

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: P150076

Luminaire Tested: **TLM-F01-LED-E1-SL2-7050**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P150076
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33678)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: TLM-F01-LED-E1-SL2-7050
Description: TALON MEDIUM LED SITE LUMINAIRE
(1) LIGHTBARS WITH AccuLED OPTICS - TYPE 2 W/ SPILL LIGHT CONTROL
Light Source: (7) 5000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2587.9 lumens
Efficiency: N/A
Efficacy: 99.9 lumens/watt
Spacing Criteria (0/90/45): 1.99 / 4.45 / 2.31
Luminous Opening: Rectangular (W 0.17' x L: 1' x H: 0')
CIE Type: Direct

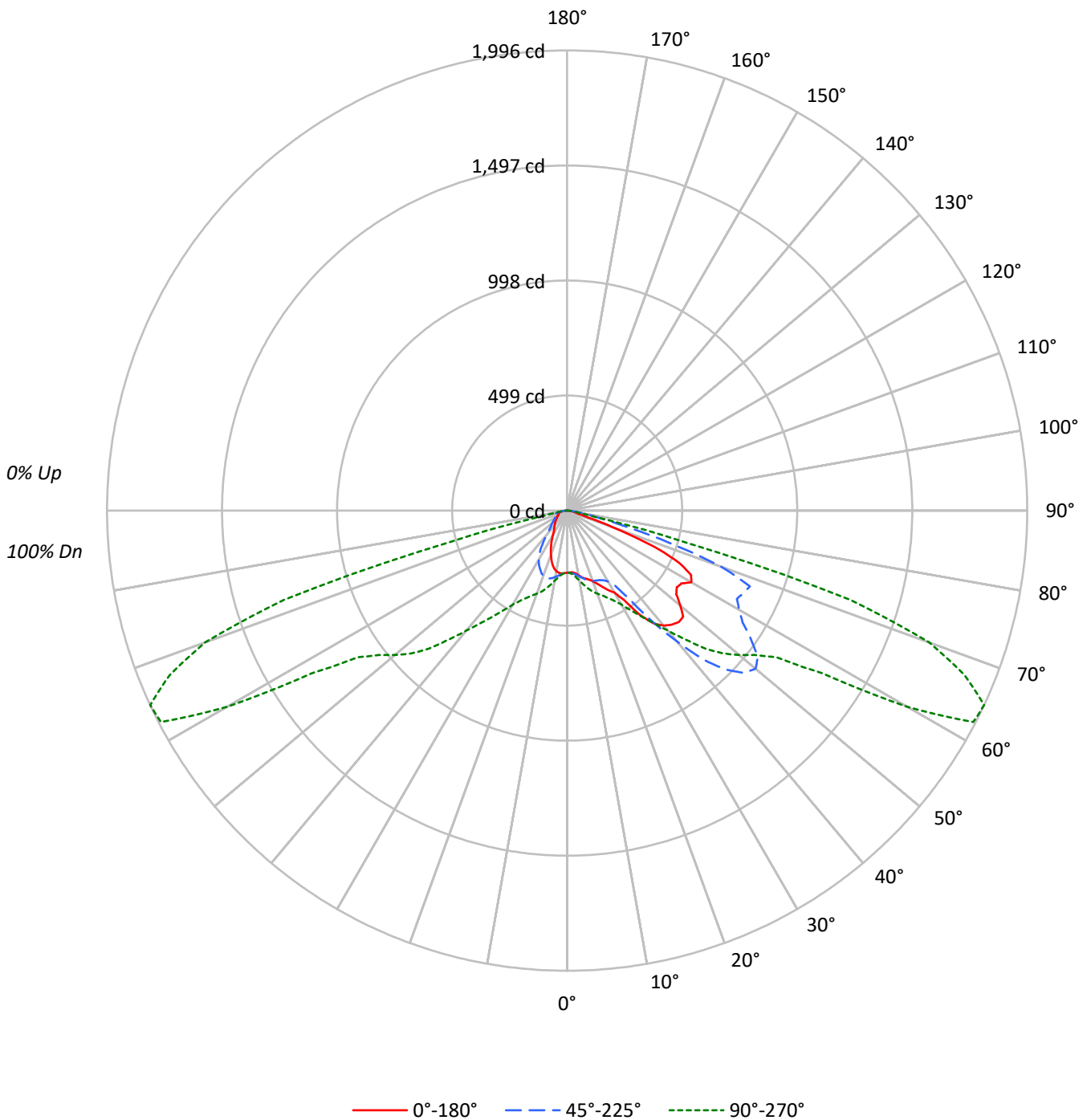
Input Watts (W): 25.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P150076

CATALOG NUMBER: TLM-F01-LED-E1-SL2-7050

Luminous Intensity Polar Plot





TEST NUMBER: P150076

CATALOG NUMBER: TLM-F01-LED-E1-SL2-7050

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	90	103	98	93	88	93	89	85	89	86	83	85	83	80	78					78			
2	93	83	74	67	90	81	73	66	77	70	64	74	68	63	70	66	61	59					59			
3	82	69	59	51	80	68	58	51	64	56	50	61	54	49	59	53	48	45					45			
4	74	59	48	40	71	57	47	40	55	46	39	52	45	38	50	43	38	35					35			
5	66	51	40	32	64	50	39	32	47	38	31	45	37	31	43	36	30	28					28			
6	60	44	34	26	58	43	33	26	41	32	26	40	32	25	38	31	25	23					23			
7	55	39	29	22	53	38	29	22	37	28	22	35	27	21	34	27	21	19					19			
8	51	35	25	19	49	34	25	19	33	24	18	32	24	18	30	23	18	16					16			
9	47	32	22	16	46	31	22	16	30	22	16	29	21	16	28	21	16	14					14			
10	44	29	20	14	42	28	20	14	27	19	14	26	19	14	25	19	14	12					12			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	17058	17058	17058
5°	17066	17695	17409
10°	18266	19841	17192
15°	20006	22917	15994
20°	21939	25854	13813
25°	25584	29175	11423
30°	30013	34370	9022
35°	42799	43348	7529
40°	53841	56081	7001
45°	61266	75826	6653
50°	63112	96012	6285
55°	64026	122434	6105
60°	78767	215392	6078
65°	80454	298998	6382
70°	38580	309495	7257
75°	10642	127457	8831
80°	8970	17794	8751
85°	5957	11043	9444



TEST NUMBER: P150076

CATALOG NUMBER: TLM-F01-LED-E1-SL2-7050

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	26.8	1.0
10°-20°	87.6	3.4
20°-30°	151.2	5.8
30°-40°	250.3	9.7
40°-50°	424.6	16.4
50°-60°	564.1	21.8
60°-70°	728.7	28.2
70°-80°	305.6	11.8
80°-90°	49.1	1.9
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°	265.6	10.3
0°-40°	515.9	19.9
0°-60°	1504.5	58.1
0°-90°	2587.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2587.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	269	269	269	269	269	
5°	268	273	278	277	274	26
15°	305	309	350	305	244	87
25°	366	333	418	279	164	171
35°	554	462	561	198	97	343
45°	684	976	847	101	74	520
55°	580	973	1109	69	55	537
65°	537	844	1996	55	43	485
75°	44	242	521	57	36	70
85°	8	20	15	18	13	11
90°	0	0	0	0	0	



TEST NUMBER: P150076

CATALOG NUMBER: TLM-F01-LED-E1-SL2-7050

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	60°	61°	62°	64°
0°	269.4	269.4	269.4	269.4	269.4	269.4	269.4	269.4	269.4	269.4	269.4
2.5°	268.5	269.4	268.8	269.4	269.9	270.2	270.8	270.5	270.5	270.8	270.2
5°	268.5	268.5	269.4	270.8	271.3	273.0	275.0	274.7	275.0	274.7	275.3
7.5°	274.2	273.9	274.7	276.4	277.0	279.5	282.9	283.5	284.1	284.1	284.9
10°	284.1	283.8	284.6	285.5	286.3	288.3	293.1	295.1	295.3	295.6	296.8
12.5°	296.5	296.2	295.1	295.1	294.8	298.5	304.9	308.6	309.2	310.3	311.2
15°	305.2	304.4	302.7	301.6	303.0	308.9	318.5	322.7	323.3	324.1	326.4
17.5°	313.7	312.9	309.2	306.4	308.3	317.9	330.9	335.4	336.6	337.4	340.0
20°	325.6	325.0	319.6	312.9	312.3	324.7	340.5	346.5	347.3	348.4	351.0
22.5°	343.6	341.1	334.9	322.2	316.0	328.7	347.3	355.5	356.6	357.7	361.1
25°	366.2	365.1	354.4	334.9	321.9	332.6	354.6	364.8	366.5	367.9	372.4
27.5°	389.7	388.0	376.4	351.0	332.3	340.5	366.2	377.8	380.1	382.3	386.5
30°	410.5	410.0	400.4	372.7	349.3	355.5	384.9	399.0	401.5	404.3	408.3
32.5°	459.7	460.0	450.1	421.8	390.2	382.6	411.7	432.9	434.0	437.4	444.4
35°	553.7	554.8	551.2	528.9	493.3	461.9	464.8	485.7	486.8	489.6	496.4
37.5°	616.7	618.9	630.2	637.3	619.2	604.8	569.0	560.8	561.6	559.9	558.5
40°	651.4	654.8	684.4	721.1	740.9	741.2	725.7	689.5	675.7	671.7	654.8
42.5°	671.2	676.8	718.9	781.6	838.3	877.3	886.9	846.8	836.6	818.6	786.1
45°	684.2	690.9	740.6	826.5	910.0	976.4	1026.4	1008.6	1001.8	990.8	960.9
47.5°	681.9	687.3	738.9	841.7	947.6	1041.9	1130.6	1148.9	1140.7	1137.9	1117.6
50°	640.7	645.5	698.0	803.9	927.0	1066.8	1196.6	1248.6	1248.6	1254.0	1247.7
52.5°	596.6	600.6	648.3	743.5	860.3	1042.5	1233.3	1319.5	1330.8	1340.1	1354.8
55°	580.0	584.8	620.9	702.2	803.6	973.0	1245.8	1372.5	1393.4	1409.3	1442.6
57.5°	587.9	592.7	618.4	679.9	770.3	902.1	1246.3	1444.0	1484.4	1516.8	1584.3
60°	622.0	626.6	648.0	700.5	761.5	861.2	1222.3	1557.8	1622.1	1683.1	1795.5
62.5°	606.2	611.9	643.2	734.7	826.7	830.1	1135.6	1645.9	1749.5	1839.6	2018.3
65°	537.0	543.0	567.5	653.1	830.7	843.7	1007.2	1647.6	1776.3	1898.0	2090.9
67.5°	407.7	410.0	429.5	498.1	664.4	858.7	875.0	1452.5	1575.0	1710.8	1909.9
70°	208.4	212.3	218.0	275.0	427.8	709.6	751.9	1070.4	1226.6	1366.9	1606.1
72.5°	72.3	73.7	79.3	105.0	208.4	465.6	658.2	733.6	827.9	959.2	1236.2
75°	43.5	43.5	45.5	53.1	95.2	242.5	585.6	599.2	611.9	655.9	837.2
77.5°	34.4	35.0	35.0	36.4	52.8	124.5	444.7	557.1	558.8	563.0	593.5
80°	24.6	25.7	28.0	29.1	34.2	68.3	249.6	489.0	522.4	538.5	560.8
82.5°	18.4	19.5	23.7	25.1	26.5	38.1	112.1	337.4	398.1	430.3	508.8
85°	8.2	9.6	16.1	17.8	18.6	20.3	52.5	96.0	110.4	124.0	163.5
87.5°	1.4	1.4	2.5	3.7	5.4	5.1	11.6	16.4	16.7	19.5	21.7
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: P150076

CATALOG NUMBER: TLM-F01-LED-E1-SL2-7050

CANDELA DISTRIBUTION (continued):

	65°	66°	67°	68°	69°	70°	71°	72°	73°	74°	75°
0°	269.4	269.4	269.4	269.4	269.4	269.4	269.4	269.4	269.4	269.4	269.4
2.5°	270.2	270.2	270.2	269.9	270.2	270.2	270.2	270.2	270.5	270.5	270.5
5°	276.1	275.6	275.9	275.9	275.9	275.6	276.1	275.9	276.1	277.0	276.7
7.5°	284.9	285.5	285.7	286.0	286.0	286.0	286.3	286.9	286.9	287.7	287.4
10°	297.9	297.6	297.9	298.7	299.6	299.9	300.7	300.4	301.0	302.1	303.3
12.5°	311.7	312.3	313.1	314.0	315.4	315.7	316.5	316.8	318.5	318.5	319.6
15°	327.3	327.5	329.2	329.5	331.2	331.8	333.2	333.7	335.7	336.0	337.1
17.5°	341.4	341.9	342.8	343.6	345.6	346.5	347.6	348.7	350.4	351.0	352.9
20°	352.7	353.8	354.1	355.8	357.5	358.6	359.7	360.9	362.5	363.4	365.4
22.5°	362.8	364.0	364.8	366.2	367.3	369.0	369.6	371.6	373.3	374.7	376.4
25°	373.8	375.5	376.4	378.9	379.8	381.5	382.9	384.9	387.1	388.8	391.1
27.5°	389.4	391.9	393.0	395.9	397.8	398.7	400.9	403.8	405.7	407.7	410.0
30°	410.8	415.6	416.5	418.5	422.1	422.7	425.5	427.8	430.9	432.9	434.8
32.5°	444.1	450.1	450.6	452.9	456.0	457.1	459.4	461.9	466.7	467.6	470.7
35°	495.3	497.8	500.1	500.9	503.4	504.9	506.6	509.4	514.2	513.6	517.0
37.5°	556.5	557.4	557.7	554.8	555.4	552.9	556.0	556.5	558.2	559.6	563.0
40°	644.1	635.3	634.2	627.4	620.6	617.0	615.5	609.9	611.3	611.9	614.7
42.5°	772.0	755.0	740.9	731.3	714.6	706.5	695.4	686.7	679.9	682.5	683.6
45°	934.0	909.8	887.2	857.8	836.1	820.5	801.1	783.5	775.6	772.0	776.5
47.5°	1095.8	1074.4	1047.8	1017.6	983.2	957.5	925.0	896.5	876.7	869.4	873.3
50°	1235.6	1215.8	1195.8	1178.0	1137.9	1110.0	1065.6	1028.6	997.6	981.8	977.5
52.5°	1351.7	1341.2	1330.5	1315.5	1283.3	1255.4	1220.1	1183.6	1142.4	1110.2	1099.2
55°	1455.3	1461.5	1456.1	1456.4	1443.7	1425.9	1396.0	1368.9	1340.1	1303.6	1288.4
57.5°	1606.3	1643.0	1650.4	1668.7	1677.8	1687.4	1695.8	1679.8	1672.4	1645.3	1645.6
60°	1844.4	1898.0	1944.6	1987.0	2021.7	2055.6	2091.1	2107.0	2124.5	2132.7	2160.6
62.5°	2097.6	2148.7	2218.2	2275.0	2306.9	2350.9	2389.6	2414.7	2445.5	2478.3	2520.9
65°	2160.3	2221.9	2265.6	2303.5	2335.1	2358.5	2379.7	2409.6	2435.3	2487.3	2537.6
67.5°	1999.7	2048.8	2088.9	2126.2	2150.7	2170.5	2189.4	2209.2	2253.2	2300.4	2350.9
70°	1716.5	1775.8	1842.1	1890.4	1902.5	1919.5	1937.5	1963.2	1985.3	2034.7	2073.1
72.5°	1379.0	1464.3	1520.5	1587.4	1601.8	1627.5	1637.7	1657.7	1661.7	1688.5	1698.7
75°	961.1	1058.8	1115.3	1164.4	1174.0	1159.9	1165.6	1094.7	1076.6	1062.0	1050.1
77.5°	634.5	660.7	669.8	661.8	624.0	594.4	562.7	531.7	535.1	509.9	465.9
80°	564.2	570.1	561.9	554.0	532.2	501.2	472.7	443.6	429.2	413.9	391.3
82.5°	548.9	571.8	574.3	564.7	547.5	513.6	479.2	436.0	399.3	365.4	330.9
85°	183.5	223.3	241.1	257.8	262.9	268.8	248.5	220.8	187.5	165.2	129.3
87.5°	23.4	29.1	33.6	28.8	33.6	39.5	28.5	31.9	32.2	20.0	15.0
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: P150076

CATALOG NUMBER: TLM-F01-LED-E1-SL2-7050

CANDELA DISTRIBUTION (continued):

	76°	77°	78°	79°	80°	81°	82°	83°	84°	85°	86°
0°	269.4	269.4	269.4	269.4	269.4	269.4	269.4	269.4	269.4	269.4	269.4
2.5°	270.8	270.5	270.5	270.5	270.2	270.5	270.5	270.5	270.5	270.5	270.2
5°	277.0	277.0	277.8	278.1	277.6	277.3	277.6	277.8	277.8	277.6	277.8
7.5°	288.6	288.9	289.4	290.3	289.7	290.0	290.3	290.0	290.8	291.1	290.8
10°	303.3	303.8	305.2	305.5	305.2	306.4	306.6	306.1	306.6	306.6	307.8
12.5°	320.2	320.8	322.5	323.0	323.6	323.9	324.7	325.0	325.8	326.4	327.3
15°	338.5	339.1	340.2	342.2	342.8	343.3	343.9	345.6	345.9	347.0	347.9
17.5°	354.1	354.9	356.6	358.0	358.9	360.3	360.9	362.8	363.4	365.1	366.5
20°	366.5	367.9	369.3	371.0	372.4	374.1	374.7	376.7	377.8	378.6	380.3
22.5°	377.8	379.5	381.5	383.4	384.6	386.8	387.7	388.5	391.1	392.2	393.9
25°	392.5	394.2	396.4	399.0	400.1	402.9	403.8	405.2	408.0	409.1	411.7
27.5°	412.5	414.8	416.5	419.0	420.4	422.4	424.4	426.1	428.6	430.3	433.1
30°	437.7	439.3	442.2	444.1	446.4	449.2	451.5	453.2	454.6	457.1	460.2
32.5°	474.6	474.9	475.8	480.6	482.8	485.1	488.2	489.6	491.9	494.4	497.8
35°	520.7	523.2	525.2	527.4	530.0	532.5	533.7	537.9	539.9	543.3	546.6
37.5°	566.4	566.7	571.2	572.6	574.9	577.4	581.4	585.6	590.7	594.1	599.4
40°	615.5	617.8	623.4	626.3	629.1	635.3	638.4	645.2	653.7	658.5	667.5
42.5°	686.7	690.1	700.2	704.8	711.5	721.7	728.2	737.5	740.9	752.5	756.7
45°	779.9	790.3	805.0	814.6	826.7	837.8	843.4	847.6	852.7	861.8	860.6
47.5°	880.7	894.2	910.6	930.4	938.3	951.3	958.6	966.8	962.3	960.0	957.8
50°	984.0	999.8	1021.6	1039.4	1051.5	1059.4	1065.6	1064.5	1054.9	1049.8	1035.7
52.5°	1098.9	1108.3	1128.9	1144.1	1151.5	1153.2	1151.7	1143.3	1134.2	1118.1	1101.5
55°	1275.1	1270.9	1279.1	1286.1	1283.9	1291.8	1271.5	1263.6	1241.2	1220.4	1198.0
57.5°	1633.2	1638.8	1593.1	1572.5	1568.8	1576.1	1540.3	1535.7	1481.8	1475.0	1437.5
60°	2156.7	2184.3	2148.5	2128.4	2074.2	2056.4	2016.3	1999.7	1948.0	1906.2	1853.4
62.5°	2550.3	2575.4	2590.4	2561.8	2530.2	2483.6	2422.9	2355.7	2300.9	2236.8	2180.9
65°	2585.8	2636.7	2671.1	2684.4	2662.1	2611.0	2536.1	2451.4	2367.6	2287.1	2216.5
67.5°	2419.5	2465.0	2518.4	2566.1	2568.9	2535.6	2471.8	2385.6	2288.8	2189.4	2106.7
70°	2133.8	2190.8	2237.4	2287.7	2322.7	2303.5	2271.6	2192.5	2092.0	2014.6	1919.5
72.5°	1735.4	1759.4	1770.7	1820.1	1820.6	1785.6	1763.0	1719.3	1638.2	1583.5	1510.9
75°	1013.4	960.6	904.4	855.5	815.7	799.1	725.1	712.7	663.0	632.2	587.0
77.5°	417.9	370.7	310.0	259.5	209.5	186.9	154.2	139.8	121.1	112.9	107.6
80°	358.3	313.7	268.0	224.2	185.2	146.3	113.8	88.4	69.5	59.0	54.8
82.5°	292.5	265.7	233.8	210.1	179.6	150.5	127.1	98.5	73.7	54.2	41.5
85°	105.6	86.7	69.7	64.1	51.1	42.1	35.3	30.2	24.8	19.8	17.5
87.5°	11.9	11.3	6.5	6.2	7.1	5.1	5.9	5.4	4.5	4.0	4.2
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: P150076

CATALOG NUMBER: TLM-F01-LED-E1-SL2-7050

CANDELA DISTRIBUTION (continued):

	87°	88°	89°	90°	95°	105°	115°	125°	135°	145°	155°
0°	269.4	269.4	269.4	269.4	269.4	269.4	269.4	269.4	269.4	269.4	269.4
2.5°	270.2	270.2	270.5	270.5	270.8	271.1	271.6	271.3	271.3	271.6	271.6
5°	277.8	278.7	278.4	278.4	278.4	278.7	279.0	277.8	276.7	275.6	275.0
7.5°	291.1	291.7	292.2	291.7	292.2	292.0	291.4	288.3	284.6	280.1	277.0
10°	308.3	308.3	308.9	308.6	309.7	308.9	307.2	300.1	292.2	282.6	275.6
12.5°	327.0	328.9	328.1	328.4	330.6	328.4	324.4	314.0	299.9	284.3	271.9
15°	349.0	349.8	350.4	349.6	351.0	349.0	341.9	325.3	304.7	282.9	264.6
17.5°	367.1	367.3	367.6	368.2	370.2	367.9	355.8	333.2	305.8	276.4	252.1
20°	381.2	382.6	383.7	383.7	386.5	383.2	367.1	337.1	302.1	265.7	236.3
22.5°	395.9	397.0	398.4	398.7	402.4	399.0	376.4	336.3	292.5	250.5	218.0
25°	413.9	415.1	416.2	417.6	422.7	417.9	385.7	332.9	279.3	232.4	198.2
27.5°	434.8	437.4	438.2	440.5	446.4	439.1	393.6	327.8	264.6	211.5	177.3
30°	462.8	465.9	467.0	470.1	478.3	462.2	398.1	319.1	245.9	190.3	155.0
32.5°	500.3	504.6	508.0	511.4	520.7	485.4	398.7	306.4	224.2	166.6	133.6
35°	549.5	556.0	558.5	560.8	569.5	510.5	396.1	287.4	197.7	142.3	116.6
37.5°	604.5	611.0	612.7	613.8	615.5	532.0	389.9	258.6	167.7	121.1	103.1
40°	672.3	677.9	680.2	678.5	669.5	548.6	376.1	225.0	138.6	106.7	94.6
42.5°	755.0	763.5	764.3	756.7	726.8	557.9	348.4	185.5	115.8	96.3	88.1
45°	857.5	857.0	852.2	846.8	789.2	554.3	309.7	151.1	101.4	88.1	82.2
47.5°	949.6	940.0	932.6	916.8	844.3	532.8	259.8	125.1	92.6	81.9	77.1
50°	1025.0	1007.5	991.9	974.7	885.2	494.7	210.1	106.2	84.4	76.5	72.3
52.5°	1084.5	1063.4	1045.3	1028.3	924.7	452.3	172.2	92.3	76.5	71.2	66.9
55°	1177.7	1156.5	1127.7	1109.1	985.1	413.4	147.7	81.3	68.9	65.5	61.3
57.5°	1413.5	1394.9	1360.4	1312.1	1140.4	398.7	133.8	72.8	62.7	60.7	57.3
60°	1825.2	1795.0	1750.1	1700.9	1456.1	408.6	122.8	66.9	58.4	56.8	54.2
62.5°	2135.8	2082.7	2031.9	1986.4	1708.6	408.3	108.4	62.4	55.3	54.5	52.0
65°	2148.5	2094.5	2043.4	1995.7	1714.2	363.4	91.5	58.4	54.8	54.5	50.3
67.5°	2034.4	1975.9	1926.5	1866.4	1586.9	284.1	73.4	55.9	57.0	56.5	49.7
70°	1848.0	1771.8	1731.1	1671.8	1396.5	198.8	60.4	56.8	61.8	60.1	50.5
72.5°	1450.5	1392.9	1331.0	1289.8	1093.3	125.6	50.8	57.3	63.8	61.0	52.8
75°	539.9	555.4	530.0	521.0	555.4	73.7	45.2	53.4	57.0	52.8	48.0
77.5°	109.0	104.2	98.8	97.7	126.2	45.5	41.5	46.3	43.8	38.7	39.0
80°	52.2	50.8	49.1	48.8	46.9	37.8	38.4	39.5	33.0	29.9	31.9
82.5°	34.7	32.8	32.2	31.1	31.6	33.9	36.4	33.9	25.4	23.7	28.8
85°	16.1	15.5	15.2	15.2	16.9	30.5	30.2	24.8	17.5	16.9	28.8
87.5°	4.0	4.0	4.2	4.0	4.5	9.0	7.9	7.6	6.5	7.3	13.6
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: P150076

CATALOG NUMBER: TLM-F01-LED-E1-SL2-7050

CANDELA DISTRIBUTION (continued):

	165°	175°	180°
0°	269.4	269.4	269.4
2.5°	271.3	271.6	271.3
5°	273.9	273.9	273.9
7.5°	273.9	273.0	272.8
10°	269.9	267.4	267.4
12.5°	263.2	258.9	258.4
15°	250.5	244.8	244.0
17.5°	234.4	226.7	225.3
20°	216.3	206.7	205.0
22.5°	196.5	185.5	184.7
25°	177.0	165.7	163.5
27.5°	155.3	144.3	143.2
30°	133.6	124.0	123.4
32.5°	115.2	109.3	108.1
35°	102.2	98.8	97.4
37.5°	93.7	91.2	90.9
40°	87.2	85.0	84.7
42.5°	81.9	79.9	79.6
45°	76.5	74.8	74.3
47.5°	71.2	69.5	69.2
50°	66.4	64.1	63.8
52.5°	61.8	59.6	59.0
55°	57.6	55.3	55.3
57.5°	53.9	51.7	51.4
60°	50.5	48.3	48.0
62.5°	48.0	45.2	44.9
65°	46.0	43.2	42.6
67.5°	44.9	41.5	40.7
70°	46.9	40.7	39.2
72.5°	47.2	39.8	37.8
75°	45.5	37.6	36.1
77.5°	39.8	33.6	32.2
80°	34.4	26.0	24.0
82.5°	32.8	21.2	18.4
85°	25.4	13.8	13.0
87.5°	14.4	7.6	6.2
90°	0.0	0.0	0.0

(END OF REPORT)