

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: P152364

Luminaire Tested: **TLM-F02-LED-E1-SL4-7030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P152364
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-SL4-7030
Description: TALON MEDIUM LED SITE LUMINAIRE
(2) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 W/ SPILL LIGHT CONTROL
Light Source: (14) 3000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4454.8 lumens
Efficiency: N/A
Efficacy: 81.0 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

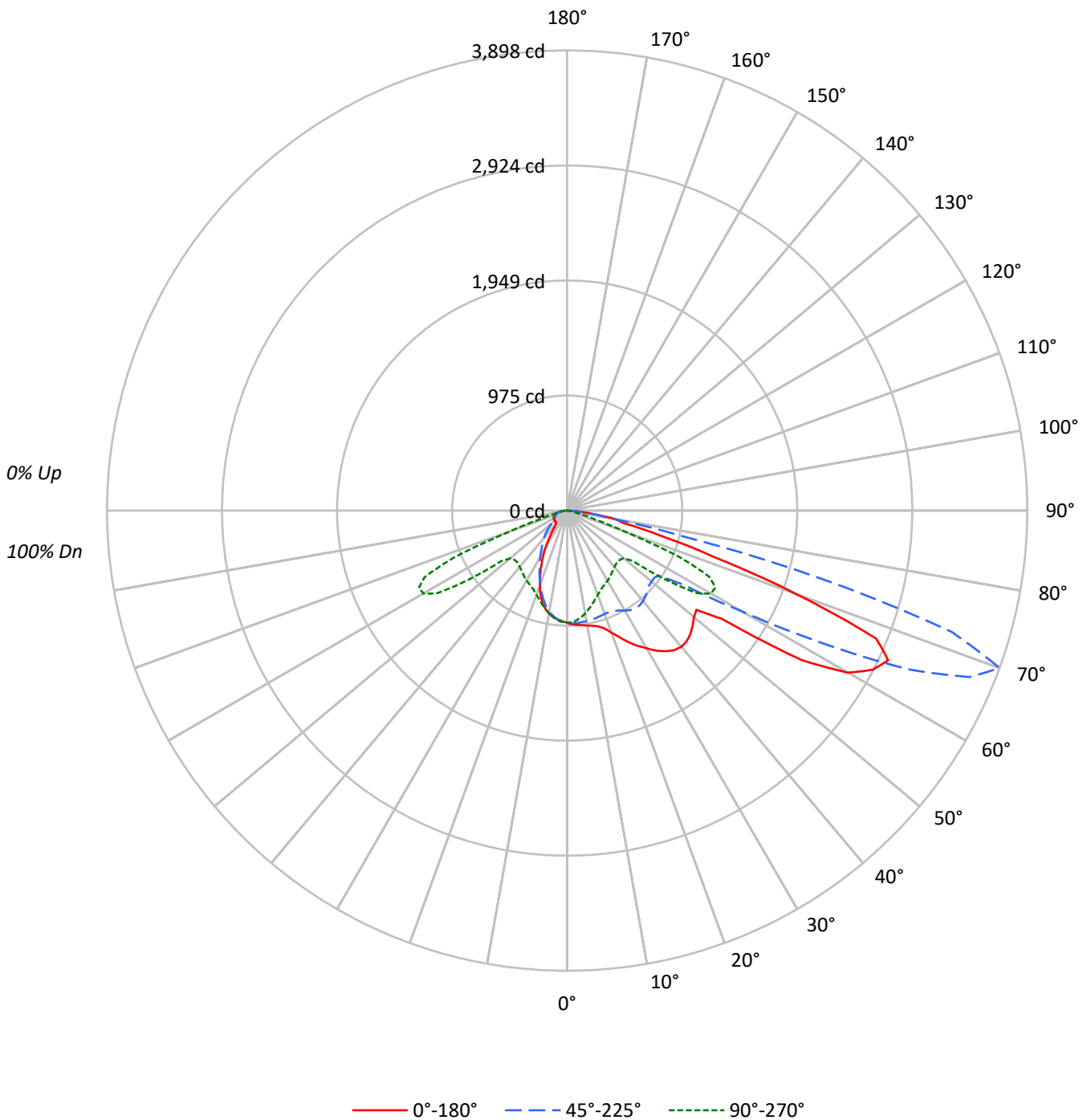
Input Watts (W): 55
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	31003	31003	31003
5°	31829	30529	30333
10°	32763	29269	29319
15°	34305	27717	27312
20°	38175	26311	23399
25°	44268	25654	18708
30°	50737	25804	13973
35°	57925	26002	9087
40°	64104	26540	6272
45°	68100	28032	6260
50°	71215	31857	6962
55°	90613	58312	7603
60°	179138	91715	8526
65°	231573	102812	9586
70°	197022	48609	10786
75°	103581	17870	13308
80°	77052	9730	14445
85°	44573	9394	14483



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	88.8	2.0
10°-20°	243.1	5.5
20°-30°	359.9	8.1
30°-40°	454.8	10.2
40°-50°	514.3	11.5
50°-60°	731.9	16.4
60°-70°	1363.1	30.6
70°-80°	624.7	14.0
80°-90°	74.2	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°	691.8	15.5
0°-40°	1146.6	25.7
0°-60°	2392.8	53.7
0°-90°	4454.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4454.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	950	950	950	950	950	
5°	972	956	932	925	926	93
15°	1016	942	821	777	809	292
25°	1230	938	713	555	520	571
35°	1455	1012	653	372	228	909
45°	1476	962	608	243	136	1136
55°	1593	956	1025	124	134	1674
65°	3000	3177	1332	111	124	2767
75°	822	2234	142	87	106	1010
85°	119	105	25	40	39	150
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°	950.5	950.5	950.5	950.5	950.5	950.5	950.5	950.5	950.5	950.5	950.5
2.5°	965.1	967.6	964.6	964.1	964.1	963.6	960.6	960.1	956.1	956.6	957.6
5°	972.1	973.2	971.1	970.6	969.6	967.6	965.1	962.1	959.1	956.1	953.6
7.5°	979.2	978.2	976.7	976.7	975.2	972.1	967.1	963.1	956.6	953.0	948.5
10°	989.2	987.7	985.7	984.7	982.2	977.7	970.6	965.1	957.1	950.0	942.5
12.5°	998.8	998.3	995.3	993.8	989.7	985.2	976.7	968.1	957.6	946.5	936.5
15°	1015.9	1013.9	1010.9	1007.8	1001.3	995.3	982.2	972.1	957.1	942.5	926.9
17.5°	1045.5	1042.0	1039.0	1032.5	1024.4	1013.9	994.8	977.7	957.1	936.0	918.4
20°	1099.8	1092.3	1088.3	1079.7	1065.6	1046.5	1016.9	989.2	958.6	931.4	907.8
22.5°	1161.1	1156.1	1150.6	1145.1	1122.9	1095.3	1055.1	1013.9	967.6	929.4	899.3
25°	1230.0	1223.5	1220.5	1210.9	1190.3	1158.6	1103.8	1046.5	988.2	937.5	899.3
27.5°	1291.3	1289.3	1288.8	1277.8	1258.2	1221.0	1156.1	1087.3	1016.4	954.1	906.8
30°	1347.1	1345.1	1344.1	1338.1	1315.5	1271.2	1200.9	1123.5	1047.0	977.2	920.9
32.5°	1406.4	1399.9	1396.9	1385.3	1359.7	1307.9	1227.5	1147.1	1071.2	999.8	936.5
35°	1454.7	1449.2	1443.1	1426.6	1390.4	1329.0	1239.1	1155.1	1080.7	1012.4	944.5
37.5°	1489.9	1484.4	1475.8	1454.7	1410.0	1336.1	1238.6	1152.6	1077.2	1010.4	946.0
40°	1505.5	1499.9	1490.9	1464.3	1413.5	1332.1	1229.0	1141.0	1066.6	999.8	940.0
42.5°	1499.4	1495.4	1483.9	1458.2	1402.4	1314.0	1209.9	1119.4	1046.5	982.7	926.4
45°	1476.3	1473.3	1462.2	1435.1	1377.3	1284.8	1181.8	1092.3	1022.4	961.6	908.3
47.5°	1441.6	1440.6	1429.6	1402.9	1345.6	1255.7	1152.6	1065.6	998.3	941.0	893.2
50°	1403.4	1398.4	1392.9	1368.2	1316.0	1230.5	1131.5	1049.1	984.7	933.4	886.7
52.5°	1379.3	1377.8	1372.8	1350.7	1300.4	1215.9	1121.9	1043.0	983.7	931.9	883.2
55°	1593.4	1597.0	1550.7	1454.7	1370.3	1256.2	1150.6	1073.7	1008.3	956.1	920.4
57.5°	2357.0	2341.4	2262.0	2071.5	1856.3	1572.3	1367.7	1243.6	1162.7	1171.7	1189.8
60°	2746.0	2743.0	2728.5	2654.6	2511.3	2295.2	2055.4	1780.4	1693.0	1702.5	1709.6
62.5°	2920.0	2924.5	2935.5	2907.9	2870.2	2807.4	2687.7	2577.1	2460.0	2416.3	2299.2
65°	3000.4	3008.4	3033.6	3049.1	3063.7	3074.8	3122.0	3251.7	3337.2	3177.3	2805.4
67.5°	2834.0	2872.7	2955.7	3036.6	3109.0	3212.0	3371.9	3673.0	3882.6	3686.0	3146.7
70°	2065.9	2118.7	2213.7	2464.1	2731.5	2965.2	3274.8	3733.3	4049.4	3897.6	3231.1
72.5°	1295.4	1309.9	1352.2	1444.1	1642.7	1942.8	2484.2	3171.8	3536.7	3415.6	2731.0
75°	821.9	826.9	825.4	846.5	880.2	945.5	1159.6	1873.4	2422.8	2233.8	1522.1
77.5°	489.6	497.1	500.1	506.7	522.8	545.9	563.5	637.4	1015.9	986.2	552.4
80°	410.2	416.2	411.2	409.7	399.6	392.6	401.1	392.6	364.4	350.9	323.2
82.5°	217.2	216.6	215.1	229.7	259.4	282.5	300.1	296.1	267.9	228.2	193.5
85°	119.1	123.2	123.2	128.2	123.7	124.2	128.2	135.2	125.2	104.6	85.5
87.5°	10.1	15.6	12.6	15.6	21.1	15.1	14.6	14.6	12.6	9.0	8.0
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°	70°	75°	80°	85°	90°	95°	100°	105°
0°	950.5	950.5	950.5	950.5	950.5	950.5	950.5	950.5	950.5	950.5	950.5
2.5°	955.1	954.1	952.0	950.5	950.5	948.0	946.5	945.5	945.0	943.0	943.0
5°	952.0	948.5	945.0	942.5	941.0	938.5	934.4	932.4	929.9	927.9	926.9
7.5°	945.5	939.0	933.4	929.4	924.4	920.4	915.3	910.8	906.3	904.3	903.3
10°	935.5	926.9	918.4	910.8	903.8	896.7	890.2	883.7	878.2	874.1	870.1
12.5°	925.9	912.8	901.8	890.7	879.7	871.1	862.1	852.5	844.5	836.9	834.9
15°	912.8	897.8	883.7	870.1	856.5	842.5	831.4	820.8	807.8	799.2	792.7
17.5°	900.8	882.7	865.6	849.5	832.9	818.3	801.7	787.7	774.6	761.5	752.0
20°	887.7	868.1	850.0	831.9	813.8	795.2	776.1	758.0	741.9	726.3	710.8
22.5°	876.1	856.0	838.4	818.8	798.7	777.6	755.5	732.9	714.3	694.2	676.1
25°	869.1	847.0	828.9	809.8	787.7	764.5	739.4	712.8	690.2	667.0	645.4
27.5°	869.1	840.5	821.9	802.8	780.1	755.5	727.9	698.7	673.1	647.4	620.8
30°	876.6	841.5	816.3	796.2	773.1	746.5	715.8	685.1	657.0	626.8	601.2
32.5°	883.7	843.5	812.3	786.7	760.0	733.9	702.7	670.0	638.9	610.2	583.1
35°	888.2	843.5	804.8	772.1	741.9	716.3	685.6	653.0	621.3	593.1	568.0
37.5°	888.7	839.4	792.7	755.5	723.8	697.2	668.0	637.4	607.2	581.1	560.0
40°	883.7	831.4	780.6	737.9	704.7	677.6	650.9	623.3	596.2	574.5	556.4
42.5°	874.6	822.9	769.1	723.8	689.2	661.0	636.4	612.7	589.1	570.5	555.4
45°	861.1	811.3	758.5	715.3	681.1	651.5	627.3	607.7	587.6	572.0	556.9
47.5°	849.0	807.3	762.0	720.8	685.1	654.5	629.8	613.2	597.7	587.1	566.5
50°	846.5	805.3	763.5	725.3	689.2	658.0	636.4	627.8	623.3	616.8	585.1
52.5°	839.4	804.8	774.6	753.5	730.4	715.8	693.2	701.2	696.2	673.1	615.8
55°	913.3	923.4	951.5	991.8	1028.9	1037.5	1035.0	1025.4	974.7	838.4	689.7
57.5°	1255.7	1312.5	1365.7	1389.4	1386.3	1359.7	1340.6	1301.9	1228.5	1062.6	835.4
60°	1731.2	1740.2	1712.1	1670.3	1600.0	1541.2	1478.3	1405.9	1299.4	1137.0	924.9
62.5°	2169.0	2047.3	1922.2	1804.6	1697.5	1604.0	1516.5	1415.5	1276.8	1107.4	913.3
65°	2478.1	2220.8	2023.2	1854.3	1703.0	1572.3	1463.2	1332.1	1175.7	1022.9	846.5
67.5°	2637.5	2242.9	1939.8	1704.5	1489.9	1308.9	1163.7	1036.0	919.9	853.0	740.9
70°	2459.5	1903.6	1481.3	1215.4	958.6	768.6	607.2	509.7	476.0	539.4	561.0
72.5°	1832.7	1239.1	881.2	681.6	522.3	416.2	319.2	250.8	204.1	214.1	278.0
75°	866.6	534.8	378.0	287.5	228.7	189.5	154.8	141.8	118.6	98.5	92.5
77.5°	337.3	245.8	203.1	148.8	105.6	84.9	72.4	69.9	71.4	69.4	68.4
80°	256.9	173.9	109.1	79.9	68.9	60.8	53.8	51.8	52.8	55.3	57.8
82.5°	143.3	89.5	66.4	57.8	51.8	44.2	40.2	37.2	37.7	40.7	46.2
85°	55.3	43.2	39.7	38.2	35.7	28.7	24.6	25.1	28.7	34.2	34.2
87.5°	6.0	6.0	8.0	6.0	6.0	6.0	5.5	6.5	7.0	9.0	10.6
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°	950.5	950.5	950.5	950.5	950.5	950.5	950.5	950.5	950.5	950.5	950.5
2.5°	942.0	942.0	942.0	941.0	941.5	939.5	939.5	938.0	940.5	939.0	938.5
5°	927.4	926.9	924.9	924.9	924.9	924.9	926.4	922.4	925.4	925.4	923.9
7.5°	902.8	902.8	897.3	900.3	899.3	900.8	902.8	900.8	903.8	905.8	904.3
10°	868.6	868.6	864.1	867.6	866.1	869.6	873.1	871.1	873.1	876.1	877.1
12.5°	830.9	828.9	824.9	826.4	826.4	828.4	829.9	832.4	834.9	838.9	841.0
15°	787.2	784.2	779.1	779.1	776.1	777.1	780.1	781.1	786.2	791.7	798.2
17.5°	742.4	734.9	729.4	722.8	717.8	721.8	725.3	727.9	731.9	740.4	744.9
20°	700.2	685.1	674.6	666.0	660.5	663.0	667.5	670.6	674.1	676.1	677.6
22.5°	658.5	641.4	626.8	616.3	607.2	609.7	607.7	606.2	608.7	602.2	601.7
25°	622.3	602.2	582.6	570.0	559.0	555.4	544.9	542.4	535.3	529.8	525.8
27.5°	596.2	570.0	548.4	533.8	516.2	503.2	489.6	476.0	468.5	459.4	454.9
30°	575.5	547.9	522.3	497.6	474.5	454.4	436.3	418.7	406.7	393.6	385.0
32.5°	556.4	530.8	499.6	466.0	434.8	412.2	388.6	368.5	349.4	332.3	319.7
35°	543.4	514.7	475.0	433.8	398.6	372.0	346.8	318.2	295.1	272.9	259.4
37.5°	536.3	501.2	452.4	406.7	367.4	337.3	306.1	272.9	244.8	224.2	203.6
40°	530.8	487.6	432.3	382.5	341.3	305.1	268.9	229.7	198.6	176.9	160.9
42.5°	524.8	472.5	414.7	363.4	317.7	275.5	231.7	190.0	160.3	145.3	138.2
45°	518.2	459.4	398.1	345.3	294.6	243.3	193.0	154.3	136.7	131.7	131.7
47.5°	516.7	450.9	386.0	327.7	268.4	206.1	157.3	133.2	128.2	129.2	131.2
50°	522.8	448.4	375.5	307.1	233.7	166.9	133.2	125.2	126.2	129.2	132.2
52.5°	537.3	450.4	364.4	278.5	192.5	137.7	123.2	122.6	125.7	130.2	133.2
55°	562.0	450.4	343.3	235.7	153.8	123.7	119.6	121.6	125.7	129.7	132.2
57.5°	614.8	445.9	306.1	188.5	128.7	118.6	118.6	121.1	124.7	128.7	130.7
60°	677.6	439.8	253.8	145.8	116.1	114.6	118.1	121.1	124.2	127.7	129.7
62.5°	681.6	424.2	201.1	120.6	109.6	112.1	117.6	121.6	122.6	125.2	127.7
65°	626.3	370.0	159.8	108.1	106.6	110.6	116.1	119.1	119.6	120.6	123.2
67.5°	548.4	301.6	129.2	102.0	103.5	108.1	111.1	113.6	115.1	117.6	118.1
70°	450.4	242.3	110.6	96.0	97.5	102.5	105.1	107.6	110.6	113.6	112.1
72.5°	319.2	188.5	97.0	89.5	91.5	96.0	99.0	101.0	103.5	106.6	104.6
75°	135.7	131.7	83.9	80.9	83.9	87.0	90.0	93.0	95.5	97.0	97.0
77.5°	69.4	77.4	72.4	72.4	74.4	77.4	79.9	82.9	84.4	86.0	88.0
80°	58.8	59.8	60.8	62.8	64.8	67.9	70.4	72.9	73.4	73.9	74.9
82.5°	48.8	50.8	51.8	54.8	56.3	57.3	58.8	58.8	59.8	59.8	58.3
85°	35.2	37.7	39.2	39.7	39.2	39.7	40.2	41.2	43.7	43.7	41.7
87.5°	10.1	9.6	12.1	12.6	13.6	15.6	17.6	21.1	22.1	23.1	23.1
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: P152364

CATALOG NUMBER: TLM-F02-LED-E1-SL4-7030

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	950.5	950.5	950.5	950.5
2.5°	938.0	939.0	937.0	937.5
5°	923.9	925.9	923.4	926.4
7.5°	905.8	908.8	908.3	907.8
10°	879.7	883.7	883.7	885.2
12.5°	846.5	849.0	851.0	852.0
15°	801.7	806.3	808.8	808.8
17.5°	748.0	751.0	752.5	750.5
20°	679.6	678.6	679.1	674.1
22.5°	600.7	602.2	597.7	598.7
25°	523.3	520.8	522.8	519.8
27.5°	448.4	448.9	443.3	445.9
30°	377.0	374.5	367.4	371.0
32.5°	308.1	301.6	294.1	289.5
35°	243.3	233.2	229.7	228.2
37.5°	191.0	180.0	176.4	172.4
40°	151.8	147.8	146.3	147.3
42.5°	136.2	136.2	137.2	137.7
45°	132.2	133.7	135.2	135.7
47.5°	132.7	134.2	136.2	136.7
50°	133.7	135.2	136.7	137.2
52.5°	134.2	134.2	135.2	135.7
55°	133.2	132.7	133.2	133.7
57.5°	131.2	130.2	130.7	132.2
60°	130.2	128.7	129.7	130.7
62.5°	127.7	127.2	128.2	128.7
65°	122.1	122.6	124.2	124.2
67.5°	117.1	117.6	118.1	118.6
70°	<i>111.1</i>	<i>111.6</i>	<i>112.6</i>	<i>113.1</i>
72.5°	104.1	106.1	107.6	109.6
75°	98.5	100.5	103.5	105.6
77.5°	89.0	90.5	94.0	96.5
80°	75.4	74.9	75.4	76.9
82.5°	57.8	57.8	57.3	56.8
85°	40.7	40.2	38.7	38.7
87.5°	22.1	21.6	21.1	20.1
90°	0.0	0.0	0.0	0.0

(END OF REPORT)