

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: P155605

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P155605
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
Description: TALON MEDIUM LED SITE LUMINAIRE
(4) LIGHTBARS WITH AccuLED OPTICS - TYPE 3
Light Source: (28) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

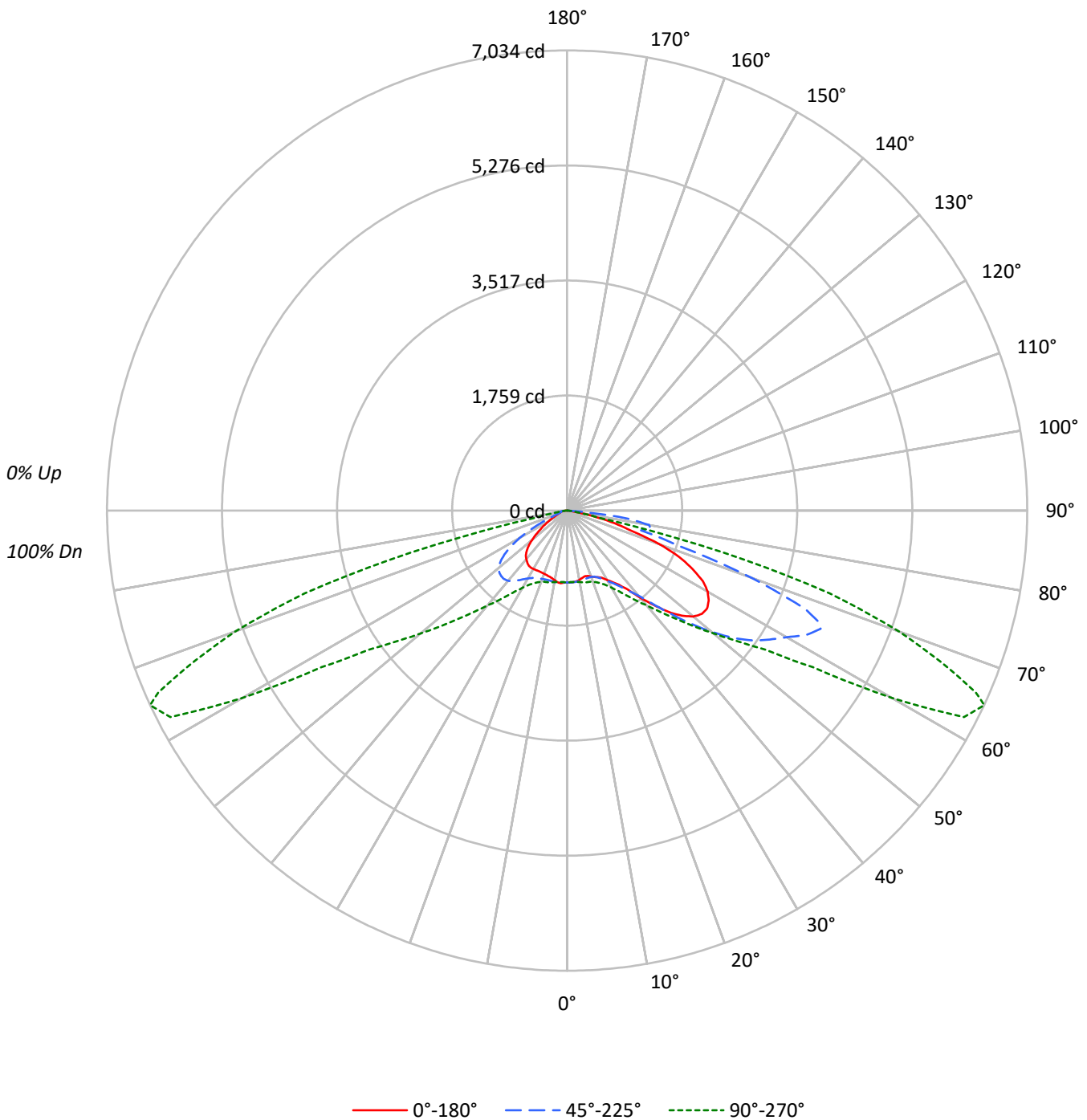
Lumens per Lamp: N/A
Luminaire Lumens: 10183.4 lumens
Efficiency: N/A
Efficacy: 99.6 lumens/watt
Spacing Criteria (0/90/45): 1.97 / 4.22 / 2.62
Luminous Opening: Rectangular (W 0.67' x L: 1' x H: 0')
CIE Type: Direct

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°	17630	17630	17630
5°	17698	17680	17964
10°	17543	18082	17651
15°	17283	18874	17392
20°	18348	19815	17558
25°	19901	21736	18106
30°	22686	25279	19133
35°	27200	30999	20120
40°	36426	39681	20360
45°	49766	52842	19932
50°	62971	72959	17523
55°	73161	103867	13935
60°	79717	183693	10574
65°	80461	267374	7991
70°	70525	253238	6670
75°	46598	153251	6834
80°	17005	15580	8049
85°	2839	10341	8922



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	105.1	1.0
10°-20°	310.2	3.0
20°-30°	533.1	5.2
30°-40°	865.7	8.5
40°-50°	1445.2	14.2
50°-60°	2275.7	22.3
60°-70°	3103.1	30.5
70°-80°	1343.3	13.2
80°-90°	202.0	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°	948.4	9.3
0°-40°	1814.1	17.8
0°-60°	5535.0	54.4
0°-90°	10183.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10183.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1097	1097	1097	1097	1097	
5°	1097	1100	1096	1110	1114	104
15°	1039	1082	1135	1102	1046	299
25°	1123	1129	1226	1138	1021	526
35°	1387	1418	1581	1301	1026	899
45°	2190	2219	2326	1423	877	1684
55°	2612	3460	3708	1172	498	2304
65°	2117	4276	7034	412	210	2055
75°	751	1169	2469	111	110	803
85°	15	260	56	77	48	40
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°	1097.4	1097.4	1097.4	1097.4	1097.4	1097.4	1097.4	1097.4	1097.4	1097.4	1097.4
2.5°	1101.8	1106.2	1101.8	1102.9	1104.0	1102.9	1101.8	1101.8	1098.5	1100.7	1102.9
5°	1097.4	1100.7	1099.6	1100.7	1101.8	1100.7	1099.6	1100.7	1098.5	1099.6	1102.9
7.5°	1091.9	1090.8	1091.9	1094.1	1096.3	1096.3	1096.3	1097.4	1096.3	1096.3	1099.6
10°	1075.4	1076.5	1078.7	1082.0	1083.1	1086.4	1086.4	1089.7	1090.8	1093.0	1097.4
12.5°	1054.5	1055.6	1057.8	1060.0	1065.5	1071.0	1071.0	1078.7	1082.0	1087.5	1095.2
15°	1039.1	1040.2	1042.4	1044.6	1049.0	1054.5	1057.8	1066.6	1072.1	1082.0	1093.0
17.5°	1047.9	1046.8	1049.0	1050.1	1050.1	1054.5	1054.5	1061.1	1067.7	1076.5	1090.8
20°	1073.2	1073.2	1075.4	1075.4	1074.3	1076.5	1072.1	1072.1	1073.2	1077.6	1087.5
22.5°	1098.5	1097.4	1101.8	1104.0	1105.1	1108.4	1104.0	1102.9	1097.4	1094.1	1097.4
25°	1122.7	1121.6	1127.1	1130.4	1135.9	1139.2	1139.2	1139.2	1134.8	1129.3	1126.0
27.5°	1160.1	1160.1	1165.6	1168.9	1173.3	1180.0	1183.3	1183.3	1184.4	1176.6	1171.1
30°	1222.9	1224.0	1225.1	1229.5	1233.9	1236.1	1240.5	1243.8	1247.1	1242.7	1233.9
32.5°	1297.7	1291.1	1291.1	1297.7	1303.2	1309.8	1312.0	1316.4	1323.0	1319.7	1318.6
35°	1386.9	1384.7	1382.5	1384.7	1391.3	1399.0	1407.8	1415.5	1411.1	1417.7	1414.4
37.5°	1519.0	1521.2	1522.3	1522.3	1521.2	1523.4	1527.8	1535.5	1533.3	1535.5	1539.9
40°	1736.9	1729.2	1721.5	1722.6	1711.6	1713.8	1696.2	1703.9	1705.0	1697.3	1700.6
42.5°	1954.8	1959.2	1962.5	1971.4	1963.6	1959.2	1942.7	1942.7	1933.9	1926.2	1924.0
45°	2190.4	2199.2	2200.3	2217.9	2211.3	2225.6	2237.7	2234.4	2220.1	2219.0	2203.6
47.5°	2378.6	2392.9	2408.3	2429.2	2445.8	2477.7	2515.1	2533.8	2544.8	2553.6	2536.0
50°	2519.5	2526.1	2565.7	2598.8	2635.1	2687.9	2739.6	2806.8	2860.7	2886.0	2910.3
52.5°	2595.5	2612.0	2654.9	2706.6	2770.5	2849.7	2933.4	3040.1	3132.6	3194.2	3249.3
55°	2612.0	2628.5	2676.9	2742.9	2829.9	2936.7	3056.6	3201.9	3340.6	3459.5	3575.1
57.5°	2565.7	2584.4	2636.2	2712.1	2814.5	2944.4	3095.2	3285.6	3477.1	3669.7	3840.3
60°	2481.0	2504.1	2551.4	2626.3	2739.6	2886.0	3066.5	3305.4	3574.0	3869.0	4195.9
62.5°	2341.2	2365.4	2409.4	2492.0	2608.7	2770.5	2979.6	3276.8	3656.5	4121.0	4701.1
65°	2116.6	2127.7	2181.6	2265.2	2368.7	2547.0	2777.1	3135.9	3630.1	4276.2	5075.3
66°	2015.4	2034.1	2067.1	2134.3	2233.3	2400.6	2631.8	2996.1	3529.9	4222.3	5065.4
67.5°	1856.9	1871.2	1893.2	1938.3	1998.9	2122.1	2341.2	2685.7	3224.0	3949.3	4855.2
70°	1501.4	1508.0	1537.7	1553.1	1574.0	1614.7	1694.0	1892.1	2311.5	2992.8	3918.5
72.5°	1023.7	1042.4	1074.3	1118.3	1175.5	1230.6	1268.0	1293.3	1383.6	1785.3	2610.9
75°	750.7	770.5	811.2	869.6	969.7	1084.2	1203.1	1258.1	1220.7	1168.9	1454.0
77.5°	435.9	462.3	496.4	552.6	645.0	796.9	1000.5	1181.1	1303.2	1310.9	1244.9
80°	183.8	187.1	208.0	236.7	293.9	400.7	559.2	818.9	1089.7	1272.4	1315.3
82.5°	41.8	51.7	66.0	78.1	95.8	132.1	195.9	325.8	588.9	923.5	1204.2
85°	15.4	15.4	20.9	30.8	35.2	39.6	51.7	82.6	140.9	259.8	541.5
87.5°	0.0	1.1	2.2	2.2	4.4	5.5	8.8	12.1	11.0	9.9	33.0
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°	1097.4	1097.4	1097.4	1097.4	1097.4	1097.4	1097.4	1097.4	1097.4	1097.4	1097.4
2.5°	1100.7	1099.6	1097.4	1097.4	1097.4	1097.4	1095.2	1096.3	1094.1	1095.2	1095.2
5°	1099.6	1099.6	1098.5	1096.3	1097.4	1097.4	1098.5	1096.3	1096.3	1097.4	1096.3
7.5°	1099.6	1098.5	1098.5	1098.5	1099.6	1098.5	1099.6	1099.6	1099.6	1100.7	1100.7
10°	1099.6	1099.6	1101.8	1102.9	1102.9	1104.0	1107.3	1107.3	1108.4	1109.5	1111.7
12.5°	1100.7	1105.1	1108.4	1111.7	1112.8	1115.0	1120.5	1120.5	1122.7	1126.0	1127.1
15°	1101.8	1108.4	1115.0	1117.2	1119.4	1123.8	1129.3	1131.5	1134.8	1138.1	1140.3
17.5°	1100.7	1109.5	1117.2	1120.5	1123.8	1129.3	1135.9	1138.1	1142.5	1146.9	1151.3
20°	1099.6	1111.7	1123.8	1128.2	1132.6	1140.3	1149.1	1154.6	1159.0	1165.6	1170.0
22.5°	1106.2	1120.5	1137.0	1143.6	1151.3	1161.2	1173.3	1180.0	1185.5	1192.1	1195.4
25°	1127.1	1138.1	1157.9	1168.9	1178.8	1195.4	1211.9	1219.6	1226.2	1231.7	1232.8
27.5°	1162.3	1165.6	1189.9	1204.2	1218.5	1244.9	1264.7	1270.2	1282.3	1286.7	1285.6
30°	1219.6	1214.1	1233.9	1255.9	1276.8	1313.1	1337.4	1351.7	1362.7	1362.7	1353.9
32.5°	1302.1	1293.3	1298.8	1324.1	1348.4	1401.2	1429.8	1448.5	1456.2	1454.0	1435.3
35°	1410.0	1404.5	1401.2	1421.0	1459.5	1521.2	1558.6	1568.5	1580.6	1578.4	1554.2
37.5°	1537.7	1533.3	1533.3	1556.4	1593.8	1685.2	1725.9	1732.5	1731.4	1713.8	1668.7
40°	1688.5	1686.3	1676.4	1689.6	1721.5	1840.4	1895.4	1904.2	1892.1	1863.5	1810.7
42.5°	1905.3	1892.1	1861.3	1869.0	1893.2	2008.8	2080.3	2104.5	2092.4	2063.8	1978.0
45°	2188.2	2173.9	2122.1	2115.5	2128.8	2230.0	2322.5	2328.0	2325.8	2289.5	2188.2
47.5°	2520.6	2498.6	2443.6	2425.9	2421.5	2515.1	2604.3	2613.1	2607.6	2553.6	2418.2
50°	2880.5	2848.6	2812.3	2800.2	2782.6	2849.7	2940.0	2941.1	2919.1	2844.2	2717.6
52.5°	3264.7	3253.7	3247.1	3235.0	3227.3	3285.6	3340.6	3307.6	3274.6	3196.4	3086.4
55°	3652.1	3697.3	3743.5	3747.9	3761.1	3823.8	3822.7	3732.5	3708.3	3665.3	3556.4
57.5°	4063.8	4231.1	4376.4	4421.5	4465.5	4582.2	4571.2	4482.0	4451.2	4398.4	4308.1
60°	4624.0	5075.3	5494.7	5594.9	5664.2	5804.0	5790.8	5653.2	5717.0	5712.6	5596.0
62.5°	5408.8	6159.5	6788.0	6942.1	6990.5	7006.0	6922.3	6773.7	6836.4	6906.9	6548.1
65°	5940.5	6823.2	7468.2	7587.1	7593.7	7409.9	7223.9	7048.9	7033.5	6972.9	6460.0
66°	5952.6	6856.3	7503.5	7619.0	7578.3	7327.4	7091.8	6915.7	6839.7	6706.6	6174.9
67.5°	5739.0	6650.4	7347.2	7469.3	7380.2	7024.7	6700.0	6473.2	6324.6	6108.9	5640.0
70°	4820.0	5723.6	6582.2	6810.0	6838.6	6308.1	5857.9	5591.6	5391.2	5095.1	4691.2
72.5°	3583.9	4400.6	5157.9	5375.8	5487.0	5063.2	4683.5	4480.9	4206.9	3895.4	3608.1
75°	2246.5	2823.3	3330.7	3483.7	3379.1	3051.1	2823.3	2738.5	2468.9	2282.9	2151.9
77.5°	1284.5	1465.0	1505.8	1447.4	1324.1	1013.7	721.0	533.8	463.4	512.9	565.8
80°	1253.7	1149.1	915.8	805.7	729.8	501.9	295.0	202.5	168.4	172.8	187.1
82.5°	1358.3	1457.3	1199.8	978.5	821.1	554.8	306.0	162.9	110.1	129.9	146.4
85°	882.8	1228.4	1106.2	932.3	755.1	474.4	252.1	84.8	56.1	73.7	101.3
87.5°	89.2	98.0	83.7	113.4	84.8	39.6	19.8	12.1	11.0	13.2	19.8
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):

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	1097.4	1097.4	1097.4	1097.4	1097.4	1097.4	1097.4	1097.4	1097.4	1097.4	1097.4
2.5°	1096.3	1096.3	1097.4	1098.5	1099.6	1100.7	1100.7	1100.7	1100.7	1102.9	1101.8
5°	1098.5	1100.7	1102.9	1104.0	1106.2	1106.2	1109.5	1108.4	1108.4	1111.7	1112.8
7.5°	1102.9	1106.2	1110.6	1109.5	1113.9	1112.8	1115.0	1115.0	1111.7	1112.8	1110.6
10°	1112.8	1117.2	1119.4	1116.1	1117.2	1112.8	1111.7	1106.2	1099.6	1096.3	1091.9
12.5°	1129.3	1133.7	1133.7	1128.2	1121.6	1111.7	1104.0	1091.9	1082.0	1076.5	1071.0
15°	1143.6	1148.0	1146.9	1138.1	1128.2	1112.8	1101.8	1087.5	1073.2	1064.4	1058.9
17.5°	1154.6	1156.8	1153.5	1141.4	1130.4	1116.1	1105.1	1089.7	1073.2	1062.2	1052.3
20°	1171.1	1168.9	1161.2	1145.8	1133.7	1120.5	1111.7	1098.5	1079.8	1065.5	1051.2
22.5°	1195.4	1186.6	1172.2	1155.7	1143.6	1131.5	1122.7	1108.4	1089.7	1072.1	1055.6
25°	1227.3	1209.7	1189.9	1172.2	1161.2	1148.0	1138.1	1122.7	1102.9	1083.1	1063.3
27.5°	1273.5	1242.7	1217.4	1202.0	1189.9	1173.3	1161.2	1141.4	1120.5	1097.4	1075.4
30°	1325.2	1283.4	1259.2	1247.1	1233.9	1216.3	1197.6	1172.2	1148.0	1122.7	1096.3
32.5°	1392.4	1341.8	1318.6	1306.5	1288.9	1266.9	1244.9	1216.3	1182.2	1149.1	1117.2
35°	1480.4	1428.7	1404.5	1385.8	1361.6	1332.9	1301.0	1262.5	1216.3	1172.2	1131.5
37.5°	1575.1	1519.0	1495.9	1476.0	1439.7	1402.3	1357.2	1301.0	1238.3	1180.0	1129.3
40°	1695.1	1643.3	1613.6	1579.5	1536.6	1471.6	1401.2	1319.7	1239.4	1167.8	1108.4
42.5°	1847.0	1795.2	1751.2	1697.3	1622.4	1522.3	1422.1	1316.4	1219.6	1138.1	1074.3
45°	2048.4	1985.7	1909.7	1815.1	1694.0	1554.2	1423.2	1295.5	1182.2	1091.9	1023.7
47.5°	2295.0	2199.2	2074.8	1915.2	1741.3	1563.0	1405.6	1253.7	1123.8	1025.9	949.9
50°	2587.7	2436.9	2232.2	1997.8	1765.5	1549.8	1361.6	1191.0	1041.3	936.7	846.4
52.5°	2922.4	2675.8	2374.2	2057.2	1764.4	1505.8	1286.7	1096.3	933.4	816.7	730.9
55°	3315.3	2948.8	2520.6	2101.2	1733.6	1424.3	1172.2	963.1	800.2	692.3	613.1
57.5°	3891.0	3391.3	2776.0	2169.5	1672.0	1298.8	1017.0	803.5	660.4	558.1	490.9
60°	4943.2	4129.8	3236.1	2307.1	1577.3	1115.0	835.4	632.9	512.9	430.4	385.2
62.5°	5735.7	4701.1	3484.8	2276.2	1386.9	888.3	619.7	461.2	377.5	321.4	292.8
65°	5622.4	4523.9	3219.5	1960.3	1087.5	626.3	411.7	313.7	259.8	233.3	216.8
66°	5365.9	4292.7	2989.5	1764.4	940.0	520.6	339.0	263.1	223.4	204.7	193.7
67.5°	4879.4	3863.5	2577.8	1446.3	722.1	377.5	255.4	208.0	181.6	173.9	166.2
70°	4056.1	3080.9	1809.6	842.0	368.7	210.2	161.8	145.3	138.7	137.6	135.4
72.5°	3108.4	2180.5	1065.5	398.5	191.5	139.8	125.5	120.0	117.8	117.8	118.9
75°	1905.3	1225.1	471.1	194.8	134.3	117.8	111.2	109.0	107.9	109.0	107.9
77.5°	636.2	389.6	201.4	147.5	122.2	109.0	104.6	102.4	102.4	102.4	102.4
80°	194.8	169.5	154.1	136.5	115.6	103.5	96.9	95.8	96.9	98.0	94.7
82.5°	146.4	138.7	129.9	121.1	104.6	92.5	90.3	90.3	90.3	87.0	82.6
85°	107.9	106.8	88.1	82.6	77.0	77.0	77.0	77.0	73.7	68.2	63.8
87.5°	19.8	18.7	19.8	20.9	30.8	33.0	33.0	35.2	38.5	36.3	36.3
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: P155605

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

CANDELA DISTRIBUTION (continued):

	160°	165°	170°	175°	180°
0°	1097.4	1097.4	1097.4	1097.4	1097.4
2.5°	1101.8	1100.7	1104.0	1101.8	1102.9
5°	1111.7	1110.6	1112.8	1110.6	1113.9
7.5°	1108.4	1106.2	1105.1	1106.2	1107.3
10°	1085.3	1083.1	1082.0	1080.9	1082.0
12.5°	1065.5	1061.1	1061.1	1058.9	1060.0
15°	1051.2	1047.9	1046.8	1044.6	1045.7
17.5°	1044.6	1039.1	1036.9	1034.7	1034.7
20°	1040.2	1033.6	1030.3	1028.1	1027.0
22.5°	1040.2	1030.3	1025.9	1023.7	1022.6
25°	1044.6	1032.5	1025.9	1022.6	1021.4
27.5°	1053.4	1038.0	1030.3	1025.9	1025.9
30°	1068.8	1049.0	1038.0	1032.5	1031.4
32.5°	1084.2	1057.8	1042.4	1035.8	1033.6
35°	1091.9	1057.8	1039.1	1028.1	1025.9
37.5°	1083.1	1043.5	1020.3	1003.8	1000.5
40°	1055.6	1013.7	988.4	973.0	970.8
42.5°	1019.2	978.5	948.8	937.8	934.5
45°	969.7	921.3	891.6	876.2	877.3
47.5°	885.0	835.4	809.0	794.7	796.9
50°	784.8	736.4	713.3	697.8	701.1
52.5°	674.7	630.7	608.7	601.0	598.8
55°	559.2	525.0	509.6	500.8	497.5
57.5°	453.5	429.3	418.3	407.3	408.4
60°	357.7	345.6	342.3	330.2	329.1
62.5°	281.8	274.1	270.8	262.0	263.1
65°	213.5	211.3	213.5	208.0	210.2
66°	192.6	193.7	193.7	190.4	192.6
67.5°	166.2	168.4	171.7	168.4	170.6
70°	137.6	139.8	142.0	142.0	142.0
72.5°	120.0	122.2	123.3	123.3	123.3
75°	110.1	111.2	112.3	110.1	110.1
77.5°	103.5	103.5	101.3	100.2	99.1
80°	93.6	92.5	89.2	87.0	87.0
82.5°	78.1	75.9	73.7	70.4	70.4
85°	59.4	57.2	55.0	50.6	48.4
87.5°	30.8	31.9	30.8	25.3	22.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)