

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: P154534

Luminaire Tested: **TLM-F01-LED-E1-T2-7030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P154534
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33671)
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-T2-7030
Description: TALON MEDIUM LED SITE LUMINAIRE
(1) LIGHTBARS WITH AccuLED OPTICS - TYPE 2
Light Source: (7) 3000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2310.1 lumens
Efficiency: N/A
Efficacy: 89.2 lumens/watt
Spacing Criteria (0/90/45): 2.21 / 4.51 / 2.52
Luminous Opening: Rectangular (W 0.17' x L: 1' x H: 0')
CIE Type: Direct

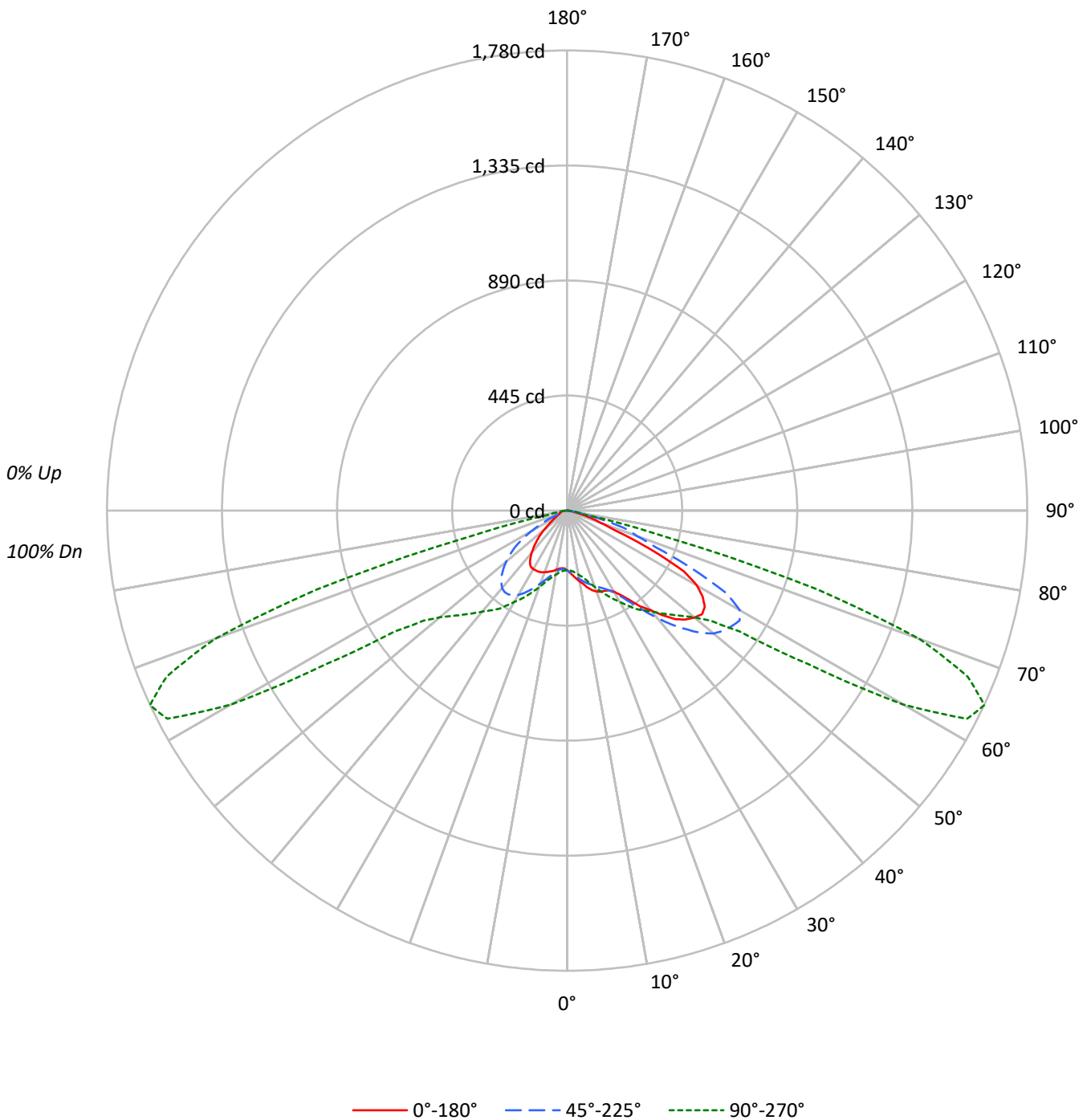
Input Watts (W): 25.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P154534

CATALOG NUMBER: TLM-F01-LED-E1-T2-7030

Luminous Intensity Polar Plot





TEST NUMBER: P154534

CATALOG NUMBER: TLM-F01-LED-E1-T2-7030

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	107	101	96	91	104	98	94	90	94	90	87	90	87	84	86	84	81	79
2	94	84	76	69	91	82	75	68	78	72	66	75	70	65	72	67	63	61
3	84	71	61	53	81	69	60	53	66	58	51	63	56	50	60	54	50	47
4	75	60	50	42	72	59	49	41	56	48	41	54	46	40	51	45	39	37
5	67	52	42	34	65	51	41	33	49	40	33	46	39	33	44	38	32	30
6	61	46	35	28	59	45	35	27	43	34	27	41	33	27	39	32	27	24
7	56	40	30	23	54	40	30	23	38	29	23	36	28	23	35	28	22	20
8	52	36	26	20	50	35	26	20	34	26	19	33	25	19	31	24	19	17
9	48	33	23	17	46	32	23	17	31	23	17	30	22	17	28	22	17	15
10	45	30	21	15	43	29	21	15	28	20	15	27	20	15	26	19	15	13

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	14626	14626	14626
5°	15991	14981	14218
10°	17887	16208	14852
15°	20262	18105	15962
20°	22471	21205	17101
25°	23935	25199	18227
30°	26423	29786	19112
35°	32712	35943	19370
40°	41526	42154	17639
45°	53180	50995	14873
50°	63358	63180	11614
55°	71720	89813	8268
60°	73423	189724	6496
65°	53996	266742	5453
70°	25640	268379	5406
75°	13969	99666	6581
80°	6600	15934	8423
85°	3124	9880	9880



TEST NUMBER: P154534

CATALOG NUMBER: TLM-F01-LED-E1-T2-7030

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	23.1	1.0
10°-20°	79.4	3.4
20°-30°	156.1	6.8
30°-40°	259.3	11.2
40°-50°	381.1	16.5
50°-60°	527.6	22.8
60°-70°	629.7	27.3
70°-80°	222.7	9.6
80°-90°	31.1	1.3
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°	258.6	11.2
0°-40°	518.0	22.4
0°-60°	1426.6	61.8
0°-90°	2310.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2310.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	231	231	231	231	231	
5°	252	247	236	227	224	25
15°	309	290	276	265	244	88
25°	343	332	361	339	261	160
35°	423	438	465	396	251	271
45°	594	648	570	359	166	455
55°	650	779	814	245	75	569
65°	360	537	1780	76	36	351
75°	57	162	407	30	27	70
85°	4	9	14	23	14	6
90°	0	0	0	0	0	



TEST NUMBER: P154534

CATALOG NUMBER: TLM-F01-LED-E1-T2-7030

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	60°	61°	62°	64°
0°	231.0	231.0	231.0	231.0	231.0	231.0	231.0	231.0	231.0	231.0	231.0
2.5°	241.0	241.3	240.8	240.5	239.8	238.5	237.5	236.5	236.5	236.5	235.7
5°	251.6	252.1	251.1	250.3	248.1	246.8	245.0	243.8	243.3	243.0	242.3
7.5°	264.9	264.1	262.6	262.1	260.4	257.6	254.3	251.8	251.8	251.6	251.8
10°	278.2	276.2	275.5	274.7	271.9	268.4	264.7	261.9	261.6	261.4	260.6
12.5°	291.5	290.8	290.0	287.3	284.5	279.0	274.7	271.9	271.7	271.9	270.9
15°	309.1	307.4	306.6	301.8	295.8	289.8	284.5	282.0	281.2	281.5	280.7
17.5°	322.7	322.7	320.9	315.7	307.9	299.6	294.1	292.5	292.3	292.3	292.5
20°	333.5	333.3	331.5	327.2	317.9	309.6	306.9	306.4	306.1	306.1	306.9
22.5°	339.5	339.0	338.3	333.5	326.2	320.7	320.9	322.5	323.0	323.5	324.5
25°	342.6	341.8	341.6	338.3	333.0	332.3	336.8	340.8	341.8	342.8	344.1
27.5°	347.6	346.3	346.8	345.6	344.3	346.6	355.9	360.2	360.9	362.2	362.9
30°	361.4	360.9	362.9	363.4	364.4	367.7	376.2	380.3	382.0	382.0	385.5
32.5°	387.8	388.1	388.6	393.8	395.6	397.9	402.4	405.6	405.9	406.2	409.4
35°	423.2	424.7	429.0	433.5	437.8	437.6	434.8	436.6	435.3	436.8	437.1
37.5°	468.0	466.0	472.3	482.6	489.1	487.3	475.0	467.0	469.2	468.2	467.5
40°	502.4	504.7	516.7	530.3	535.3	540.9	524.8	511.0	508.9	505.2	502.9
42.5°	549.9	550.2	560.0	570.0	584.6	596.7	586.4	566.5	560.5	555.9	546.1
45°	593.9	593.1	601.2	613.5	630.8	648.2	652.0	630.3	628.1	620.0	607.2
47.5°	623.3	622.3	627.8	643.9	672.1	700.5	716.0	709.5	705.2	702.0	681.9
50°	643.2	641.1	647.4	664.5	695.9	739.7	780.4	785.9	784.2	784.2	771.3
52.5°	658.0	658.0	662.5	676.3	708.3	762.8	835.7	863.6	865.8	868.3	867.6
55°	649.7	650.9	662.3	682.4	716.0	778.9	881.4	942.5	955.1	965.6	977.7
57.5°	621.3	625.6	640.6	673.6	718.1	790.9	932.2	1053.1	1088.5	1119.2	1166.9
60°	579.8	585.4	607.2	649.2	703.2	771.3	950.0	1146.6	1202.9	1269.7	1394.4
62.5°	508.7	514.2	535.6	577.6	623.8	696.2	876.1	1160.4	1250.4	1345.1	1533.6
65°	360.4	351.6	376.2	413.9	467.0	537.1	708.0	1067.7	1197.1	1325.5	1558.3
67.5°	200.8	200.1	215.1	243.3	294.1	369.5	487.8	818.8	938.0	1083.5	1369.3
70°	138.5	140.0	149.5	180.0	221.9	287.0	347.6	514.2	599.9	698.7	979.7
72.5°	97.3	100.5	105.8	123.9	166.9	241.8	355.1	307.4	350.1	417.5	589.1
75°	57.1	59.3	63.1	71.9	95.0	161.6	367.7	270.2	270.2	286.0	356.4
77.5°	35.2	35.2	37.4	41.0	50.5	79.2	261.9	303.6	295.1	286.0	286.8
80°	18.1	19.4	22.6	24.4	28.1	36.2	117.6	283.3	310.6	329.0	316.2
82.5°	8.3	9.3	13.8	14.8	16.3	19.1	40.5	161.1	215.9	284.3	355.1
85°	4.3	4.3	7.3	9.0	9.8	8.8	14.8	65.1	98.5	150.3	235.2
87.5°	0.8	0.8	1.3	1.5	2.3	2.0	2.5	3.8	6.3	6.8	7.0
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: P154534

CATALOG NUMBER: TLM-F01-LED-E1-T2-7030

CANDELA DISTRIBUTION (continued):

	65°	66°	67°	68°	69°	70°	71°	72°	73°	74°	75°
0°	231.0	231.0	231.0	231.0	231.0	231.0	231.0	231.0	231.0	231.0	231.0
2.5°	235.5	235.7	235.5	235.2	234.7	234.7	234.7	234.5	234.5	234.5	234.2
5°	242.3	241.3	241.5	241.0	240.8	240.5	240.8	240.3	239.8	240.0	239.8
7.5°	250.8	250.3	249.3	249.3	249.1	248.6	248.6	247.8	247.6	247.1	246.8
10°	260.4	259.1	259.6	259.1	259.4	258.4	257.9	257.4	256.9	256.9	257.1
12.5°	270.2	269.9	269.2	268.7	268.7	267.9	268.2	267.9	267.2	266.9	266.2
15°	280.2	280.2	279.5	279.7	279.5	279.0	278.5	278.5	278.0	277.5	277.7
17.5°	292.0	292.0	292.0	292.0	292.3	291.5	291.8	291.3	290.8	291.8	291.8
20°	307.4	308.4	308.4	308.1	309.4	308.6	308.4	309.6	308.4	310.1	309.9
22.5°	325.0	326.0	326.0	327.0	327.2	328.0	328.5	328.0	329.0	330.0	330.0
25°	344.6	345.6	346.3	347.8	348.6	348.1	348.3	349.6	350.1	351.1	352.1
27.5°	365.2	365.4	366.4	368.2	369.5	370.0	370.2	372.2	372.5	373.0	374.0
30°	385.3	387.8	387.3	389.6	390.3	391.1	392.6	393.3	395.1	396.1	396.1
32.5°	408.9	408.4	410.4	412.2	413.4	414.7	416.0	417.0	418.0	418.5	421.0
35°	438.3	439.3	439.3	439.6	442.6	442.8	443.9	446.1	446.9	448.4	449.4
37.5°	467.5	465.7	465.5	465.5	464.5	465.2	465.5	465.7	466.7	467.0	468.0
40°	500.1	497.9	495.9	494.6	492.6	489.8	489.3	488.1	488.8	488.6	488.8
42.5°	544.9	538.6	533.8	530.3	526.3	523.3	521.0	517.7	515.5	512.7	512.2
45°	601.9	590.1	582.1	576.3	570.5	562.2	557.5	552.4	547.9	543.4	539.6
47.5°	676.8	664.3	651.5	640.9	631.8	618.5	605.0	597.4	588.6	580.8	575.3
50°	765.1	750.0	743.9	729.1	717.8	697.7	680.9	668.5	650.9	639.1	628.8
52.5°	855.3	851.5	848.2	835.7	822.4	810.8	796.0	774.4	756.5	742.9	721.8
55°	978.2	979.9	978.7	971.9	967.1	956.1	950.0	931.2	923.1	903.5	881.4
57.5°	1185.0	1199.1	1216.9	1224.0	1233.5	1224.5	1235.0	1247.9	1215.9	1227.0	1207.1
60°	1449.2	1513.8	1552.2	1599.5	1630.4	1673.6	1681.4	1692.7	1689.4	1695.7	1708.5
62.5°	1610.5	1687.2	1760.8	1814.4	1871.7	1903.3	1941.5	1968.2	1995.8	2014.4	2009.1
65°	1658.0	1736.9	1803.8	1862.4	1913.6	1952.3	1987.8	2021.2	2046.6	2064.4	2075.0
67.5°	1483.6	1586.7	1657.0	1725.6	1791.7	1832.5	1862.1	1894.5	1931.7	1962.6	1968.7
70°	1116.4	1271.0	1370.8	1452.9	1530.6	1585.4	1626.9	1657.0	1685.9	1708.0	1732.2
72.5°	698.2	833.4	947.5	1054.1	1136.5	1211.9	1246.9	1313.7	1304.9	1321.8	1339.8
75°	418.5	484.3	547.1	622.3	665.5	728.4	739.7	750.7	744.9	726.1	740.2
77.5°	290.8	301.6	301.1	296.8	292.3	281.2	266.9	259.1	253.8	246.3	249.3
80°	292.5	269.2	233.5	196.3	162.1	139.5	130.4	130.4	139.7	153.1	166.4
82.5°	349.6	324.7	289.5	242.3	192.0	156.3	132.5	122.9	124.7	138.2	155.3
85°	235.7	241.3	211.6	193.5	153.3	119.4	100.0	81.2	71.9	74.1	83.9
87.5°	8.5	10.3	3.8	5.0	3.5	3.0	3.0	3.3	2.3	2.8	2.5
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: P154534

CATALOG NUMBER: TLM-F01-LED-E1-T2-7030

CANDELA DISTRIBUTION (continued):

	76°	77°	78°	79°	80°	81°	82°	83°	84°	85°	86°
0°	231.0	231.0	231.0	231.0	231.0	231.0	231.0	231.0	231.0	231.0	231.0
2.5°	234.0	233.7	233.7	233.2	233.2	233.0	233.0	232.7	232.5	232.5	232.2
5°	239.5	239.3	238.8	238.5	238.0	238.0	237.8	237.3	237.3	236.8	236.5
7.5°	247.3	246.8	246.3	246.1	245.8	245.0	245.0	244.5	244.5	244.0	243.8
10°	256.6	256.1	255.6	255.9	255.1	254.8	254.3	254.3	253.6	253.3	253.3
12.5°	266.7	266.4	266.4	265.7	265.4	265.2	264.1	264.1	264.1	263.6	263.9
15°	277.5	277.7	277.0	277.7	277.5	276.7	276.7	276.7	275.7	277.0	276.0
17.5°	292.0	292.8	292.3	292.5	292.0	292.0	292.3	292.0	292.5	292.5	294.1
20°	310.1	310.4	311.7	311.1	311.1	310.9	311.4	311.7	312.7	312.2	313.2
22.5°	330.0	331.3	331.5	332.5	332.5	332.3	332.8	333.8	334.3	335.0	334.8
25°	352.6	353.4	354.4	353.1	355.1	355.1	355.6	356.9	357.1	357.1	358.9
27.5°	373.7	375.7	376.0	377.2	376.5	377.0	378.8	379.5	380.5	380.5	381.0
30°	397.6	398.4	398.9	400.4	400.1	400.4	400.6	401.9	401.9	403.1	404.4
32.5°	422.2	422.7	423.2	424.7	425.3	426.3	425.8	426.8	428.0	428.3	429.0
35°	451.6	452.1	452.6	454.9	455.2	456.9	457.4	456.9	458.9	457.7	458.9
37.5°	468.7	471.0	471.5	473.0	472.5	473.8	474.5	475.5	476.0	477.0	479.0
40°	489.6	490.3	491.9	492.6	493.6	493.9	494.9	495.6	496.4	498.6	500.9
42.5°	511.0	512.0	512.7	513.7	515.0	516.0	516.7	519.0	519.5	521.0	525.3
45°	536.8	536.3	536.6	536.8	537.3	538.6	540.9	543.1	544.6	548.2	551.7
47.5°	569.0	565.7	564.5	562.5	563.0	565.7	566.2	570.0	573.0	576.3	580.6
50°	617.8	609.0	603.7	598.4	597.9	599.4	601.4	605.5	609.0	613.2	619.3
52.5°	699.7	682.9	672.3	657.7	653.7	653.0	651.5	653.7	654.7	660.5	671.8
55°	865.6	834.4	814.3	791.7	770.6	764.3	752.2	754.7	752.2	755.8	772.6
57.5°	1211.9	1187.0	1167.4	1138.5	1102.3	1063.9	1054.3	1014.9	1022.7	1045.3	1030.7
60°	1714.8	1705.8	1691.7	1677.9	1628.4	1600.5	1555.0	1550.0	1518.0	1518.3	1497.4
62.5°	1996.3	2007.9	1999.3	1995.3	1992.6	1983.8	1961.1	1934.0	1893.3	1863.9	1820.6
65°	2076.7	2066.9	2057.6	2056.4	2055.6	2070.0	2073.2	2054.1	2017.2	1971.4	1921.7
67.5°	1983.0	1977.5	1978.0	1967.4	1974.0	1998.8	2016.2	2010.9	1977.0	1921.7	1858.3
70°	1759.8	1749.0	1760.1	1773.9	1783.7	1798.0	1815.4	1819.6	1788.7	1731.9	1667.3
72.5°	1317.7	1319.5	1330.0	1333.8	1373.3	1369.3	1384.8	1334.1	1311.7	1257.7	1224.5
75°	693.4	682.1	711.5	649.2	623.6	641.4	591.4	543.4	553.4	561.7	501.9
77.5°	245.0	229.2	202.3	191.5	159.3	135.0	110.3	99.5	93.7	90.7	87.0
80°	175.9	181.0	175.4	162.4	138.0	110.6	87.2	68.9	59.1	53.8	50.3
82.5°	177.9	197.8	206.6	202.8	180.7	136.7	90.2	57.6	42.7	35.7	33.2
85°	95.5	104.6	100.5	84.7	76.2	45.5	31.2	20.9	17.6	16.1	14.8
87.5°	3.8	3.0	2.5	2.5	2.8	3.0	2.5	2.8	2.5	2.5	2.5
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: P154534

CATALOG NUMBER: TLM-F01-LED-E1-T2-7030

CANDELA DISTRIBUTION (continued):

	87°	88°	89°	90°	95°	105°	115°	125°	135°	145°	155°
0°	231.0	231.0	231.0	231.0	231.0	231.0	231.0	231.0	231.0	231.0	231.0
2.5°	231.7	231.7	231.7	231.5	231.0	229.7	228.5	227.5	226.7	225.9	224.9
5°	236.3	235.7	235.7	235.7	233.7	231.7	230.0	228.2	226.7	225.4	224.4
7.5°	243.8	243.5	242.5	242.3	240.8	237.5	235.5	232.5	230.7	229.0	228.5
10°	252.8	252.6	252.3	252.1	250.1	246.8	244.3	241.5	239.0	236.5	234.0
12.5°	263.4	263.1	262.9	262.1	261.4	259.6	256.9	253.8	250.8	245.6	242.8
15°	276.5	277.0	276.5	276.2	275.7	276.0	274.2	269.9	265.2	258.4	252.6
17.5°	293.8	293.3	293.1	294.1	293.8	295.1	294.6	289.0	281.7	270.9	260.9
20°	312.9	312.9	313.9	314.7	316.9	320.2	318.7	311.9	298.6	283.5	270.4
22.5°	335.8	336.3	337.3	336.8	340.3	345.6	346.1	336.5	319.2	298.3	280.0
25°	359.7	360.2	359.2	360.7	366.4	374.0	375.5	361.9	339.0	311.9	288.0
27.5°	382.3	382.8	382.8	384.8	390.3	403.1	404.6	389.6	359.2	323.7	293.8
30°	404.4	406.4	406.9	407.4	415.7	433.5	436.8	414.9	376.7	332.5	297.8
32.5°	432.3	433.0	434.0	435.3	444.9	466.7	466.7	436.8	388.1	338.0	298.6
35°	462.2	462.4	464.7	465.0	478.5	500.4	496.1	454.9	396.1	336.8	293.1
37.5°	480.3	481.3	483.6	486.6	500.9	531.8	522.0	470.5	397.6	328.5	280.5
40°	502.7	504.7	506.9	510.0	531.3	563.7	543.9	480.3	391.3	312.2	261.6
42.5°	526.8	529.6	533.1	538.6	564.0	591.9	560.5	481.8	377.0	293.8	239.3
45°	553.9	559.0	563.0	569.5	598.2	616.3	570.5	473.0	358.9	269.7	215.4
47.5°	585.4	589.4	596.4	603.4	632.1	632.9	571.5	455.9	334.3	245.6	190.0
50°	624.1	626.6	637.1	641.4	668.3	650.2	564.2	432.8	308.4	218.4	161.9
52.5°	675.6	679.1	692.7	699.2	718.3	673.8	553.9	407.7	278.7	188.0	133.0
55°	777.4	792.7	802.2	813.6	825.9	727.4	549.4	380.8	245.3	152.8	105.3
57.5°	1063.1	1058.1	1079.2	1104.9	1104.6	849.8	576.6	357.6	205.8	116.9	80.9
60°	1488.9	1493.7	1482.9	1498.2	1449.4	1001.6	613.8	333.3	161.4	87.0	61.8
62.5°	1805.3	1777.7	1762.3	1744.2	1636.9	1018.1	586.6	283.3	117.4	61.1	47.5
65°	1880.2	1847.8	1814.9	1780.4	1618.6	917.9	481.3	207.9	75.9	42.0	37.7
67.5°	1806.3	1754.3	1712.3	1676.9	1483.1	760.8	351.9	127.7	43.5	33.9	32.2
70°	1614.8	1557.2	1489.4	1449.7	1248.9	560.7	225.4	68.9	33.4	30.2	29.4
72.5°	1182.0	1134.8	1060.6	1015.1	896.7	340.8	125.9	38.7	31.2	28.9	27.9
75°	460.4	435.8	404.9	407.4	363.7	150.8	57.1	33.4	30.4	28.4	27.4
77.5°	79.2	77.2	71.4	71.4	81.2	55.0	38.0	33.7	30.2	27.9	26.1
80°	47.5	46.5	44.2	43.7	42.2	38.7	36.4	34.2	29.7	26.4	24.1
82.5°	31.2	29.9	29.2	28.9	31.4	33.9	34.2	33.9	28.1	22.9	19.6
85°	13.3	13.3	13.3	13.6	18.1	27.4	28.1	30.2	23.1	17.8	14.1
87.5°	2.3	2.8	2.8	3.0	3.3	6.0	7.5	9.8	7.8	7.5	6.8
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: P154534

CATALOG NUMBER: TLM-F01-LED-E1-T2-7030

CANDELA DISTRIBUTION (continued):

	165°	175°	180°
0°	231.0	231.0	231.0
2.5°	224.7	224.2	224.2
5°	223.9	223.4	223.7
7.5°	227.0	225.9	226.2
10°	232.5	231.5	231.0
12.5°	239.5	238.3	238.3
15°	246.8	243.8	243.5
17.5°	252.8	249.1	248.6
20°	259.6	254.6	253.8
22.5°	265.9	259.1	258.1
25°	270.4	262.1	260.9
27.5°	272.4	262.6	261.6
30°	274.0	262.9	261.4
32.5°	272.4	260.6	259.4
35°	264.1	251.3	250.6
37.5°	249.8	235.5	234.5
40°	231.0	215.9	213.4
42.5°	206.8	192.8	190.0
45°	183.5	167.4	166.1
47.5°	158.3	143.0	143.8
50°	131.9	118.1	117.9
52.5°	106.8	94.8	94.0
55°	84.2	75.7	74.9
57.5°	66.6	62.1	61.3
60°	54.3	52.0	51.3
62.5°	43.7	43.0	42.7
65°	36.4	36.4	36.4
67.5°	31.7	31.9	31.9
70°	29.2	29.4	29.2
72.5°	28.1	28.9	28.9
75°	27.4	27.9	26.9
77.5°	26.9	27.1	25.4
80°	26.6	26.4	23.1
82.5°	23.1	22.4	19.6
85°	21.1	16.1	13.6
87.5°	10.8	7.5	5.8
90°	0.0	0.0	0.0

(END OF REPORT)