

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: P152365

Luminaire Tested: **TLM-F02-LED-E1-SL4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P152365
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-F02-LED-E1-SL4
Description: TALON MEDIUM LED SITE LUMINAIRE
(2) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 W/ SPILL LIGHT CONTROL
Light Source: (14) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

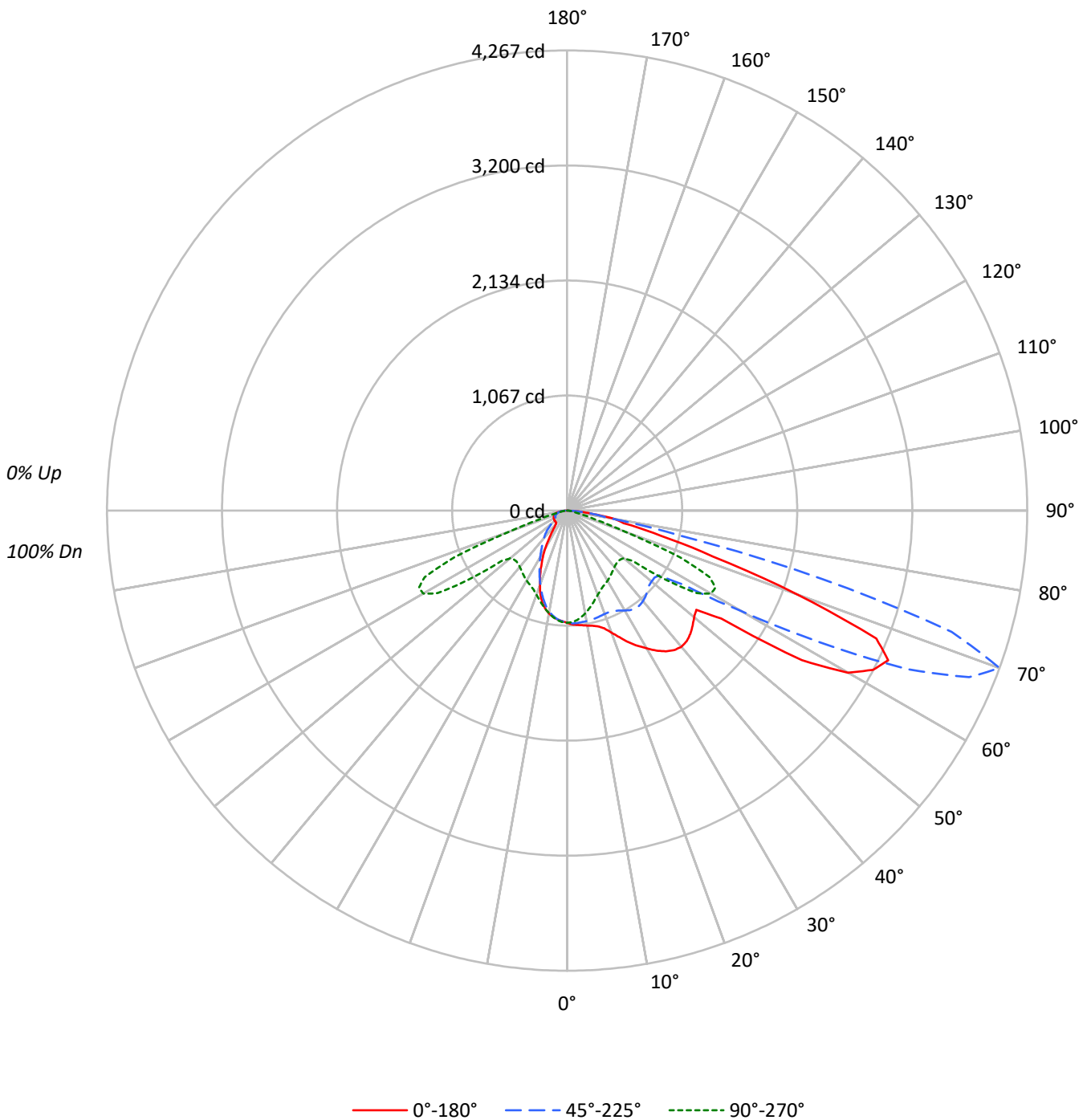
Lumens per Lamp: N/A
Luminaire Lumens: 4877.4 lumens
Efficiency: N/A
Efficacy: 88.7 lumens/watt
Spacing Criteria (0/90/45): 1.36 / 1.07 / 1.36
Luminous Opening: Rectangular (W 0.33' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 55
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°	33945	33945	33945
5°	34851	33427	33211
10°	35873	32045	32101
15°	37561	30348	29902
20°	41799	28807	25617
25°	48468	28087	20482
30°	55551	28252	15299
35°	63420	28467	9951
40°	70184	29056	6868
45°	74562	30694	6855
50°	77974	34882	7622
55°	99211	63845	8325
60°	196138	100418	9335
65°	253538	112560	10489
70°	215714	53225	11807
75°	113398	19559	14569
80°	84359	10650	15816
85°	48802	10292	15868



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	97.2	2.0
10°-20°	266.2	5.5
20°-30°	394.0	8.1
30°-40°	497.9	10.2
40°-50°	563.1	11.5
50°-60°	801.3	16.4
60°-70°	1492.4	30.6
70°-80°	684.0	14.0
80°-90°	81.2	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°	757.4	15.5
0°-40°	1255.3	25.7
0°-60°	2619.8	53.7
0°-90°	4877.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4877.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1041	1041	1041	1041	1041	
5°	1064	1047	1021	1013	1014	102
15°	1112	1032	899	851	886	320
25°	1347	1026	780	608	569	625
35°	1593	1108	715	407	250	996
45°	1616	1053	665	266	149	1243
55°	1745	1047	1123	135	146	1833
65°	3285	3479	1458	121	136	3029
75°	900	2446	155	95	116	1106
85°	130	114	28	44	42	164
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°	1040.7	1040.7	1040.7	1040.7	1040.7	1040.7	1040.7	1040.7	1040.7	1040.7	1040.7
2.5°	1056.7	1059.4	1056.1	1055.6	1055.6	1055.0	1051.7	1051.2	1046.8	1047.3	1048.4
5°	1064.4	1065.5	1063.3	1062.7	1061.6	1059.4	1056.7	1053.4	1050.1	1046.8	1044.0
7.5°	1072.1	1071.0	1069.3	1069.3	1067.7	1064.4	1058.9	1054.5	1047.3	1043.5	1038.5
10°	1083.1	1081.4	1079.2	1078.1	1075.4	1070.4	1062.7	1056.7	1047.9	1040.2	1031.9
12.5°	1093.5	1093.0	1089.7	1088.0	1083.6	1078.7	1069.3	1060.0	1048.4	1036.3	1025.3
15°	1112.3	1110.1	1106.8	1103.5	1096.3	1089.7	1075.4	1064.4	1047.9	1031.9	1014.8
17.5°	1144.7	1140.9	1137.6	1130.4	1121.6	1110.1	1089.1	1070.4	1047.9	1024.8	1005.5
20°	1204.2	1195.9	1191.5	1182.2	1166.7	1145.8	1113.4	1083.1	1049.5	1019.8	993.9
22.5°	1271.3	1265.8	1259.8	1253.7	1229.5	1199.2	1155.2	1110.1	1059.4	1017.6	984.6
25°	1346.7	1339.6	1336.2	1325.8	1303.2	1268.6	1208.6	1145.8	1082.0	1026.4	984.6
27.5°	1413.8	1411.6	1411.1	1399.0	1377.5	1336.8	1265.8	1190.4	1112.8	1044.6	992.8
30°	1474.9	1472.7	1471.6	1465.0	1440.3	1391.8	1314.8	1230.0	1146.4	1069.9	1008.2
32.5°	1539.9	1532.7	1529.4	1516.8	1488.7	1432.0	1344.0	1255.9	1172.8	1094.6	1025.3
35°	1592.7	1586.7	1580.1	1561.9	1522.3	1455.1	1356.6	1264.7	1183.3	1108.4	1034.1
37.5°	1631.2	1625.2	1615.8	1592.7	1543.7	1462.8	1356.1	1262.0	1179.4	1106.2	1035.8
40°	1648.3	1642.2	1632.3	1603.2	1547.6	1458.4	1345.6	1249.3	1167.8	1094.6	1029.2
42.5°	1641.7	1637.3	1624.6	1596.6	1535.5	1438.6	1324.7	1225.6	1145.8	1075.9	1014.3
45°	1616.4	1613.1	1601.0	1571.2	1508.0	1406.7	1293.9	1195.9	1119.4	1052.8	994.5
47.5°	1578.4	1577.3	1565.2	1536.0	1473.3	1374.8	1262.0	1166.7	1093.0	1030.3	978.0
50°	1536.6	1531.1	1525.0	1498.1	1440.8	1347.3	1238.8	1148.6	1078.1	1022.0	970.8
52.5°	1510.2	1508.5	1503.0	1478.8	1423.8	1331.3	1228.4	1142.0	1077.0	1020.3	967.0
55°	1744.6	1748.5	1697.8	1592.7	1500.3	1375.3	1259.8	1175.5	1104.0	1046.8	1007.7
57.5°	2580.6	2563.5	2476.6	2268.0	2032.4	1721.5	1497.5	1361.6	1273.0	1282.9	1302.7
60°	3006.6	3003.3	2987.3	2906.4	2749.5	2512.9	2250.4	1949.3	1853.6	1864.0	1871.7
62.5°	3197.0	3201.9	3214.0	3183.8	3142.5	3073.7	2942.7	2821.6	2693.4	2645.5	2517.3
65°	3285.0	3293.8	3321.4	3338.4	3354.4	3366.5	3418.2	3560.2	3653.8	3478.8	3071.5
67.5°	3102.9	3145.2	3236.1	3324.7	3403.9	3516.7	3691.7	4021.4	4250.9	4035.7	3445.2
70°	2261.9	2319.7	2423.7	2697.8	2990.6	3246.5	3585.5	4087.4	4433.6	4267.4	3537.6
72.5°	1418.3	1434.2	1480.4	1581.2	1798.5	2127.1	2719.8	3472.7	3872.3	3739.6	2990.1
75°	899.8	905.3	903.7	926.8	963.7	1035.2	1269.7	2051.2	2652.7	2445.8	1666.5
77.5°	536.0	544.3	547.6	554.8	572.4	597.7	616.9	697.8	1112.3	1079.8	604.8
80°	449.1	455.7	450.2	448.5	437.5	429.8	439.2	429.8	399.0	384.1	353.9
82.5°	237.8	237.2	235.5	251.5	284.0	309.3	328.6	324.2	293.3	249.9	211.9
85°	130.4	134.8	134.8	140.3	135.4	135.9	140.3	148.0	137.0	114.5	93.6
87.5°	11.0	17.1	13.8	17.1	23.1	16.5	16.0	16.0	13.8	9.9	8.8
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°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1040.7	1040.7	1040.7	1040.7	1040.7	1040.7	1040.7	1040.7	1040.7	1040.7	1040.7
2.5°	1045.7	1044.6	1042.4	1040.7	1040.7	1038.0	1036.3	1035.2	1034.7	1032.5	1032.5
5°	1042.4	1038.5	1034.7	1031.9	1030.3	1027.5	1023.1	1020.9	1018.1	1015.9	1014.8
7.5°	1035.2	1028.1	1022.0	1017.6	1012.1	1007.7	1002.2	997.2	992.3	990.1	989.0
10°	1024.2	1014.8	1005.5	997.2	989.5	981.8	974.7	967.5	961.5	957.1	952.7
12.5°	1013.7	999.4	987.3	975.2	963.1	953.8	943.9	933.4	924.6	916.3	914.1
15°	999.4	982.9	967.5	952.7	937.8	922.4	910.3	898.7	884.4	875.1	867.9
17.5°	986.2	966.4	947.7	930.1	911.9	896.0	877.8	862.4	848.1	833.8	823.3
20°	971.9	950.5	930.6	910.8	891.0	870.7	849.7	829.9	812.3	795.3	778.2
22.5°	959.3	937.2	918.0	896.5	874.5	851.4	827.2	802.4	782.0	760.0	740.2
25°	951.6	927.3	907.5	886.6	862.4	837.1	809.6	780.4	755.6	730.3	706.6
27.5°	951.6	920.2	899.8	878.9	854.1	827.2	796.9	765.0	736.9	708.9	679.7
30°	959.8	921.3	893.8	871.8	846.4	817.3	783.7	750.1	719.3	686.3	658.2
32.5°	967.5	923.5	889.4	861.3	832.1	803.5	769.4	733.6	699.5	668.1	638.4
35°	972.5	923.5	881.1	845.3	812.3	784.2	750.7	714.9	680.2	649.4	621.9
37.5°	973.0	919.1	867.9	827.2	792.5	763.3	731.4	697.8	664.8	636.2	613.1
40°	967.5	910.3	854.7	807.9	771.6	741.9	712.7	682.4	652.7	629.0	609.2
42.5°	957.6	900.9	842.0	792.5	754.5	723.7	696.7	670.9	645.0	624.6	608.1
45°	942.7	888.3	830.5	783.1	745.7	713.3	686.8	665.4	643.4	626.3	609.8
47.5°	929.5	883.9	834.3	789.2	750.1	716.6	689.6	671.4	654.4	642.8	620.2
50°	926.8	881.7	836.0	794.2	754.5	720.4	696.7	687.4	682.4	675.3	640.6
52.5°	919.1	881.1	848.1	825.0	799.7	783.7	758.9	767.7	762.2	736.9	674.2
55°	1000.0	1011.0	1041.8	1085.8	1126.6	1135.9	1133.2	1122.7	1067.1	918.0	755.1
57.5°	1374.8	1437.0	1495.3	1521.2	1517.9	1488.7	1467.8	1425.4	1345.1	1163.4	914.7
60°	1895.4	1905.3	1874.5	1828.8	1751.8	1687.4	1618.6	1539.3	1422.7	1244.9	1012.6
62.5°	2374.8	2241.6	2104.5	1975.8	1858.5	1756.2	1660.4	1549.8	1397.9	1212.4	1000.0
65°	2713.2	2431.4	2215.2	2030.2	1864.6	1721.5	1602.1	1458.4	1287.3	1120.0	926.8
67.5°	2887.7	2455.7	2123.8	1866.2	1631.2	1433.1	1274.1	1134.3	1007.1	933.9	811.2
70°	2692.9	2084.2	1621.9	1330.7	1049.5	841.5	664.8	558.1	521.2	590.5	614.2
72.5°	2006.6	1356.6	964.8	746.3	571.8	455.7	349.5	274.6	223.4	234.4	304.3
75°	948.8	585.6	413.9	314.8	250.4	207.5	169.5	155.2	129.9	107.9	101.3
77.5°	369.3	269.1	222.3	162.9	115.6	93.0	79.3	76.5	78.1	75.9	74.8
80°	281.2	190.4	119.4	87.5	75.4	66.6	58.9	56.7	57.8	60.5	63.3
82.5°	156.8	98.0	72.6	63.3	56.7	48.4	44.0	40.7	41.3	44.6	50.6
85°	60.5	47.3	43.5	41.8	39.1	31.4	27.0	27.5	31.4	37.4	37.4
87.5°	6.6	6.6	8.8	6.6	6.6	6.6	6.1	7.2	7.7	9.9	11.6
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):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1040.7	1040.7	1040.7	1040.7	1040.7	1040.7	1040.7	1040.7	1040.7	1040.7	1040.7
2.5°	1031.4	1031.4	1031.4	1030.3	1030.8	1028.6	1028.6	1027.0	1029.7	1028.1	1027.5
5°	1015.4	1014.8	1012.6	1012.6	1012.6	1012.6	1014.3	1009.9	1013.2	1013.2	1011.5
7.5°	988.4	988.4	982.4	985.7	984.6	986.2	988.4	986.2	989.5	991.7	990.1
10°	951.0	951.0	946.1	949.9	948.3	952.1	956.0	953.8	956.0	959.3	960.4
12.5°	909.7	907.5	903.1	904.8	904.8	907.0	908.6	911.4	914.1	918.5	920.7
15°	861.8	858.5	853.0	853.0	849.7	850.8	854.1	855.2	860.7	866.8	874.0
17.5°	812.9	804.6	798.6	791.4	785.9	790.3	794.2	796.9	801.3	810.7	815.6
20°	766.6	750.1	738.6	729.2	723.2	725.9	730.9	734.2	738.0	740.2	741.9
22.5°	721.0	702.2	686.3	674.7	664.8	667.6	665.4	663.7	666.5	659.3	658.8
25°	681.3	659.3	637.9	624.1	612.0	608.1	596.6	593.8	586.1	580.1	575.7
27.5°	652.7	624.1	600.4	584.5	565.2	550.9	536.0	521.2	512.9	503.0	498.1
30°	630.2	599.9	571.8	544.8	519.5	497.5	477.7	458.4	445.2	430.9	421.6
32.5°	609.2	581.2	547.0	510.2	476.1	451.3	425.4	403.4	382.5	363.8	350.0
35°	594.9	563.6	520.1	475.0	436.4	407.3	379.7	348.4	323.1	298.8	284.0
37.5°	587.2	548.7	495.3	445.2	402.3	369.3	335.2	298.8	268.0	245.5	222.9
40°	581.2	533.8	473.3	418.8	373.7	334.1	294.4	251.5	217.4	193.7	176.1
42.5°	574.6	517.3	454.0	397.9	347.8	301.6	253.7	208.0	175.6	159.1	151.3
45°	567.4	503.0	435.9	378.1	322.5	266.4	211.3	169.0	149.7	144.2	144.2
47.5°	565.8	493.7	422.7	358.8	293.9	225.6	172.3	145.8	140.3	141.4	143.6
50°	572.4	490.9	411.1	336.3	255.9	182.7	145.8	137.0	138.1	141.4	144.7
52.5°	588.3	493.1	399.0	304.9	210.8	150.8	134.8	134.3	137.6	142.5	145.8
55°	615.3	493.1	375.9	258.1	168.4	135.4	131.0	133.2	137.6	142.0	144.7
57.5°	673.1	488.2	335.2	206.4	140.9	129.9	129.9	132.6	136.5	140.9	143.1
60°	741.9	481.6	277.9	159.6	127.1	125.5	129.3	132.6	135.9	139.8	142.0
62.5°	746.3	464.5	220.1	132.1	120.0	122.7	128.8	133.2	134.3	137.0	139.8
65°	685.7	405.1	175.0	118.3	116.7	121.1	127.1	130.4	131.0	132.1	134.8
67.5°	600.4	330.2	141.4	111.7	113.4	118.3	121.6	124.4	126.0	128.8	129.3
70°	493.1	265.3	121.1	105.1	106.8	112.3	115.0	117.8	121.1	124.4	122.7
72.5°	349.5	206.4	106.2	98.0	100.2	105.1	108.4	110.6	113.4	116.7	114.5
75°	148.6	144.2	91.9	88.6	91.9	95.2	98.5	101.8	104.6	106.2	106.2
77.5°	75.9	84.8	79.3	79.3	81.5	84.8	87.5	90.8	92.5	94.1	96.3
80°	64.4	65.5	66.6	68.8	71.0	74.3	77.0	79.8	80.4	80.9	82.0
82.5°	53.4	55.6	56.7	60.0	61.6	62.7	64.4	64.4	65.5	65.5	63.8
85°	38.5	41.3	42.9	43.5	42.9	43.5	44.0	45.1	47.9	47.9	45.7
87.5°	11.0	10.5	13.2	13.8	14.9	17.1	19.3	23.1	24.2	25.3	25.3
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: P152365

CATALOG NUMBER: TLM-F02-LED-E1-SL4

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1040.7	1040.7	1040.7	1040.7
2.5°	1027.0	1028.1	1025.9	1026.4
5°	1011.5	1013.7	1011.0	1014.3
7.5°	991.7	995.0	994.5	993.9
10°	963.1	967.5	967.5	969.2
12.5°	926.8	929.5	931.7	932.8
15°	877.8	882.8	885.5	885.5
17.5°	818.9	822.2	823.9	821.7
20°	744.1	743.0	743.5	738.0
22.5°	657.7	659.3	654.4	655.5
25°	572.9	570.2	572.4	569.1
27.5°	490.9	491.5	485.4	488.2
30°	412.8	410.0	402.3	406.2
32.5°	337.4	330.2	322.0	317.0
35°	266.4	255.4	251.5	249.9
37.5°	209.1	197.0	193.2	188.8
40°	166.2	161.8	160.2	161.3
42.5°	149.1	149.1	150.2	150.8
45°	144.7	146.4	148.0	148.6
47.5°	145.3	146.9	149.1	149.7
50°	146.4	148.0	149.7	150.2
52.5°	146.9	146.9	148.0	148.6
55°	145.8	145.3	145.8	146.4
57.5°	143.6	142.5	143.1	144.7
60°	142.5	140.9	142.0	143.1
62.5°	139.8	139.2	140.3	140.9
65°	133.7	134.3	135.9	135.9
67.5°	128.2	128.8	129.3	129.9
70°	121.6	122.2	123.3	123.8
72.5°	113.9	116.1	117.8	120.0
75°	107.9	110.1	113.4	115.6
77.5°	97.4	99.1	102.9	105.7
80°	82.6	82.0	82.6	84.2
82.5°	63.3	63.3	62.7	62.2
85°	44.6	44.0	42.4	42.4
87.5°	24.2	23.7	23.1	22.0
90°	0.0	0.0	0.0	0.0

(END OF REPORT)