

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: STREETWORKS

Report Number: P150203

Luminaire Tested: **TMU-F02-LED-E-U-SL2-8030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P150203
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: STREETWORKS
Catalog Number: TMU-F02-LED-E-U-SL2-8030
Description: TALON MEDIUM LED AREA LUMINAIRE
(2) LIGHTBARS WITH AccuLED OPTICS - TYPE 2 W/ SPILL LIGHT CONTROL
Light Source: (14) 3000K CCT, 80 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4257.2 lumens
Efficiency: N/A
Efficacy: 77.4 lumens/watt
Luminous Opening: Rectangular (W 0.33' x L: 1' x H: 0')
IES Classification: Type II - Short - Non-Cutoff
BUG Rating: B1 - U0 - G1

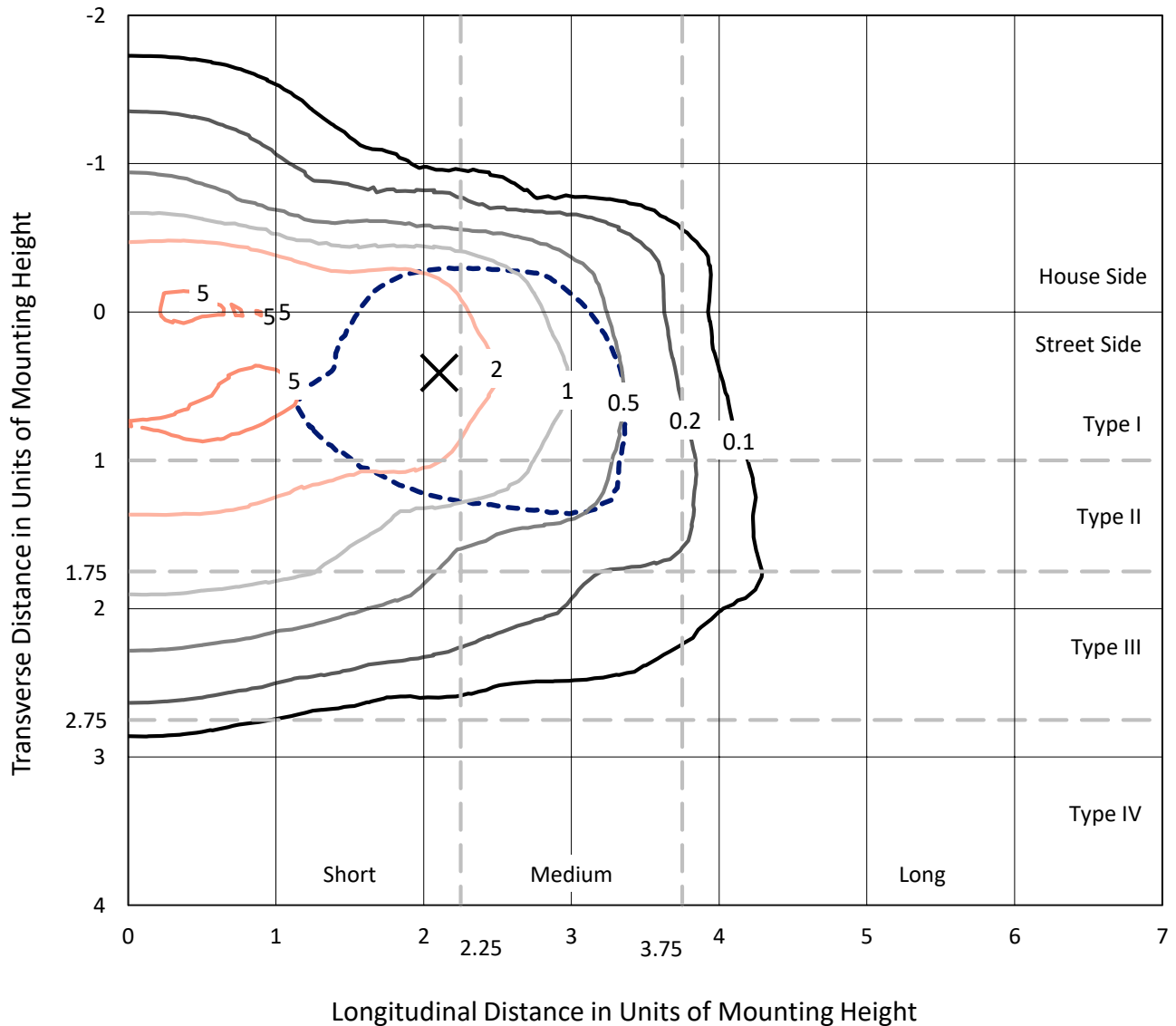
Input Watts (W): 55
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P150203
 CATALOG NUMBER: TMU-F02-LED-E-U-SL2-8030

Iso-Footcandle Lines of Horizontal Illumination

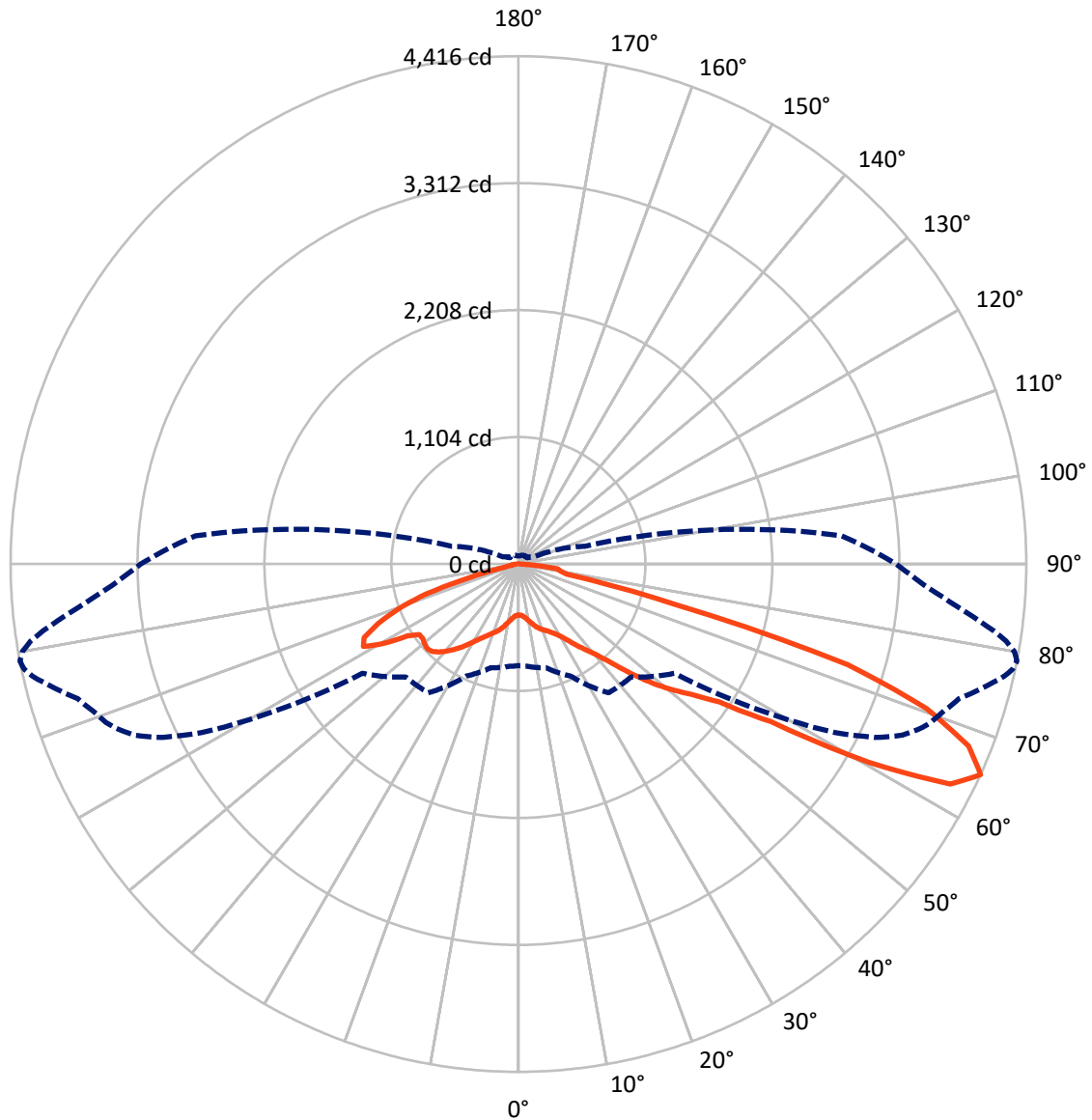
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5.9 fc
 Type II - Short - Non-Cutoff

REPORT NUMBER: P150203
CATALOG NUMBER: TMU-F02-LED-E-U-SL2-8030

Luminous Intensity Polar Plot



— Vertical Plane Through 79-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

REPORT NUMBER: P150203

CATALOG NUMBER: TMU-F02-LED-E-U-SL2-8030

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1006.4	0.0	1006.4
	% Fixture	23.6	0.0	23.6
Street Side	Lumens	3250.8	0.0	3250.8
	% Fixture	76.4	0.0	76.4
Total	Lumens	4257.2	0.0	4257.2
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	44.0	1.0
10°-20°	144.0	3.4
20°-30°	248.8	5.8
30°-40°	411.8	9.7
40°-50°	698.4	16.4
50°-60°	928.0	21.8
60°-70°	1198.7	28.2
70°-80°	502.7	11.8
80°-90°	80.8	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°-90°	4257.2	100.0
0°-180°	4257.2	100.0



REPORT NUMBER: P150203

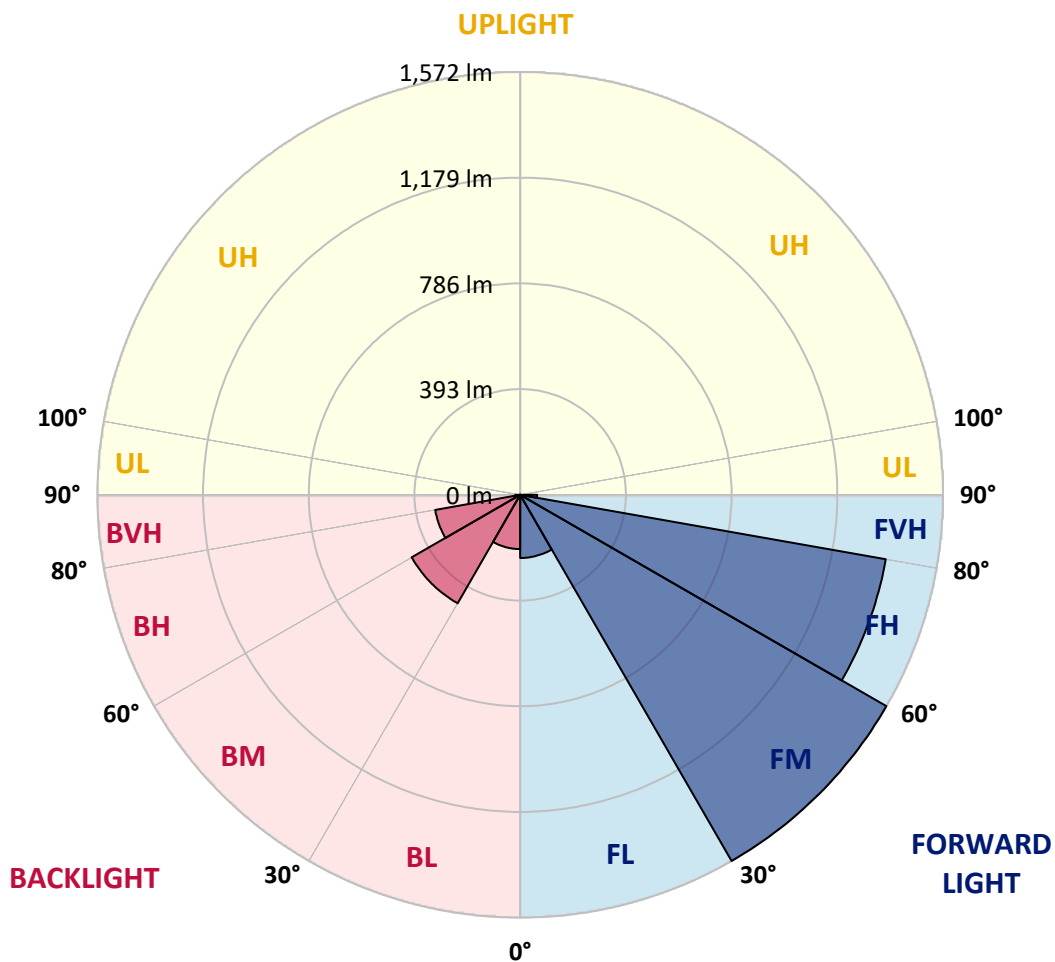
CATALOG NUMBER: TMU-F02-LED-E-U-SL2-8030

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	234.9	5.5			
FM	(30°-60°)	1572.3	36.9			
FH	(60°-80°)	1380.4	32.4			G1/1800
FVH	(80°-90°)	63.1	1.5			G1/100
BL	(0°-30°)	202.0	4.7	B1/500		
BM	(30°-60°)	465.9	10.9	B1/1000		
BH	(60°-80°)	321.0	7.5	B1/500		G1/500
BVH	(80°-90°)	17.6	0.4			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G1

Type II Short





REPORT NUMBER: P150203

CATALOG NUMBER: TMU-F02-LED-E-U-SL2-8030

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	60°	61°	62°	64°
0°	443.1	443.1	443.1	443.1	443.1	443.1	443.1	443.1	443.1	443.1	443.1
2.5°	441.7	443.1	442.2	443.1	444.1	444.5	445.4	445.0	445.0	445.4	444.5
5°	441.7	441.7	443.1	445.4	446.4	449.2	452.4	451.9	452.4	451.9	452.9
7.5°	451.0	450.6	451.9	454.7	455.7	459.8	465.4	466.3	467.3	467.3	468.7
10°	467.3	466.8	468.2	469.6	471.0	474.2	482.1	485.4	485.9	486.3	488.2
12.5°	487.7	487.3	485.4	485.4	484.9	491.0	501.6	507.7	508.6	510.5	511.9
15°	502.1	500.7	497.9	496.1	498.4	508.2	523.9	530.9	531.8	533.2	537.0
17.5°	516.0	514.7	508.6	504.0	507.2	523.0	544.4	551.8	553.7	555.1	559.2
20°	535.6	534.6	525.8	514.7	513.7	534.2	560.2	569.9	571.3	573.2	577.4
22.5°	565.3	561.1	550.9	530.0	519.8	540.7	571.3	584.8	586.7	588.5	594.1
25°	602.4	600.6	582.9	550.9	529.5	547.2	583.4	600.1	602.9	605.2	612.7
27.5°	641.0	638.2	619.2	577.4	546.7	560.2	602.4	621.5	625.2	628.9	635.9
30°	675.4	674.4	658.6	613.1	574.6	584.8	633.1	656.3	660.5	665.2	671.7
32.5°	756.2	756.7	740.4	693.9	641.9	629.4	677.2	712.1	713.9	719.5	731.1
35°	910.9	912.7	906.7	870.0	811.5	759.9	764.6	798.9	800.8	805.4	816.6
37.5°	1014.4	1018.2	1036.7	1048.4	1018.6	994.9	935.9	922.5	923.9	921.1	918.8
40°	1071.6	1077.2	1125.9	1186.3	1218.8	1219.3	1193.7	1134.3	1111.5	1105.0	1077.2
42.5°	1104.1	1113.4	1182.6	1285.7	1379.1	1443.2	1459.0	1393.0	1376.3	1346.6	1293.1
45°	1125.5	1136.6	1218.4	1359.6	1497.1	1606.2	1688.4	1659.2	1648.0	1629.9	1580.7
47.5°	1121.7	1130.6	1215.6	1384.6	1558.8	1714.0	1859.8	1890.0	1876.5	1871.9	1838.5
50°	1053.9	1061.8	1148.2	1322.4	1524.9	1754.8	1968.5	2054.0	2054.0	2062.8	2052.6
52.5°	981.5	988.0	1066.5	1223.0	1415.3	1714.9	2028.9	2170.6	2189.1	2204.5	2228.6
55°	954.1	962.0	1021.4	1155.2	1321.9	1600.6	2049.3	2257.9	2292.3	2318.3	2373.1
57.5°	967.1	975.0	1017.2	1118.5	1267.1	1484.0	2050.3	2375.4	2441.8	2495.2	2606.3
60°	1023.3	1030.7	1066.0	1152.4	1252.7	1416.7	2010.8	2562.6	2668.5	2768.8	2953.7
62.5°	997.3	1006.6	1058.1	1208.6	1360.0	1365.6	1868.2	2707.5	2878.0	3026.2	3320.2
65°	883.5	893.2	933.6	1074.4	1366.5	1387.9	1656.8	2710.3	2922.1	3122.3	3439.6
67.5°	670.7	674.4	706.5	819.4	1092.9	1412.5	1439.5	2389.3	2590.9	2814.3	3141.8
70°	342.8	349.3	358.6	452.4	703.7	1167.3	1236.9	1760.9	2017.7	2248.6	2642.0
72.5°	118.9	121.2	130.5	172.8	342.8	765.9	1082.7	1206.7	1361.9	1577.9	2033.5
75°	71.5	71.5	74.8	87.3	156.5	399.0	963.4	985.6	1006.6	1079.0	1377.2
77.5°	56.7	57.6	57.6	59.9	86.9	204.8	731.6	916.4	919.2	926.2	976.4
80°	40.4	42.3	46.0	47.8	56.2	112.4	410.6	804.5	859.3	885.8	922.5
82.5°	30.2	32.0	39.0	41.3	43.7	62.7	184.4	555.1	654.9	707.9	837.0
85°	13.5	15.8	26.5	29.3	30.7	33.4	86.4	157.9	181.6	203.9	268.9
87.5°	2.3	2.3	4.2	6.0	8.8	8.4	19.0	26.9	27.4	32.0	35.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P150203

CATALOG NUMBER: TMU-F02-LED-E-U-SL2-8030

CANDELA DISTRIBUTION (continued):

	65°	66°	67°	68°	69°	70°	71°	72°	73°	74°	75°
0°	443.1	443.1	443.1	443.1	443.1	443.1	443.1	443.1	443.1	443.1	443.1
2.5°	444.5	444.5	444.5	444.1	444.5	444.5	444.5	444.5	445.0	445.0	445.0
5°	454.3	453.3	453.8	453.8	453.8	453.3	454.3	453.8	454.3	455.7	455.2
7.5°	468.7	469.6	470.1	470.5	470.5	470.5	471.0	471.9	471.9	473.3	472.9
10°	490.0	489.6	490.0	491.4	492.8	493.3	494.7	494.2	495.1	497.0	498.9
12.5°	512.8	513.7	515.1	516.5	518.8	519.3	520.7	521.2	523.9	523.9	525.8
15°	538.3	538.8	541.6	542.1	544.8	545.8	548.1	549.0	552.3	552.7	554.6
17.5°	561.6	562.5	563.9	565.3	568.5	569.9	571.8	573.6	576.4	577.4	580.6
20°	580.1	582.0	582.5	585.3	588.0	589.9	591.8	593.6	596.4	597.8	601.1
22.5°	596.9	598.7	600.1	602.4	604.3	607.1	608.0	611.3	614.1	616.4	619.2
25°	615.0	617.8	619.2	623.3	624.7	627.5	629.8	633.1	636.8	639.6	643.3
27.5°	640.5	644.7	646.6	651.2	654.5	655.9	659.6	664.2	667.5	670.7	674.4
30°	675.8	683.7	685.1	688.4	694.4	695.3	700.0	703.7	708.8	712.1	715.3
32.5°	730.6	740.4	741.3	745.0	750.2	752.0	755.7	759.9	767.8	769.2	774.3
35°	814.7	818.9	822.6	824.0	828.2	830.5	833.3	837.9	845.8	844.9	850.5
37.5°	915.5	916.9	917.4	912.7	913.7	909.5	914.6	915.5	918.3	920.6	926.2
40°	1059.5	1045.1	1043.2	1032.1	1020.9	1014.9	1012.6	1003.3	1005.6	1006.6	1011.2
42.5°	1269.9	1242.0	1218.8	1203.0	1175.6	1162.2	1144.0	1129.6	1118.5	1122.7	1124.5
45°	1536.5	1496.6	1459.4	1411.1	1375.4	1349.8	1317.8	1289.0	1276.0	1269.9	1277.3
47.5°	1802.7	1767.4	1723.7	1674.0	1617.4	1575.1	1521.7	1474.8	1442.2	1430.2	1436.7
50°	2032.6	2000.1	1967.1	1937.9	1871.9	1825.9	1753.0	1692.1	1641.0	1615.0	1608.1
52.5°	2223.5	2206.3	2188.7	2164.1	2111.1	2065.1	2007.1	1947.1	1879.3	1826.4	1808.3
55°	2394.0	2404.2	2395.4	2395.8	2374.9	2345.7	2296.4	2251.8	2204.5	2144.6	2119.5
57.5°	2642.5	2702.9	2714.9	2745.1	2760.0	2775.8	2789.7	2763.3	2751.2	2706.6	2707.0
60°	3034.1	3122.3	3198.9	3268.6	3325.8	3381.5	3440.0	3466.0	3494.8	3508.3	3554.3
62.5°	3450.7	3534.8	3649.0	3742.4	3794.9	3867.3	3931.0	3972.3	4023.0	4076.8	4147.0
65°	3553.8	3655.1	3727.1	3789.3	3841.3	3879.9	3914.7	3964.0	4006.2	4091.7	4174.4
67.5°	3289.5	3370.3	3436.3	3497.6	3538.0	3570.5	3601.7	3634.2	3706.6	3784.2	3867.3
70°	2823.6	2921.2	3030.3	3109.8	3129.7	3157.6	3187.3	3229.6	3265.8	3347.1	3410.3
72.5°	2268.6	2408.8	2501.3	2611.4	2635.1	2677.3	2694.0	2727.0	2733.5	2777.7	2794.4
75°	1581.1	1741.8	1834.7	1915.6	1931.4	1908.1	1917.4	1800.8	1771.1	1746.9	1727.4
77.5°	1043.7	1086.9	1101.8	1088.8	1026.5	977.8	925.7	874.6	880.2	838.9	766.4
80°	928.1	937.8	924.3	911.3	875.6	824.5	777.6	729.7	706.0	680.9	643.8
82.5°	903.0	940.6	944.8	929.0	900.6	844.9	788.2	717.2	656.8	601.1	544.4
85°	301.9	367.4	396.7	424.1	432.4	442.2	408.8	363.2	308.4	271.7	212.7
87.5°	38.6	47.8	55.3	47.4	55.3	65.0	46.9	52.5	53.0	33.0	24.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P150203

CATALOG NUMBER: TMU-F02-LED-E-U-SL2-8030

CANDELA DISTRIBUTION (continued):

	76°	77°	78°	79°	80°	81°	82°	83°	84°	85°	86°
0°	443.1	443.1	443.1	443.1	443.1	443.1	443.1	443.1	443.1	443.1	443.1
2.5°	445.4	445.0	445.0	445.0	444.5	445.0	445.0	445.0	445.0	445.0	444.5
5°	455.7	455.7	457.1	457.5	456.6	456.1	456.6	457.1	457.1	456.6	457.1
7.5°	474.7	475.2	476.1	477.5	476.6	477.0	477.5	477.0	478.4	478.9	478.4
10°	498.9	499.8	502.1	502.6	502.1	504.0	504.4	503.5	504.4	504.4	506.3
12.5°	526.7	527.7	530.4	531.4	532.3	532.8	534.2	534.6	536.0	537.0	538.3
15°	556.9	557.9	559.7	563.0	563.9	564.8	565.7	568.5	569.0	570.9	572.3
17.5°	582.5	583.9	586.7	589.0	590.4	592.7	593.6	596.9	597.8	600.6	602.9
20°	602.9	605.2	607.6	610.3	612.7	615.4	616.4	619.6	621.5	622.9	625.7
22.5°	621.5	624.3	627.5	630.8	632.6	636.4	637.7	639.1	643.3	645.2	648.0
25°	645.6	648.4	652.1	656.3	658.2	662.8	664.2	666.5	671.2	673.0	677.2
27.5°	678.6	682.3	685.1	689.3	691.6	694.9	698.1	700.9	705.1	707.9	712.5
30°	720.0	722.7	727.4	730.6	734.4	739.0	742.7	745.5	747.8	752.0	757.1
32.5°	780.8	781.3	782.7	790.6	794.3	798.0	803.1	805.4	809.1	813.3	818.9
35°	856.5	860.7	864.0	867.7	871.8	876.0	877.9	884.9	888.1	893.7	899.3
37.5°	931.8	932.2	939.7	942.0	945.7	949.9	956.4	963.4	971.7	977.3	986.1
40°	1012.6	1016.3	1025.6	1030.2	1034.9	1045.1	1050.2	1061.4	1075.3	1083.2	1098.1
42.5°	1129.6	1135.2	1151.9	1159.4	1170.5	1187.2	1197.9	1213.2	1218.8	1237.9	1244.8
45°	1282.9	1300.1	1324.3	1340.1	1360.0	1378.1	1387.4	1394.4	1402.8	1417.6	1415.8
47.5°	1448.7	1471.0	1498.0	1530.5	1543.5	1564.9	1576.9	1590.4	1583.0	1579.3	1575.6
50°	1618.7	1644.8	1680.5	1709.8	1729.8	1742.8	1753.0	1751.1	1735.3	1727.0	1703.8
52.5°	1807.8	1823.1	1857.0	1882.1	1894.2	1897.0	1894.7	1880.7	1865.9	1839.4	1812.0
55°	2097.6	2090.7	2104.1	2115.8	2112.0	2125.0	2091.6	2078.6	2041.9	2007.5	1970.8
57.5°	2686.6	2695.9	2620.7	2586.7	2580.7	2592.8	2533.8	2526.4	2437.6	2426.5	2364.7
60°	3547.8	3593.3	3534.3	3501.3	3412.1	3382.9	3316.9	3289.5	3204.5	3135.8	3048.9
62.5°	4195.3	4236.6	4261.2	4214.3	4162.3	4085.7	3985.8	3875.2	3785.1	3679.7	3587.7
65°	4253.8	4337.4	4394.1	4415.9	4379.2	4295.1	4172.1	4032.7	3894.8	3762.4	3646.2
67.5°	3980.2	4055.0	4142.8	4221.3	4225.9	4171.1	4066.1	3924.5	3765.2	3601.7	3465.6
70°	3510.2	3604.0	3680.6	3763.3	3820.9	3789.3	3736.8	3606.8	3441.4	3314.1	3157.6
72.5°	2854.8	2894.2	2912.8	2994.1	2995.0	2937.4	2900.3	2828.3	2695.0	2604.9	2485.5
75°	1667.1	1580.2	1487.8	1407.4	1341.9	1314.5	1192.8	1172.4	1090.6	1040.0	965.7
77.5°	687.4	609.9	510.0	426.9	344.7	307.5	253.6	229.9	199.3	185.8	177.0
80°	589.4	516.0	440.8	368.8	304.7	240.6	187.2	145.4	114.3	97.1	90.1
82.5°	481.2	437.1	384.6	345.6	295.4	247.6	209.0	162.1	121.2	89.2	68.3
85°	173.7	142.6	114.7	105.4	84.1	69.2	58.1	49.7	40.9	32.5	28.8
87.5°	19.5	18.6	10.7	10.2	11.6	8.4	9.8	8.8	7.4	6.5	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



REPORT NUMBER: P150203

CATALOG NUMBER: TMU-F02-LED-E-U-SL2-8030

CANDELA DISTRIBUTION (continued):

	87°	88°	89°	90°	95°	105°	115°	125°	135°	145°	155°
0°	443.1	443.1	443.1	443.1	443.1	443.1	443.1	443.1	443.1	443.1	443.1
2.5°	444.5	444.5	445.0	445.0	445.4	445.9	446.8	446.4	446.4	446.8	446.8
5°	457.1	458.5	458.0	458.0	458.0	458.5	458.9	457.1	455.2	453.3	452.4
7.5°	478.9	479.8	480.7	479.8	480.7	480.3	479.4	474.2	468.2	460.8	455.7
10°	507.2	507.2	508.2	507.7	509.5	508.2	505.4	493.8	480.7	465.0	453.3
12.5°	537.9	541.1	539.7	540.2	543.9	540.2	533.7	516.5	493.3	467.7	447.3
15°	574.1	575.5	576.4	575.0	577.4	574.1	562.5	535.1	501.2	465.4	435.2
17.5°	603.8	604.3	604.8	605.7	608.9	605.2	585.3	548.1	503.0	454.7	414.8
20°	627.1	629.4	631.2	631.2	635.9	630.3	603.8	554.6	497.0	437.1	388.8
22.5°	651.2	653.1	655.4	655.9	661.9	656.3	619.2	553.2	481.2	412.0	358.6
25°	680.9	682.8	684.7	687.0	695.3	687.4	634.5	547.6	459.4	382.3	326.1
27.5°	715.3	719.5	720.9	724.6	734.4	722.3	647.5	539.3	435.2	347.9	291.7
30°	761.3	766.4	768.3	773.4	786.8	760.4	654.9	524.9	404.6	313.1	255.0
32.5°	823.1	830.0	835.6	841.2	856.5	798.5	655.9	504.0	368.8	274.0	219.7
35°	903.9	914.6	918.8	922.5	936.9	839.8	651.7	472.9	325.1	234.1	191.8
37.5°	994.5	1005.2	1007.9	1009.8	1012.6	875.1	641.5	425.5	275.9	199.3	169.5
40°	1106.0	1115.2	1119.0	1116.2	1101.3	902.5	618.7	370.2	228.1	175.6	155.6
42.5°	1242.0	1256.0	1257.4	1244.8	1195.6	917.8	573.2	305.2	190.4	158.4	144.9
45°	1410.7	1409.7	1401.8	1393.0	1298.3	911.8	509.5	248.5	166.8	144.9	135.2
47.5°	1562.1	1546.3	1534.2	1508.2	1388.8	876.5	427.3	205.8	152.4	134.7	126.8
50°	1686.1	1657.3	1631.8	1603.4	1456.2	813.8	345.6	174.6	138.9	125.9	118.9
52.5°	1784.1	1749.3	1719.5	1691.7	1521.2	744.1	283.3	151.9	125.9	117.1	110.1
55°	1937.4	1902.6	1855.2	1824.5	1620.6	680.0	242.9	133.8	113.3	107.8	100.8
57.5°	2325.2	2294.6	2237.9	2158.5	1876.1	655.9	220.2	119.8	103.1	99.9	94.3
60°	3002.5	2952.8	2878.9	2798.1	2395.4	672.1	202.1	110.1	96.1	93.4	89.2
62.5°	3513.4	3426.1	3342.5	3267.7	2810.6	671.7	178.4	102.7	91.0	89.6	85.5
65°	3534.3	3445.6	3361.5	3283.0	2819.9	597.8	150.5	96.1	90.1	89.6	82.7
67.5°	3346.7	3250.5	3169.2	3070.3	2610.4	467.3	120.8	92.0	93.8	92.9	81.8
70°	3040.1	2914.7	2847.8	2750.2	2297.4	327.0	99.4	93.4	101.7	98.9	83.1
72.5°	2386.1	2291.3	2189.6	2121.8	1798.5	206.7	83.6	94.3	105.0	100.3	86.9
75°	888.1	913.7	871.8	857.0	913.7	121.2	74.3	87.8	93.8	86.9	79.0
77.5°	179.3	171.4	162.6	160.7	207.6	74.8	68.3	76.2	72.0	63.6	64.1
80°	85.9	83.6	80.8	80.4	77.1	62.2	63.2	65.0	54.3	49.2	52.5
82.5°	57.1	53.9	53.0	51.1	52.0	55.7	59.9	55.7	41.8	39.0	47.4
85°	26.5	25.5	25.1	25.1	27.9	50.2	49.7	40.9	28.8	27.9	47.4
87.5°	6.5	6.5	7.0	6.5	7.4	14.9	13.0	12.5	10.7	12.1	22.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P150203

CATALOG NUMBER: TMU-F02-LED-E-U-SL2-8030

CANDELA DISTRIBUTION (continued):

	165°	175°	180°
0°	443.1	443.1	443.1
2.5°	446.4	446.8	446.4
5°	450.6	450.6	450.6
7.5°	450.6	449.2	448.7
10°	444.1	439.9	439.9
12.5°	432.9	425.9	425.0
15°	412.0	402.7	401.3
17.5°	385.5	373.0	370.7
20°	355.8	340.0	337.2
22.5°	323.3	305.2	303.8
25°	291.2	272.7	268.9
27.5°	255.5	237.4	235.5
30°	219.7	203.9	203.0
32.5°	189.5	179.8	177.9
35°	168.1	162.6	160.2
37.5°	154.2	150.0	149.6
40°	143.5	139.8	139.3
42.5°	134.7	131.5	131.0
45°	125.9	123.1	122.2
47.5°	117.1	114.3	113.8
50°	109.2	105.4	105.0
52.5°	101.7	98.0	97.1
55°	94.8	91.0	91.0
57.5°	88.7	85.0	84.5
60°	83.1	79.4	79.0
62.5°	79.0	74.3	73.9
65°	75.7	71.1	70.1
67.5°	73.9	68.3	66.9
70°	77.1	66.9	64.6
72.5°	77.6	65.5	62.2
75°	74.8	61.8	59.5
77.5°	65.5	55.3	53.0
80°	56.7	42.7	39.5
82.5°	53.9	34.8	30.2
85°	41.8	22.8	21.4
87.5°	23.7	12.5	10.2
90°	0.0	0.0	0.0

(END OF REPORT)