

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: McGRAW-EDISON

Report Number: P164910

Luminaire Tested: **VTS-F02-LED-E1-SL2-HSS-8030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P164910
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33726)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: VTS-F02-LED-E1-SL2-HSS-8030
Description: VENTUS LED SITE LUMINAIRE
(2) LIGHTBARS WITH AccuLED OPTICS - TYPE 2 W/ SPILL LIGHT CONTROL AND HOUSE SIDE SHIELD
Light Source: (14) 3000K CCT, 80 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2524.5 lumens
Efficiency: N/A
Efficacy: 45.9 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 1' x H: 0.1')
IES Classification: Type II - Short - Non-Cutoff
BUG Rating: B0 - U0 - G1

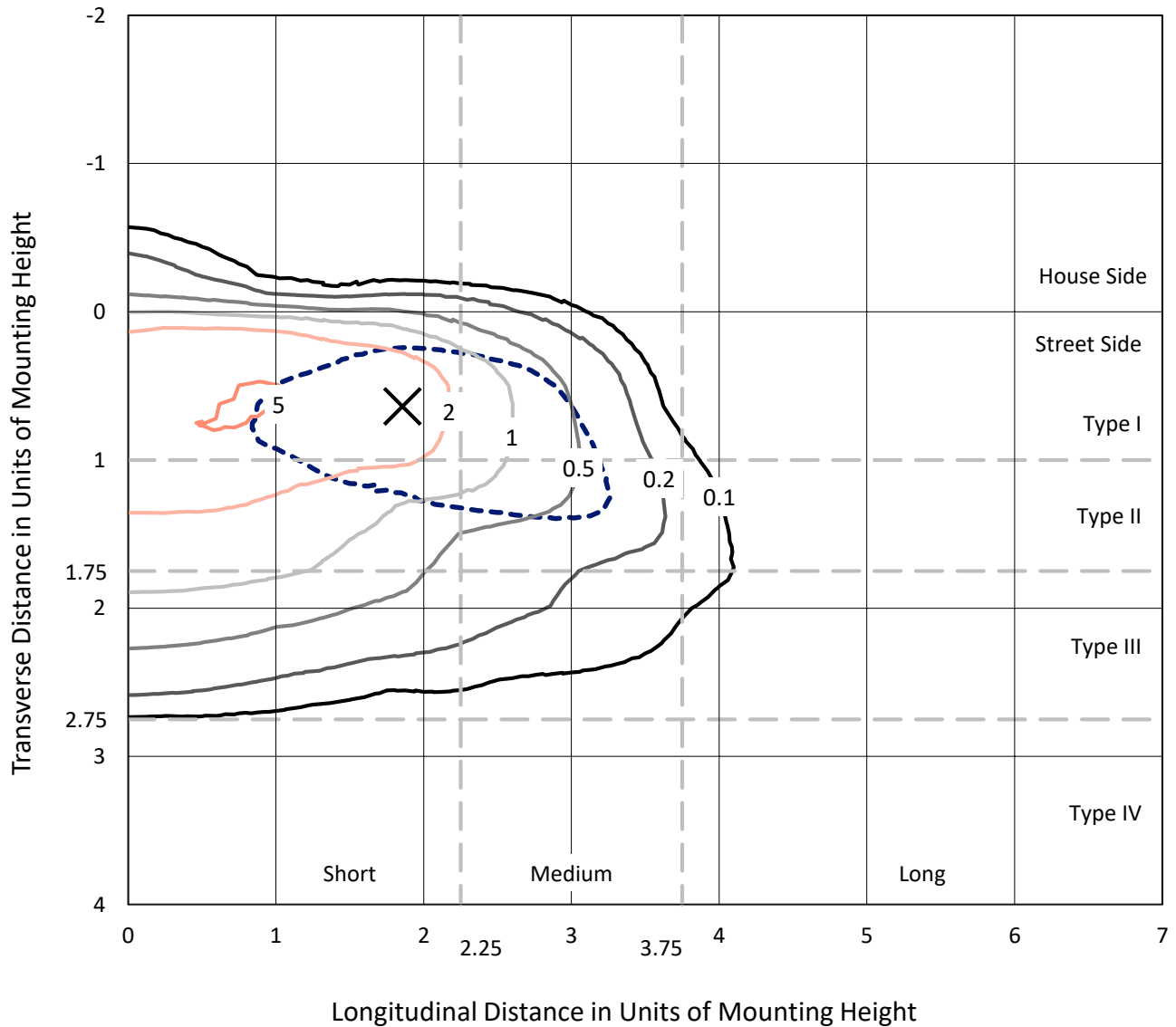
Input Watts (W): 55
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT

REPORT NUMBER: P164910

CATALOG NUMBER: VTS-F02-LED-E1-SL2-HSS-8030

Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

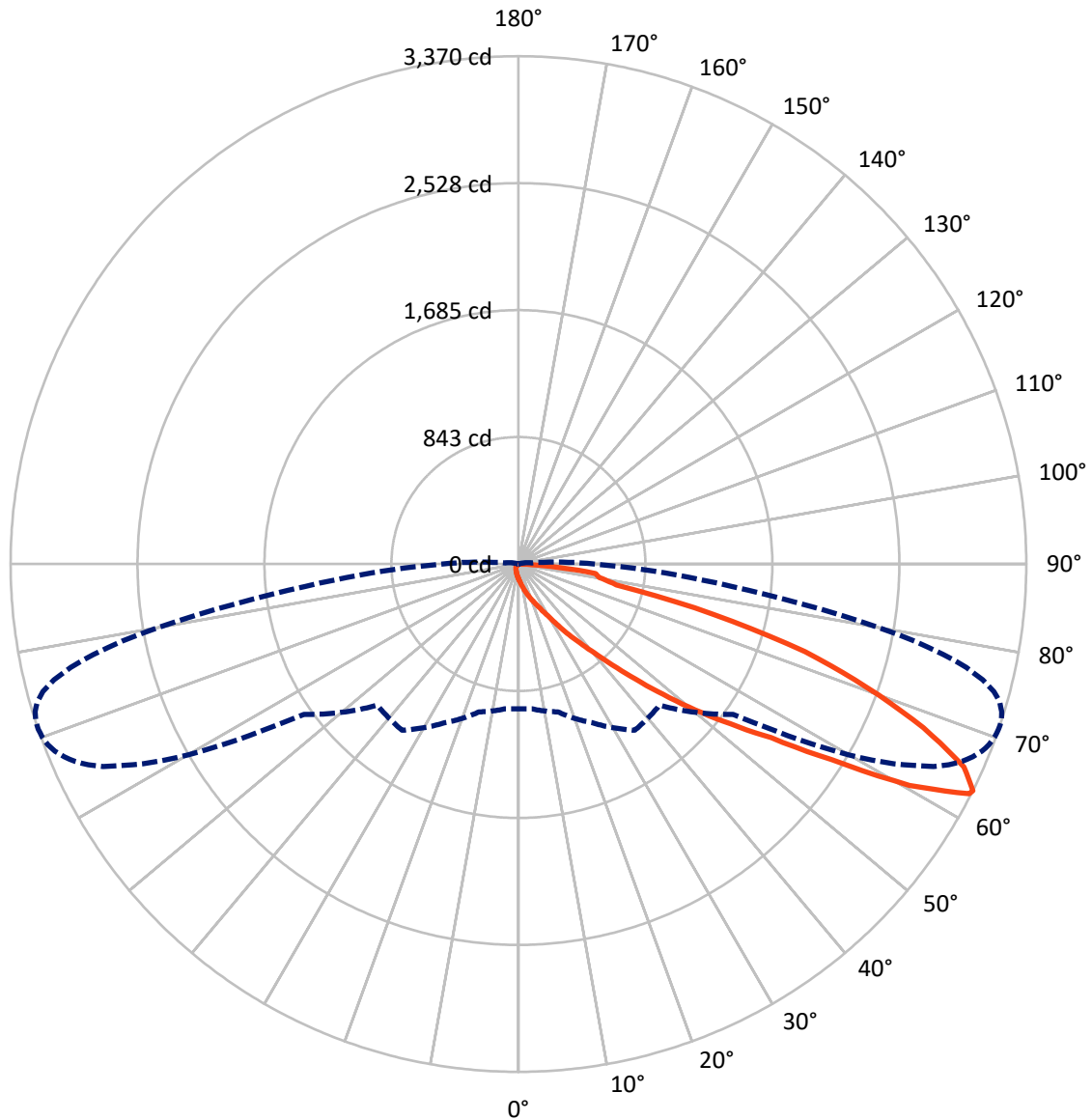


Based on 10 foot mounting height. Maximum calculated value = 5.3 fc
 Type II - Short - Non-Cutoff

REPORT NUMBER: P164910

CATALOG NUMBER: VTS-F02-LED-E1-SL2-HSS-8030

Luminous Intensity Polar Plot



— Vertical Plane Through 71-Deg Lateral - - - Horizontal Cone Through 63-Deg Vertical

REPORT NUMBER: P164910

CATALOG NUMBER: VTS-F02-LED-E1-SL2-HSS-8030

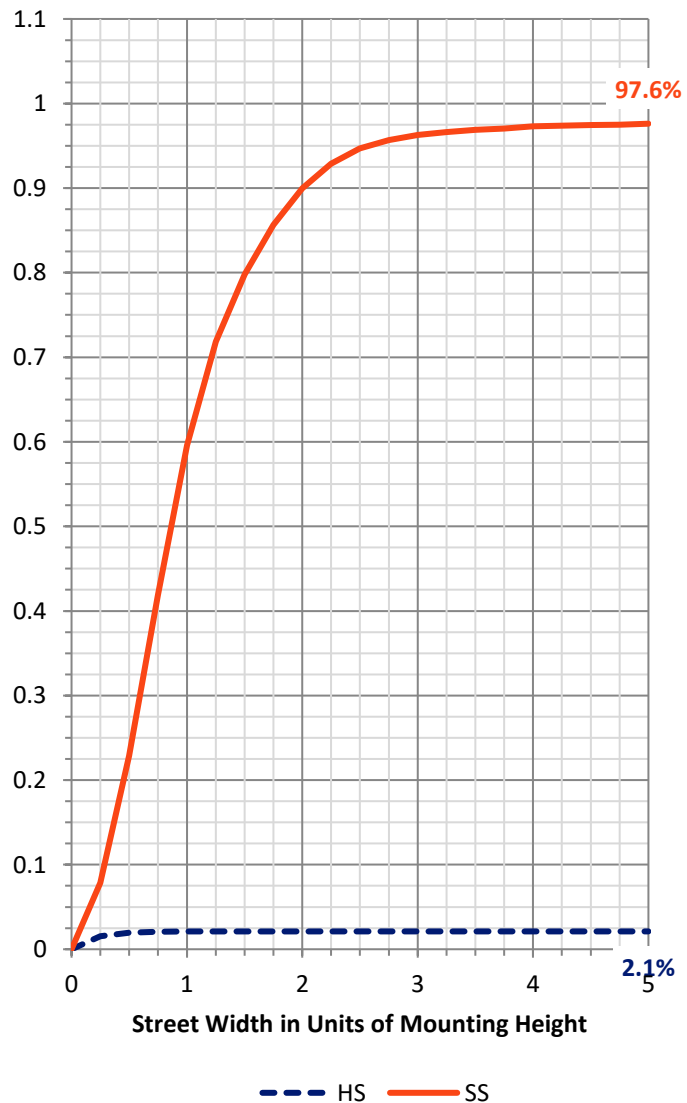
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	53.6	0.0	53.6
	% Fixture	2.1	0.0	2.1
Street Side	Lumens	2470.9	0.0	2470.9
	% Fixture	97.9	0.0	97.9
Total	Lumens	2524.5	0.0	2524.5
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	10.7	0.4
10°-20°	41.5	1.6
20°-30°	84.3	3.3
30°-40°	206.0	8.2
40°-50°	460.7	18.2
50°-60°	647.8	25.7
60°-70°	761.7	30.2
70°-80°	275.0	10.9
80°-90°	36.8	1.5
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°	2524.5	100.0
0°-180°	2524.5	100.0



REPORT NUMBER: P164910

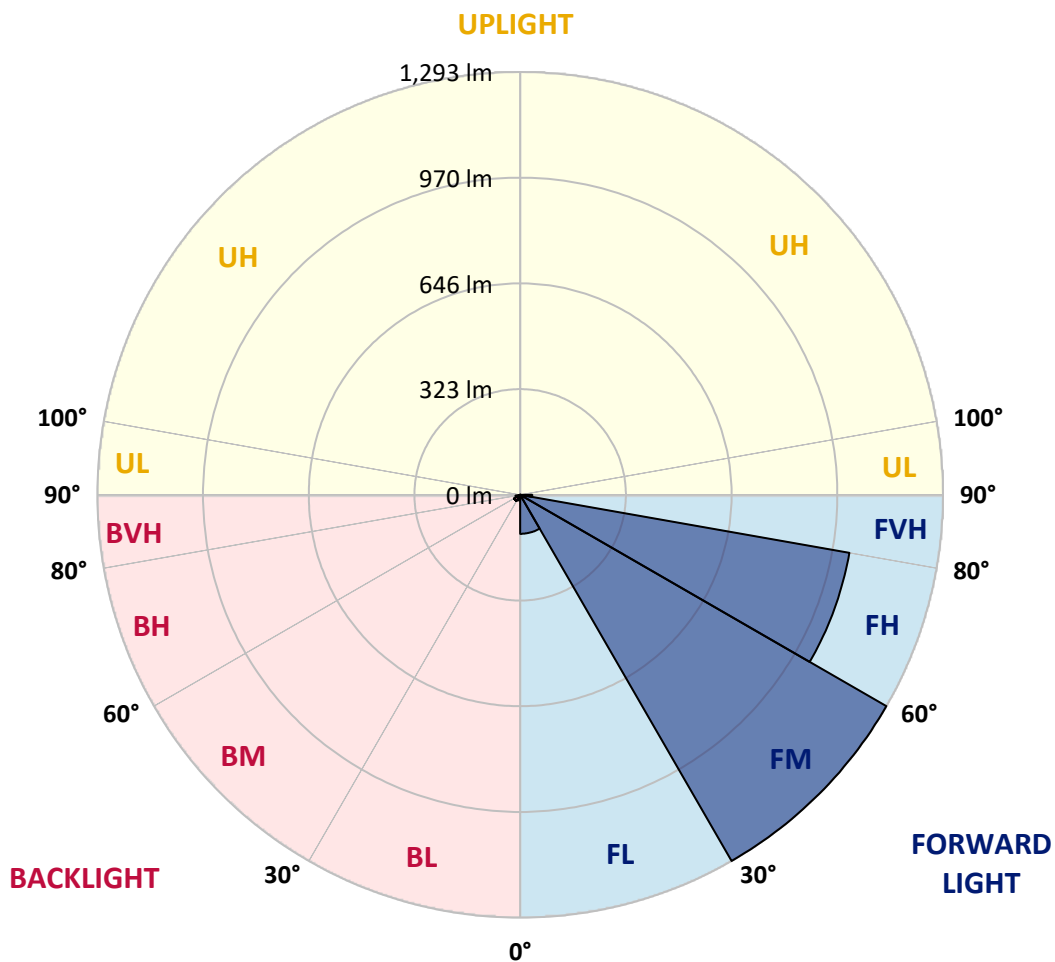
CATALOG NUMBER: VTS-F02-LED-E1-SL2-HSS-8030

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	119.3	4.7			
FM	(30°-60°)	1292.8	51.2			
FH	(60°-80°)	1022.1	40.5			G1/1800
FVH	(80°-90°)	36.7	1.5			G1/100
BL	(0°-30°)	17.2	0.7	B0/110		
BM	(30°-60°)	21.6	0.9	B0/220		
BH	(60°-80°)	14.7	0.6	B0/110		G0/110
BVH	(80°-90°)	0.1	0.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B0-U0-G1

Type II Short





REPORT NUMBER: P164910

CATALOG NUMBER: VTS-F02-LED-E1-SL2-HSS-8030

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	56°	57°	58°	59°
0°	96.8	96.8	96.8	96.8	96.8	96.8	96.8	96.8	96.8	96.8	96.8
2.5°	126.7	128.0	127.1	124.8	122.1	118.4	115.2	115.2	114.7	113.3	113.8
5°	166.1	166.6	164.8	159.2	154.2	146.4	137.7	136.8	135.8	134.5	134.0
7.5°	204.7	206.5	204.7	198.7	188.6	176.7	162.9	161.6	158.8	158.8	157.0
10°	244.2	244.2	242.3	235.4	226.2	209.3	191.8	189.5	186.3	185.4	182.7
12.5°	272.1	272.1	271.2	267.6	260.2	245.1	224.0	221.7	217.5	216.2	213.0
15°	283.2	283.2	283.6	286.8	287.3	280.4	258.4	256.5	252.4	248.7	247.4
17.5°	290.0	289.6	289.6	294.2	302.4	307.0	292.8	291.0	286.4	284.5	279.9
20°	305.2	304.3	301.5	301.5	309.3	325.4	325.4	324.9	319.9	318.5	316.2
22.5°	327.7	326.8	318.5	311.6	315.3	335.5	354.3	353.4	351.5	349.7	348.3
25°	364.4	361.2	346.9	326.8	323.6	345.1	376.3	378.6	380.0	380.0	380.9
27.5°	419.9	415.8	390.6	352.9	338.7	360.7	400.7	405.2	409.4	410.3	414.4
30°	497.0	489.7	453.4	398.4	365.8	383.7	436.5	441.5	447.5	449.3	455.7
32.5°	623.7	619.6	584.7	502.1	432.3	428.7	486.5	492.9	500.7	503.9	511.7
35°	816.5	817.4	788.9	714.6	618.2	567.7	576.0	581.5	584.2	593.9	598.0
37.5°	947.3	949.5	956.0	926.6	857.8	806.3	741.6	747.6	733.4	734.7	735.2
40°	1018.9	1026.2	1063.8	1092.3	1086.8	1056.9	1005.1	1008.3	981.7	975.7	946.8
42.5°	1066.6	1076.2	1136.3	1224.4	1269.4	1296.5	1284.6	1283.2	1262.5	1254.7	1230.4
45°	1096.4	1105.1	1180.9	1310.7	1414.5	1493.4	1526.0	1529.6	1512.2	1504.4	1484.2
47.5°	1095.0	1105.1	1186.3	1342.9	1495.7	1621.9	1713.7	1718.3	1728.8	1721.9	1723.3
50°	1034.5	1044.1	1125.8	1288.2	1471.8	1680.6	1848.6	1863.3	1880.3	1891.7	1897.3
52.5°	961.0	967.9	1040.4	1194.6	1369.9	1656.3	1928.5	1953.7	1979.0	2000.5	2015.7
55°	933.9	941.7	998.6	1126.7	1288.2	1554.4	1965.6	2002.8	2038.6	2074.0	2102.9
57.5°	948.2	955.5	996.4	1094.6	1239.6	1447.0	1976.2	2034.0	2092.8	2150.1	2207.0
60°	1000.5	1008.3	1043.2	1124.4	1226.8	1385.1	1934.9	2030.8	2128.6	2228.6	2322.7
62.5°	979.8	983.0	1034.5	1176.7	1318.5	1332.3	1784.8	1918.8	2068.0	2222.2	2374.1
63°	960.1	963.8	1016.1	1162.5	1346.5	1324.5	1738.5	1879.8	2037.2	2203.4	2368.6
65°	870.6	871.1	911.0	1026.7	1315.3	1338.3	1532.0	1666.9	1847.7	2046.9	2255.7
67.5°	649.9	646.7	685.2	773.3	1032.6	1338.7	1314.9	1390.6	1516.3	1693.0	1880.3
70°	230.4	225.4	287.8	409.8	643.4	1095.0	1129.9	1135.0	1169.8	1265.3	1382.8
72.5°	74.8	76.2	91.8	150.1	296.5	737.1	1023.0	1007.4	998.2	997.7	1013.3
75°	29.8	30.3	36.7	66.6	133.1	355.2	895.9	904.6	907.8	912.4	917.4
77.5°	14.2	15.6	20.7	37.2	66.1	175.8	641.1	715.0	757.2	789.8	809.6
80°	5.0	6.0	11.5	22.9	30.7	80.8	337.8	407.5	469.5	549.4	618.2
82.5°	0.0	0.0	2.3	16.1	17.0	32.6	138.6	162.5	185.9	240.9	309.3
85°	0.0	0.0	0.0	4.6	5.0	5.5	46.8	56.5	63.3	73.9	85.4
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.4	1.4	2.8	6.9	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



REPORT NUMBER: P164910

CATALOG NUMBER: VTS-F02-LED-E1-SL2-HSS-8030

CANDELA DISTRIBUTION (continued):

	60°	61°	62°	64°	65°	66°	67°	68°	69°	70°	71°
0°	96.8	96.8	96.8	96.8	96.8	96.8	96.8	96.8	96.8	96.8	96.8
2.5°	112.9	112.5	112.5	111.5	111.1	110.1	109.7	108.3	107.9	107.9	107.9
5°	133.6	131.7	130.8	128.5	127.1	126.7	124.4	123.5	122.1	122.5	120.2
7.5°	156.5	153.3	151.9	148.7	147.8	144.6	143.6	141.4	140.0	137.2	136.3
10°	181.7	177.6	175.3	170.3	168.9	166.6	163.8	161.1	158.8	156.0	154.7
12.5°	210.7	207.0	205.1	198.3	195.1	191.8	188.2	184.5	180.8	178.5	175.3
15°	244.6	238.6	236.8	230.4	224.9	220.8	215.7	211.1	208.4	203.8	200.5
17.5°	278.1	272.1	270.8	261.1	255.2	252.4	246.9	240.9	235.9	231.3	226.2
20°	311.6	307.5	303.8	294.6	288.2	283.6	276.3	270.3	266.2	259.8	253.3
22.5°	345.1	341.0	338.3	328.6	322.6	316.2	309.8	303.4	297.4	289.6	282.3
25°	379.6	376.8	375.4	366.7	361.2	355.2	348.8	341.5	334.1	325.4	317.6
27.5°	415.3	416.3	413.5	411.7	405.7	401.6	391.5	386.4	380.9	370.4	360.7
30°	460.8	463.5	462.6	464.0	460.3	457.6	449.8	443.3	436.9	426.8	415.8
32.5°	518.1	521.8	523.6	528.7	526.9	526.0	523.6	514.5	509.9	492.5	487.9
35°	606.7	604.9	612.7	616.8	615.0	614.1	611.3	606.3	600.8	588.4	576.9
37.5°	721.9	723.7	726.5	718.3	712.7	712.3	704.0	699.0	691.2	677.4	663.6
40°	933.0	921.6	908.7	873.8	858.7	850.0	825.6	818.7	805.4	786.6	772.4
42.5°	1207.5	1196.0	1157.4	1099.2	1068.0	1024.8	1005.1	980.8	961.9	931.2	914.7
45°	1480.1	1447.0	1442.4	1374.5	1336.0	1279.1	1243.7	1202.9	1160.2	1119.8	1090.4
47.5°	1710.0	1702.7	1680.2	1638.9	1603.1	1555.3	1509.9	1447.0	1403.0	1345.6	1292.8
50°	1894.0	1893.6	1885.3	1861.5	1831.6	1793.1	1753.2	1699.9	1649.9	1579.7	1523.2
52.5°	2031.7	2039.1	2041.8	2034.5	2023.0	1989.0	1968.9	1924.3	1882.1	1822.4	1761.4
55°	2132.7	2159.8	2173.5	2189.1	2185.9	2174.0	2173.1	2144.2	2124.9	2077.6	2034.5
57.5°	2257.5	2302.0	2344.7	2420.5	2423.2	2449.8	2463.6	2477.4	2481.0	2462.2	2448.0
60°	2416.3	2507.2	2588.0	2746.3	2787.6	2852.8	2895.0	2940.9	2979.9	2983.1	2982.2
62.5°	2528.3	2668.3	2798.6	3033.6	3113.9	3189.2	3245.6	3290.2	3317.2	3344.7	3357.6
63°	2531.5	2684.8	2823.4	3065.7	3150.2	3221.8	3275.5	3316.8	3345.2	3361.7	3370.0
65°	2454.0	2639.8	2805.0	3046.4	3125.8	3197.9	3225.9	3253.0	3266.7	3273.2	3248.8
67.5°	2079.9	2261.7	2454.4	2724.3	2792.2	2878.5	2901.4	2915.2	2921.6	2920.2	2899.6
70°	1555.3	1707.7	1922.0	2230.4	2320.4	2404.9	2457.2	2479.7	2487.0	2484.7	2454.0
72.5°	1085.8	1175.3	1352.0	1695.3	1817.9	1926.2	1990.9	2024.4	2031.3	2017.5	1989.0
75°	911.9	916.5	956.4	1144.1	1258.9	1374.5	1447.5	1468.6	1454.8	1413.1	1340.6
77.5°	814.1	824.3	824.3	852.2	874.7	906.9	913.8	862.3	802.7	725.6	663.2
80°	682.9	718.3	743.0	763.7	766.0	759.6	742.6	713.7	667.8	609.0	543.8
82.5°	414.9	484.6	513.1	619.6	671.9	707.2	704.5	665.9	631.0	570.0	514.5
85°	104.6	112.9	122.5	159.2	178.5	218.0	242.8	254.3	258.4	237.3	214.8
87.5°	10.1	6.9	11.5	8.7	12.4	9.2	12.4	11.5	14.2	15.1	16.5
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: P164910

CATALOG NUMBER: VTS-F02-LED-E1-SL2-HSS-8030

CANDELA DISTRIBUTION (continued):

	72°	73°	74°	75°	76°	77°	78°	79°	80°	81°	82°
0°	96.8	96.8	96.8	96.8	96.8	96.8	96.8	96.8	96.8	96.8	96.8
2.5°	106.9	106.5	106.0	105.6	105.1	104.6	103.7	103.7	102.8	102.3	101.9
5°	118.9	117.9	117.5	116.6	115.2	114.3	112.9	111.1	109.7	109.2	108.3
7.5°	134.0	131.7	130.8	129.4	127.6	124.8	123.0	121.6	119.3	117.9	115.2
10°	151.0	148.7	146.0	143.2	140.4	137.2	134.9	133.1	129.4	127.6	124.4
12.5°	172.6	168.4	165.2	161.6	157.9	154.2	151.4	146.0	142.7	138.6	135.8
15°	194.6	190.9	187.3	182.7	177.1	171.2	168.4	163.4	159.2	152.8	149.2
17.5°	221.2	214.3	208.8	203.3	198.3	192.7	187.3	179.5	173.5	168.0	160.6
20°	247.4	239.1	233.1	225.8	218.5	209.7	203.3	197.8	189.5	182.2	174.4
22.5°	275.3	267.1	257.5	250.1	240.0	233.1	224.4	215.2	207.0	197.3	187.7
25°	309.3	300.6	289.6	279.9	268.5	258.9	248.3	237.7	227.6	216.6	204.2
27.5°	351.1	341.9	330.0	318.5	303.4	291.4	281.3	267.1	254.3	240.5	226.2
30°	403.9	393.8	379.1	362.6	347.4	334.1	319.9	301.1	286.8	270.3	252.0
32.5°	472.7	460.8	441.0	425.4	406.6	389.2	369.4	350.6	330.4	308.9	287.8
35°	559.5	548.4	525.5	502.5	481.9	461.2	436.5	414.9	386.4	360.3	333.2
37.5°	649.4	629.7	608.6	583.8	558.1	533.3	503.0	473.2	440.6	412.1	378.2
40°	752.2	728.3	710.9	684.3	648.0	612.7	584.7	547.5	506.7	468.6	428.7
42.5°	893.1	866.5	835.3	794.9	768.7	727.4	691.2	647.1	593.4	550.7	502.5
45°	1056.0	1019.8	989.5	950.5	918.8	867.4	825.2	766.4	712.7	656.7	598.0
47.5°	1241.9	1196.9	1152.8	1114.3	1063.8	1013.3	959.7	897.2	828.4	766.9	697.1
50°	1455.3	1391.5	1330.5	1280.9	1211.6	1153.3	1095.0	1024.8	948.6	877.9	798.5
52.5°	1692.6	1618.7	1537.9	1461.7	1381.4	1306.6	1236.4	1155.6	1070.7	984.4	895.9
55°	1979.0	1923.4	1828.4	1731.6	1624.2	1524.2	1433.7	1333.7	1230.4	1117.1	1023.9
57.5°	2427.3	2400.3	2320.9	2224.0	2084.0	1962.4	1809.1	1686.6	1537.0	1381.0	1260.7
60°	3035.0	3001.5	2956.9	2878.5	2767.4	2602.2	2433.3	2242.8	2015.2	1799.1	1593.9
62.5°	3359.0	3347.0	3310.8	3256.6	3152.9	3022.6	2852.3	2643.0	2386.0	2123.5	1861.9
63°	3368.6	3353.5	3322.3	3267.2	3175.9	3049.7	2882.6	2679.3	2427.8	2160.2	1893.1
65°	3238.3	3232.3	3200.6	3140.5	3078.1	2981.7	2852.3	2677.4	2466.3	2213.5	1947.7
67.5°	2872.1	2854.1	2805.5	2787.1	2743.5	2676.5	2577.9	2457.6	2306.6	2107.9	1878.4
70°	2429.2	2402.5	2341.5	2308.9	2255.7	2213.5	2153.4	2067.5	1974.4	1835.8	1664.6
72.5°	1959.7	1904.6	1848.6	1763.7	1689.4	1614.1	1547.5	1487.0	1384.6	1328.6	1198.7
75°	1272.6	1172.6	1076.7	948.2	832.5	730.2	630.6	580.1	475.0	432.3	371.3
77.5°	604.0	548.0	472.7	414.4	340.1	277.7	226.7	170.3	133.6	104.6	79.8
80°	487.4	440.1	394.7	341.9	285.9	228.1	174.9	130.8	92.7	64.2	45.4
82.5°	434.6	383.2	327.2	291.0	252.9	207.0	169.8	138.6	102.3	74.8	50.9
85°	168.9	142.3	109.7	89.5	69.8	57.4	51.9	35.8	28.0	22.0	17.0
87.5°	14.7	11.9	9.6	6.4	6.9	3.7	4.1	2.8	2.3	2.3	1.8
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: P164910

CATALOG NUMBER: VTS-F02-LED-E1-SL2-HSS-8030

CANDELA DISTRIBUTION (continued):

	83°	84°	85°	86°	87°	88°	89°	90°	95°	105°	115°
0°	96.8	96.8	96.8	96.8	96.8	96.8	96.8	96.8	96.8	96.8	96.8
2.5°	101.4	101.0	100.5	99.6	99.6	98.7	98.2	97.8	95.5	90.4	86.3
5°	106.5	105.6	104.6	103.3	102.3	101.0	100.1	98.7	93.6	84.0	75.7
7.5°	113.8	112.0	110.6	107.9	106.5	104.6	103.3	101.0	92.7	78.0	66.6
10°	122.5	119.3	117.0	113.8	111.1	108.8	106.5	103.3	91.8	71.6	58.3
12.5°	133.1	129.4	124.8	121.1	117.5	114.3	111.1	106.9	90.4	66.1	51.9
15°	143.6	138.1	134.9	129.9	124.8	120.2	115.7	112.0	90.9	60.1	46.3
17.5°	155.6	150.1	143.2	137.7	132.2	126.2	120.7	113.3	88.6	55.5	42.2
20°	167.0	159.2	152.8	146.0	138.1	130.8	123.9	117.5	86.7	50.9	38.5
22.5°	179.5	170.3	162.0	153.3	143.6	135.4	127.1	118.9	83.5	46.8	35.3
25°	194.6	184.0	172.1	161.6	151.4	141.4	130.8	120.7	80.3	43.1	33.1
27.5°	213.0	199.2	187.3	173.9	159.7	146.9	135.4	124.4	77.1	40.4	30.7
30°	236.4	220.3	203.3	186.3	171.2	156.5	140.4	126.7	73.9	37.6	28.5
32.5°	267.6	247.4	226.7	207.0	186.8	168.0	151.0	133.1	72.0	35.3	26.2
35°	308.9	282.7	257.5	232.7	208.4	185.4	163.4	143.2	72.0	32.6	23.4
37.5°	347.9	317.6	285.5	254.7	225.8	199.2	173.0	148.7	68.4	30.3	21.1
40°	390.1	353.8	316.2	279.9	245.1	212.0	182.2	154.2	65.2	27.5	18.8
42.5°	454.8	408.9	359.8	317.6	275.8	235.0	197.8	164.8	61.0	24.8	16.5
45°	539.7	481.4	423.6	372.2	319.0	268.9	224.9	184.0	60.1	22.5	14.2
47.5°	630.6	561.7	493.8	428.2	365.8	307.5	254.7	205.6	60.1	20.2	12.4
50°	721.0	634.7	562.2	486.0	415.8	346.9	284.1	228.1	60.6	18.4	10.1
52.5°	802.7	710.4	629.2	541.1	463.5	383.7	315.3	250.1	59.7	16.1	8.2
55°	916.0	807.7	713.7	616.4	525.5	435.5	358.0	283.2	60.1	14.2	6.9
57.5°	1124.9	997.7	884.4	756.8	652.1	536.0	442.0	351.1	65.6	11.9	5.0
60°	1424.5	1259.3	1100.1	944.5	811.4	673.3	551.2	444.3	77.1	9.6	3.7
62.5°	1626.0	1409.9	1219.9	1048.2	893.5	749.0	615.9	494.3	84.9	7.8	2.3
63°	1646.7	1423.2	1232.2	1055.1	897.2	752.7	618.6	497.9	85.4	7.3	2.3
65°	1685.7	1446.1	1239.1	1056.5	893.5	747.6	616.8	497.5	86.3	6.0	1.8
67.5°	1641.2	1410.8	1199.2	1017.0	861.4	717.8	593.9	479.1	85.8	4.1	1.4
70°	1467.7	1276.8	1090.9	921.1	779.7	649.9	540.6	436.9	78.9	2.8	0.9
72.5°	1077.6	947.7	803.6	681.1	587.4	487.9	416.3	328.1	61.0	1.8	0.4
75°	319.4	291.0	244.6	215.7	190.5	157.4	140.0	109.2	31.2	0.9	0.0
77.5°	63.8	57.8	51.9	47.3	44.5	38.1	36.3	29.8	12.8	0.4	0.0
80°	33.5	27.5	23.4	20.7	17.9	14.7	12.4	10.1	2.3	0.0	0.0
82.5°	32.1	21.6	15.6	12.8	11.0	8.7	6.9	5.0	1.4	0.0	0.0
85°	11.9	9.2	6.9	5.5	4.6	4.1	3.2	2.8	0.0	0.0	0.0
87.5°	1.8	1.4	1.4	0.9	0.9	0.4	0.4	0.4	0.0	0.0	0.0
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: P164910

CATALOG NUMBER: VTS-F02-LED-E1-SL2-HSS-8030

CANDELA DISTRIBUTION (continued):

	125°	135°	145°	155°	165°	175°	180°
0°	96.8	96.8	96.8	96.8	96.8	96.8	96.8
2.5°	82.2	78.5	76.6	74.4	74.4	73.9	74.8
5°	68.4	63.3	59.7	56.9	57.4	56.0	56.5
7.5°	57.8	52.8	49.6	47.7	47.3	46.8	46.8
10°	50.0	45.4	42.7	41.3	40.9	40.9	40.9
12.5°	44.5	39.9	37.6	36.7	36.7	36.3	36.3
15°	39.9	36.3	34.0	33.1	33.1	32.6	33.1
17.5°	36.3	32.6	30.7	29.8	29.8	29.4	29.4
20°	33.1	29.8	28.0	26.6	26.6	26.2	26.6
22.5°	30.3	27.1	24.8	23.9	23.4	22.9	23.4
25°	27.5	24.3	22.0	20.7	20.2	20.2	19.7
27.5°	25.2	22.0	19.3	17.9	17.4	17.4	17.0
30°	22.9	19.3	16.5	15.1	14.7	14.7	14.7
32.5°	20.7	16.5	14.2	12.8	12.4	12.4	12.4
35°	18.4	14.2	11.9	10.6	10.1	10.1	10.1
37.5°	15.6	11.9	9.2	8.2	7.8	7.3	7.3
40°	13.3	9.2	6.9	6.0	5.0	5.0	5.0
42.5°	11.0	7.3	5.0	3.7	3.2	2.8	3.2
45°	9.2	5.5	3.2	1.8	1.4	1.4	1.4
47.5°	7.3	3.7	1.4	0.4	0.4	0.4	0.4
50°	5.5	2.3	0.4	0.0	0.0	0.4	0.4
52.5°	4.1	1.4	0.0	0.0	0.0	0.0	0.0
55°	2.3	0.4	0.0	0.0	0.0	0.0	0.0
57.5°	1.4	0.0	0.0	0.0	0.0	0.0	0.0
60°	0.9	0.0	0.0	0.0	0.0	0.0	0.0
62.5°	0.4	0.0	0.0	0.0	0.0	0.0	0.0
63°	0.4	0.0	0.0	0.0	0.0	0.0	0.0
65°	0.4	0.0	0.0	0.0	0.0	0.0	0.0
67.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
72.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)