

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: P152359

Luminaire Tested: **TLM-E02-LED-E1-SL4-7030**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P152359  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33680)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: MCGRAW-EDISON  
Catalog Number: TLM-E02-LED-E1-SL4-7030  
Description: TALON MEDIUM LED SITE LUMINAIRE  
(2) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 W/ SPILL LIGHT CONTROL  
Light Source: (42) 3000K CCT, 70 CRI LEDs  
Ballast/Driver: -

**Summary**

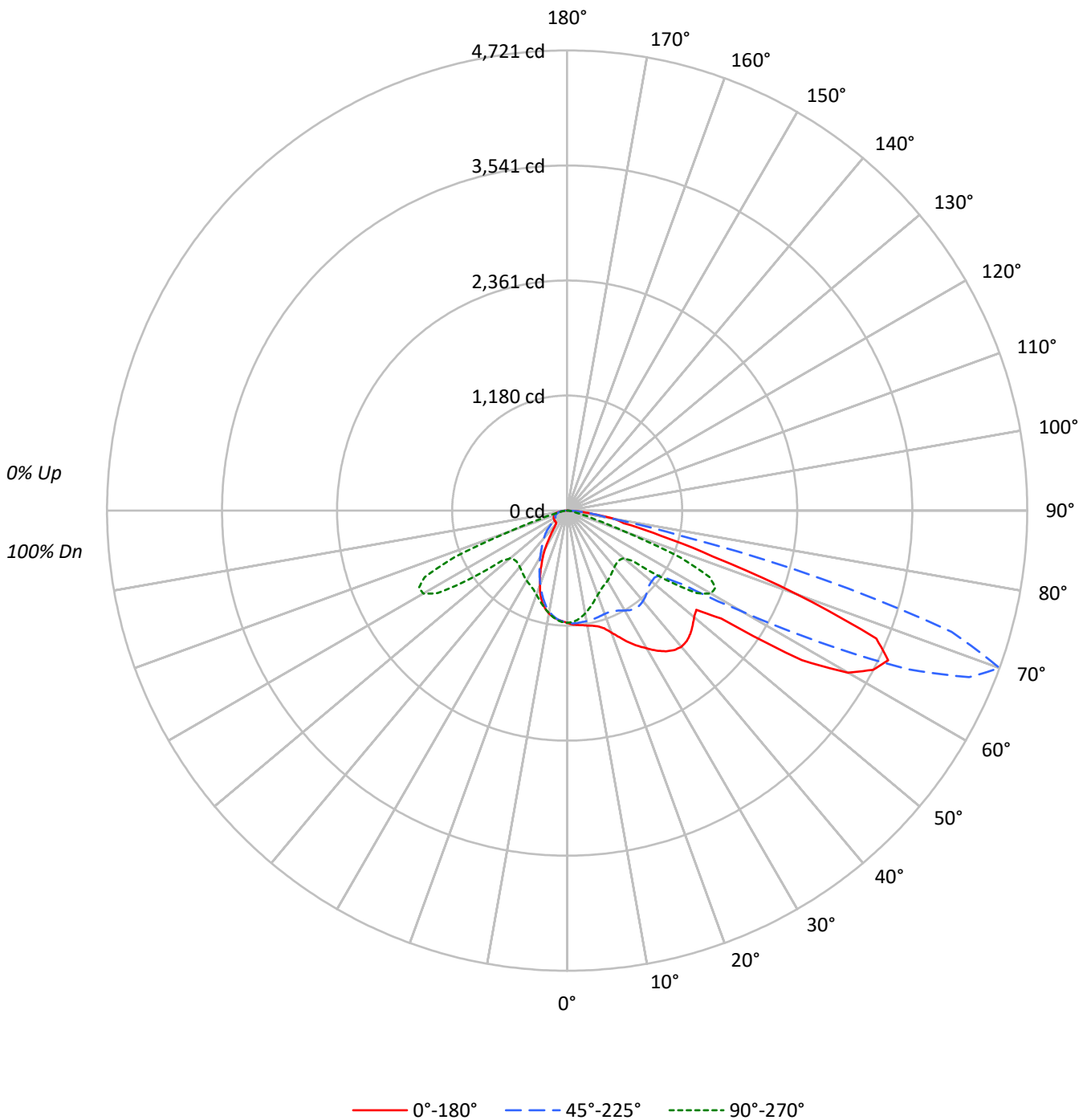
Lumens per Lamp: N/A  
Luminaire Lumens: 5396.3 lumens  
Efficiency: N/A  
Efficacy: 103.6 lumens/watt  
Spacing Criteria (0/90/45): 1.36 / 1.07 / 1.36  
Luminous Opening: Rectangular (W 0.33' x L: 1' x H: 0')  
CIE Type: Direct

Input Watts (W): 52.1  
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	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					100			
1	106	100	94	89	103	97	92	88	93	89	85	89	86	82	85	82	80	78					78			
2	93	83	74	67	90	81	73	66	77	70	64	73	68	63	70	66	61	59					59			
3	83	70	59	51	80	68	58	51	65	57	50	62	55	49	59	53	48	45					45			
4	74	60	49	41	72	58	48	40	55	47	40	53	45	39	51	44	39	36					36			
5	67	52	41	33	65	51	41	33	48	40	33	46	38	32	44	37	32	29					29			
6	61	46	36	28	59	45	35	28	43	34	28	41	33	27	39	32	27	25					25			
7	57	41	31	24	55	40	31	24	39	30	24	37	29	23	36	29	23	21					21			
8	53	37	28	21	51	36	27	21	35	27	21	34	26	21	32	26	20	18					18			
9	49	34	25	19	47	33	25	19	32	24	18	31	24	18	30	23	18	16					16			
10	46	31	23	17	44	31	22	17	30	22	17	29	21	16	28	21	16	14					14			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	37556	37556	37556
5°	38558	36983	36744
10°	39689	35453	35516
15°	41556	33576	33083
20°	46246	31872	28342
25°	53625	31074	22659
30°	61464	31257	16926
35°	70169	31497	11006
40°	77653	32148	7596
45°	82492	33960	7584
50°	86266	38591	8434
55°	109766	70641	9213
60°	217001	111103	10327
65°	280513	124539	11608
70°	238669	58880	13065
75°	125471	21639	16119
80°	93337	11778	17507
85°	54004	11377	17552



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CATALOG NUMBER: TLM-E02-LED-E1-SL4-7030

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	107.6	2.0
10°-20°	294.5	5.5
20°-30°	435.9	8.1
30°-40°	550.9	10.2
40°-50°	623.0	11.5
50°-60°	886.6	16.4
60°-70°	1651.2	30.6
70°-80°	756.8	14.0
80°-90°	89.8	1.7
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°	838.0	15.5
0°-40°	1388.9	25.7
0°-60°	2898.5	53.7
0°-90°	5396.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5396.3	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1151	1151	1151	1151	1151	
5°	1178	1158	1130	1120	1122	113
15°	1231	1142	994	941	980	354
25°	1490	1136	863	673	630	692
35°	1762	1226	791	451	276	1102
45°	1788	1165	736	295	164	1376
55°	1930	1158	1242	150	162	2028
65°	3634	3849	1614	134	150	3351
75°	996	2706	172	105	128	1224
85°	144	127	30	48	47	182
90°	0	0	0	0	0	



TEST NUMBER: P152359

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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1151.4	1151.4	1151.4	1151.4	1151.4	1151.4	1151.4	1151.4	1151.4	1151.4	1151.4
2.5°	1169.1	1172.1	1168.5	1167.9	1167.9	1167.3	1163.6	1163.0	1158.1	1158.7	1160.0
5°	1177.6	1178.8	1176.4	1175.8	1174.6	1172.1	1169.1	1165.4	1161.8	1158.1	1155.1
7.5°	1186.1	1184.9	1183.1	1183.1	1181.3	1177.6	1171.5	1166.7	1158.7	1154.5	1149.0
10°	1198.3	1196.5	1194.1	1192.8	1189.8	1184.3	1175.8	1169.1	1159.3	1150.8	1141.7
12.5°	1209.9	1209.3	1205.6	1203.8	1198.9	1193.4	1183.1	1172.7	1160.0	1146.6	1134.4
15°	1230.6	1228.2	1224.5	1220.8	1212.9	1205.6	1189.8	1177.6	1159.3	1141.7	1122.8
17.5°	1266.5	1262.3	1258.6	1250.7	1240.9	1228.2	1205.0	1184.3	1159.3	1133.8	1112.5
20°	1332.3	1323.1	1318.3	1307.9	1290.9	1267.7	1231.8	1198.3	1161.2	1128.3	1099.7
22.5°	1406.6	1400.5	1393.8	1387.1	1360.3	1326.8	1278.1	1228.2	1172.1	1125.9	1089.3
25°	1490.0	1482.1	1478.4	1466.8	1441.9	1403.5	1337.1	1267.7	1197.1	1135.6	1089.3
27.5°	1564.3	1561.8	1561.2	1547.8	1524.1	1479.0	1400.5	1317.1	1231.2	1155.7	1098.5
30°	1631.9	1629.4	1628.2	1620.9	1593.5	1539.9	1454.7	1360.9	1268.3	1183.7	1115.5
32.5°	1703.7	1695.8	1692.1	1678.1	1647.1	1584.4	1486.9	1389.5	1297.6	1211.1	1134.4
35°	1762.2	1755.5	1748.2	1728.1	1684.2	1609.9	1500.9	1399.3	1309.1	1226.3	1144.1
37.5°	1804.8	1798.1	1787.7	1762.2	1708.0	1618.5	1500.3	1396.2	1304.9	1223.9	1146.0
40°	1823.7	1817.0	1806.0	1773.7	1712.2	1613.6	1488.8	1382.2	1292.1	1211.1	1138.6
42.5°	1816.3	1811.5	1797.5	1766.4	1698.8	1591.7	1465.6	1356.0	1267.7	1190.4	1122.2
45°	1788.3	1784.7	1771.3	1738.4	1668.4	1556.3	1431.5	1323.1	1238.5	1164.8	1100.3
47.5°	1746.3	1745.1	1731.7	1699.4	1630.0	1521.0	1396.2	1290.9	1209.3	1139.9	1082.0
50°	1700.0	1694.0	1687.3	1657.4	1594.1	1490.6	1370.6	1270.8	1192.8	1130.7	1074.1
52.5°	1670.8	1669.0	1662.9	1636.1	1575.2	1472.9	1359.1	1263.5	1191.6	1128.9	1069.8
55°	1930.2	1934.5	1878.5	1762.2	1659.9	1521.6	1393.8	1300.6	1221.5	1158.1	1114.9
57.5°	2855.1	2836.3	2740.1	2509.3	2248.7	1904.6	1656.8	1506.4	1408.4	1419.3	1441.3
60°	3326.4	3322.8	3305.1	3215.6	3042.1	2780.2	2489.8	2156.7	2050.8	2062.3	2070.9
62.5°	3537.1	3542.6	3556.0	3522.5	3476.8	3400.7	3255.8	3121.8	2980.0	2927.0	2785.1
65°	3634.5	3644.3	3674.7	3693.6	3711.2	3724.6	3781.9	3939.0	4042.5	3848.9	3398.3
67.5°	3433.0	3479.9	3580.3	3678.4	3766.0	3890.9	4084.5	4449.2	4703.1	4465.1	3811.7
70°	2502.6	2566.5	2681.6	2984.8	3308.8	3591.9	3967.0	4522.3	4905.3	4721.4	3914.0
72.5°	1569.1	1586.8	1637.9	1749.4	1989.9	2353.4	3009.2	3842.2	4284.2	4137.5	3308.2
75°	995.6	1001.6	999.8	1025.4	1066.2	1145.3	1404.7	2269.4	2934.9	2706.0	1843.7
77.5°	593.1	602.2	605.9	613.8	633.3	661.3	682.6	772.1	1230.6	1194.7	669.2
80°	496.9	504.2	498.1	496.3	484.1	475.6	485.9	475.6	441.5	425.0	391.5
82.5°	263.0	262.4	260.6	278.3	314.2	342.2	363.5	358.6	324.5	276.4	234.4
85°	144.3	149.2	149.2	155.3	149.8	150.4	155.3	163.8	151.6	126.7	103.5
87.5°	12.2	18.9	15.2	18.9	25.6	18.3	17.7	17.7	15.2	11.0	9.7
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: P152359

CATALOG NUMBER: TLM-E02-LED-E1-SL4-7030

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1151.4	1151.4	1151.4	1151.4	1151.4	1151.4	1151.4	1151.4	1151.4	1151.4	1151.4
2.5°	1156.9	1155.7	1153.3	1151.4	1151.4	1148.4	1146.6	1145.3	1144.7	1142.3	1142.3
5°	1153.3	1149.0	1144.7	1141.7	1139.9	1136.8	1131.9	1129.5	1126.5	1124.0	1122.8
7.5°	1145.3	1137.4	1130.7	1125.9	1119.8	1114.9	1108.8	1103.3	1097.8	1095.4	1094.2
10°	1133.2	1122.8	1112.5	1103.3	1094.8	1086.3	1078.4	1070.4	1063.7	1058.9	1054.0
12.5°	1121.6	1105.8	1092.4	1079.0	1065.6	1055.2	1044.3	1032.7	1023.0	1013.8	1011.4
15°	1105.8	1087.5	1070.4	1054.0	1037.6	1020.5	1007.1	994.3	978.5	968.2	960.2
17.5°	1091.1	1069.2	1048.5	1029.0	1008.9	991.3	971.2	954.1	938.3	922.5	910.9
20°	1075.3	1051.6	1029.7	1007.7	985.8	963.3	940.1	918.2	898.7	879.9	861.0
22.5°	1061.3	1037.0	1015.6	991.9	967.5	942.0	915.2	887.8	865.2	840.9	819.0
25°	1052.8	1026.0	1004.1	980.9	954.1	926.1	895.7	863.4	836.0	808.0	781.8
27.5°	1052.8	1018.1	995.6	972.4	945.0	915.2	881.7	846.4	815.3	784.3	752.0
30°	1061.9	1019.3	988.9	964.5	936.5	904.2	867.1	829.9	795.8	759.3	728.2
32.5°	1070.4	1021.7	984.0	952.9	920.7	889.0	851.2	811.7	773.9	739.2	706.3
35°	1075.9	1021.7	974.8	935.3	898.7	867.7	830.5	791.0	752.6	718.5	688.1
37.5°	1076.5	1016.9	960.2	915.2	876.8	844.5	809.2	772.1	735.6	703.9	678.3
40°	1070.4	1007.1	945.6	893.9	853.7	820.8	788.5	755.0	722.2	696.0	674.1
42.5°	1059.5	996.8	931.6	876.8	834.8	800.7	770.9	742.2	713.6	691.1	672.8
45°	1043.0	982.8	918.8	866.5	825.1	789.1	759.9	736.2	711.8	692.9	674.7
47.5°	1028.4	977.9	923.1	873.2	829.9	792.8	763.0	742.9	724.0	711.2	686.2
50°	1025.4	975.5	924.9	878.6	834.8	797.1	770.9	760.5	755.0	747.1	708.8
52.5°	1016.9	974.8	938.3	912.7	884.7	867.1	839.7	849.4	843.3	815.3	745.9
55°	1106.4	1118.5	1152.6	1201.4	1246.4	1256.8	1253.7	1242.2	1180.7	1015.6	835.4
57.5°	1521.0	1589.8	1654.4	1683.0	1679.3	1647.1	1623.9	1577.1	1488.2	1287.2	1012.0
60°	2097.1	2108.0	2073.9	2023.4	1938.1	1866.9	1790.8	1703.1	1574.0	1377.3	1120.4
62.5°	2627.4	2480.1	2328.4	2186.0	2056.3	1943.0	1837.1	1714.7	1546.6	1341.4	1106.4
65°	3001.9	2690.1	2450.8	2246.2	2063.0	1904.6	1772.5	1613.6	1424.2	1239.1	1025.4
67.5°	3194.9	2716.9	2349.7	2064.8	1804.8	1585.6	1409.6	1254.9	1114.3	1033.3	897.5
70°	2979.3	2305.9	1794.4	1472.3	1161.2	931.0	735.6	617.4	576.6	653.3	679.5
72.5°	2220.1	1500.9	1067.4	825.7	632.6	504.2	386.7	303.8	247.2	259.4	336.7
75°	1049.7	647.9	457.9	348.3	277.0	229.6	187.5	171.7	143.7	119.3	112.0
77.5°	408.6	297.8	246.0	180.2	127.9	102.9	87.7	84.6	86.5	84.0	82.8
80°	311.1	210.7	132.1	96.8	83.4	73.7	65.2	62.7	63.9	67.0	70.0
82.5°	173.5	108.4	80.4	70.0	62.7	53.6	48.7	45.1	45.7	49.3	56.0
85°	67.0	52.4	48.1	46.3	43.2	34.7	29.8	30.4	34.7	41.4	41.4
87.5°	7.3	7.3	9.7	7.3	7.3	7.3	6.7	7.9	8.5	11.0	12.8
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: P152359

CATALOG NUMBER: TLM-E02-LED-E1-SL4-7030

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1151.4	1151.4	1151.4	1151.4	1151.4	1151.4	1151.4	1151.4	1151.4	1151.4	1151.4
2.5°	1141.1	1141.1	1141.1	1139.9	1140.5	1138.0	1138.0	1136.2	1139.3	1137.4	1136.8
5°	1123.4	1122.8	1120.4	1120.4	1120.4	1120.4	1122.2	1117.3	1121.0	1121.0	1119.2
7.5°	1093.6	1093.6	1086.9	1090.5	1089.3	1091.1	1093.6	1091.1	1094.8	1097.2	1095.4
10°	1052.2	1052.2	1046.7	1051.0	1049.1	1053.4	1057.7	1055.2	1057.7	1061.3	1062.5
12.5°	1006.5	1004.1	999.2	1001.0	1001.0	1003.5	1005.3	1008.3	1011.4	1016.3	1018.7
15°	953.5	949.9	943.8	943.8	940.1	941.4	945.0	946.2	952.3	959.0	966.9
17.5°	899.3	890.2	883.5	875.6	869.5	874.4	878.6	881.7	886.6	896.9	902.4
20°	848.2	829.9	817.1	806.8	800.1	803.1	808.6	812.3	816.5	819.0	820.8
22.5°	797.7	777.0	759.3	746.5	735.6	738.6	736.2	734.3	737.4	729.5	728.9
25°	753.8	729.5	705.7	690.5	677.1	672.8	660.0	657.0	648.5	641.8	636.9
27.5°	722.2	690.5	664.3	646.7	625.3	609.5	593.1	576.6	567.5	556.5	551.1
30°	697.2	663.7	632.6	602.8	574.8	550.4	528.5	507.2	492.6	476.8	466.4
32.5°	674.1	643.0	605.2	564.5	526.7	499.3	470.7	446.3	423.2	402.5	387.3
35°	658.2	623.5	575.4	525.5	482.9	450.6	420.1	385.4	357.4	330.6	314.2
37.5°	649.7	607.1	548.0	492.6	445.1	408.6	370.8	330.6	296.5	271.6	246.6
40°	643.0	590.6	523.7	463.4	413.4	369.6	325.8	278.3	240.5	214.3	194.8
42.5°	635.7	572.4	502.3	440.2	384.8	333.7	280.7	230.2	194.2	176.0	167.4
45°	627.8	556.5	482.2	418.3	356.8	294.7	233.8	186.9	165.6	159.5	159.5
47.5°	625.9	546.2	467.6	397.0	325.2	249.6	190.6	161.4	155.3	156.5	158.9
50°	633.3	543.1	454.8	372.0	283.1	202.2	161.4	151.6	152.8	156.5	160.1
52.5°	650.9	545.6	441.5	337.3	233.2	166.8	149.2	148.6	152.2	157.7	161.4
55°	680.8	545.6	415.9	285.6	186.3	149.8	144.9	147.4	152.2	157.1	160.1
57.5°	744.7	540.1	370.8	228.3	155.9	143.7	143.7	146.7	151.0	155.9	158.3
60°	820.8	532.8	307.5	176.6	140.7	138.8	143.1	146.7	150.4	154.7	157.1
62.5°	825.7	513.9	243.6	146.1	132.7	135.8	142.5	147.4	148.6	151.6	154.7
65°	758.7	448.2	193.6	130.9	129.1	134.0	140.7	144.3	144.9	146.1	149.2
67.5°	664.3	365.3	156.5	123.6	125.4	130.9	134.6	137.6	139.4	142.5	143.1
70°	545.6	293.5	134.0	116.3	118.1	124.2	127.3	130.3	134.0	137.6	135.8
72.5°	386.7	228.3	117.5	108.4	110.8	116.3	120.0	122.4	125.4	129.1	126.7
75°	164.4	159.5	101.7	98.0	101.7	105.3	109.0	112.6	115.7	117.5	117.5
77.5°	84.0	93.8	87.7	87.7	90.1	93.8	96.8	100.5	102.3	104.1	106.6
80°	71.2	72.5	73.7	76.1	78.5	82.2	85.2	88.3	88.9	89.5	90.7
82.5°	59.1	61.5	62.7	66.4	68.2	69.4	71.2	71.2	72.5	72.5	70.6
85°	42.6	45.7	47.5	48.1	47.5	48.1	48.7	49.9	53.0	53.0	50.5
87.5°	12.2	11.6	14.6	15.2	16.4	18.9	21.3	25.6	26.8	28.0	28.0
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: P152359

CATALOG NUMBER: TLM-E02-LED-E1-SL4-7030

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
0°	1151.4	1151.4	1151.4	1151.4
2.5°	1136.2	1137.4	1135.0	1135.6
5°	1119.2	1121.6	1118.5	1122.2
7.5°	1097.2	1100.9	1100.3	1099.7
10°	1065.6	1070.4	1070.4	1072.3
12.5°	1025.4	1028.4	1030.9	1032.1
15°	971.2	976.7	979.7	979.7
17.5°	906.0	909.7	911.5	909.1
20°	823.2	822.0	822.6	816.5
22.5°	727.6	729.5	724.0	725.2
25°	633.9	630.8	633.3	629.6
27.5°	543.1	543.7	537.0	540.1
30°	456.7	453.6	445.1	449.4
32.5°	373.3	365.3	356.2	350.7
35°	294.7	282.5	278.3	276.4
37.5°	231.4	218.0	213.7	208.9
40°	183.9	179.0	177.2	178.4
42.5°	165.0	165.0	166.2	166.8
45°	160.1	162.0	163.8	164.4
47.5°	160.7	162.6	165.0	165.6
50°	162.0	163.8	165.6	166.2
52.5°	162.6	162.6	163.8	164.4
55°	161.4	160.7	161.4	162.0
57.5°	158.9	157.7	158.3	160.1
60°	157.7	155.9	157.1	158.3
62.5°	154.7	154.1	155.3	155.9
65°	148.0	148.6	150.4	150.4
67.5°	141.9	142.5	143.1	143.7
70°	134.6	135.2	136.4	137.0
72.5°	126.0	128.5	130.3	132.7
75°	119.3	121.8	125.4	127.9
77.5°	107.8	109.6	113.9	116.9
80°	91.3	90.7	91.3	93.2
82.5°	70.0	70.0	69.4	68.8
85°	49.3	48.7	46.9	46.9
87.5°	26.8	26.2	25.6	24.4
90°	0.0	0.0	0.0	0.0

(END OF REPORT)