4	1666.4	1621.1	1552.6	1478.2	1392.3	1307.5	1232.1	1169.4
42.5°	1948.5	1894.0	1847.5	1790.6	1711.6	1606.0	1500.3	1388.8	1286.6	1200.7	1133.4
45°	2161.0	2094.9	2014.7	1914.9	1787.1	1639.7	1501.5	1366.8	1247.2	1151.9	1079.9
47.5°	2421.2	2320.1	2188.9	2020.5	1837.1	1648.9	1482.9	1322.6	1185.6	1082.3	1002.1
50°	2730.0	2571.0	2355.0	2107.6	1862.6	1635.0	1436.4	1256.4	1098.5	988.2	893.0
52.5°	3083.1	2822.9	2504.8	2170.3	1861.4	1588.6	1357.5	1156.6	984.7	861.6	771.1
55°	3497.6	3110.9	2659.2	2216.8	1828.9	1502.6	1236.7	1016.1	844.2	730.4	646.8
57.5°	4104.9	3577.7	2928.6	2288.8	1763.9	1370.2	1073.0	847.7	696.7	588.7	517.9
60°	5215.1	4356.9	3414.0	2433.9	1664.0	1176.3	881.4	667.7	541.1	454.0	406.4
62.5°	6051.1	4959.6	3676.4	2401.4	1463.1	937.1	653.8	486.6	398.3	339.1	308.9
65°	5931.5	4772.6	3396.6	2068.1	1147.3	660.7	434.3	330.9	274.0	246.2	228.8
66°	5661.0	4528.8	3153.9	1861.4	991.7	549.3	357.7	277.5	235.7	216.0	204.4
67.5°	5147.7	4075.9	2719.6	1525.9	761.8	398.3	269.4	219.5	191.6	183.5	175.3
70°	4279.1	3250.3	1909.1	888.3	389.0	221.8	170.7	153.3	146.3	145.2	142.8
72.5°	3279.3	2300.4	1124.1	420.4	202.1	147.5	132.4	126.6	124.3	124.3	125.4
75°	2010.1	1292.4	497.0	205.5	141.7	124.3	117.3	115.0	113.8	115.0	113.8
77.5°	671.2	411.1	212.5	155.6	128.9	115.0	110.3	108.0	108.0	108.0	108.0
80°	205.5	178.8	162.6	144.0	121.9	109.2	102.2	101.0	102.2	103.3	99.9
82.5°	154.4	146.3	137.0	127.7	110.3	97.5	95.2	95.2	95.2	91.7	87.1
85°	113.8	112.6	92.9	87.1	81.3	81.3	81.3	81.3	77.8	72.0	67.4
87.5°	20.9	19.7	20.9	22.1	32.5	34.8	34.8	37.2	40.6	38.3	38.3
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: P155613

CATALOG NUMBER: TLM-F05-LED-E1-T3-8030

CANDELA DISTRIBUTION (continued):

	160°	165°	170°	175°	180°
0°	1157.7	1157.7	1157.7	1157.7	1157.7
2.5°	1162.4	1161.2	1164.7	1162.4	1163.5
5°	1172.8	1171.7	1174.0	1171.7	1175.2
7.5°	1169.4	1167.0	1165.9	1167.0	1168.2
10°	1145.0	1142.6	1141.5	1140.3	1141.5
12.5°	1124.1	1119.4	1119.4	1117.1	1118.3
15°	1109.0	1105.5	1104.3	1102.0	1103.2
17.5°	1102.0	1096.2	1093.9	1091.6	1091.6
20°	1097.4	1090.4	1086.9	1084.6	1083.4
22.5°	1097.4	1086.9	1082.3	1079.9	1078.8
25°	1102.0	1089.2	1082.3	1078.8	1077.6
27.5°	1111.3	1095.0	1086.9	1082.3	1082.3
30°	1127.6	1106.6	1095.0	1089.2	1088.1
32.5°	1143.8	1115.9	1099.7	1092.7	1090.4
35°	1151.9	1115.9	1096.2	1084.6	1082.3
37.5°	1142.6	1100.8	1076.5	1059.0	1055.6
40°	1113.6	1069.5	1042.8	1026.5	1024.2
42.5°	1075.3	1032.3	1001.0	989.4	985.9
45°	1023.0	971.9	940.6	924.3	925.5
47.5°	933.6	881.4	853.5	838.4	840.7
50°	828.0	776.9	752.5	736.2	739.7
52.5°	711.8	665.4	642.2	634.0	631.7
55°	589.9	553.9	537.6	528.4	524.9
57.5°	478.4	452.9	441.3	429.7	430.8
60°	377.4	364.6	361.1	348.4	347.2
62.5°	297.3	289.1	285.7	276.4	277.5
65°	225.3	223.0	225.3	219.5	221.8
66°	203.2	204.4	204.4	200.9	203.2
67.5°	175.3	177.7	181.2	177.7	180.0
70°	145.2	147.5	149.8	149.8	149.8
72.5°	126.6	128.9	130.1	130.1	130.1
75°	116.1	117.3	118.4	116.1	116.1
77.5°	109.2	109.2	106.8	105.7	104.5
80°	98.7	97.5	94.1	91.7	91.7
82.5°	82.4	80.1	77.8	74.3	74.3
85°	62.7	60.4	58.1	53.4	51.1
87.5°	32.5	33.7	32.5	26.7	23.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)