

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: P158200

Luminaire Tested: **VST-E02-LED-E-U-SL2**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P158200
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33712)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: VST-E02-LED-E-U-SL2
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(2) LIGHTBARS WITH AccuLED OPTICS - TYPE 2 W/ SPILL LIGHT CONTROL
Light Source: (42) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6017.5 lumens
Efficiency: N/A
Efficacy: 115.5 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 - G2

Input Watts (W): 52.1
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

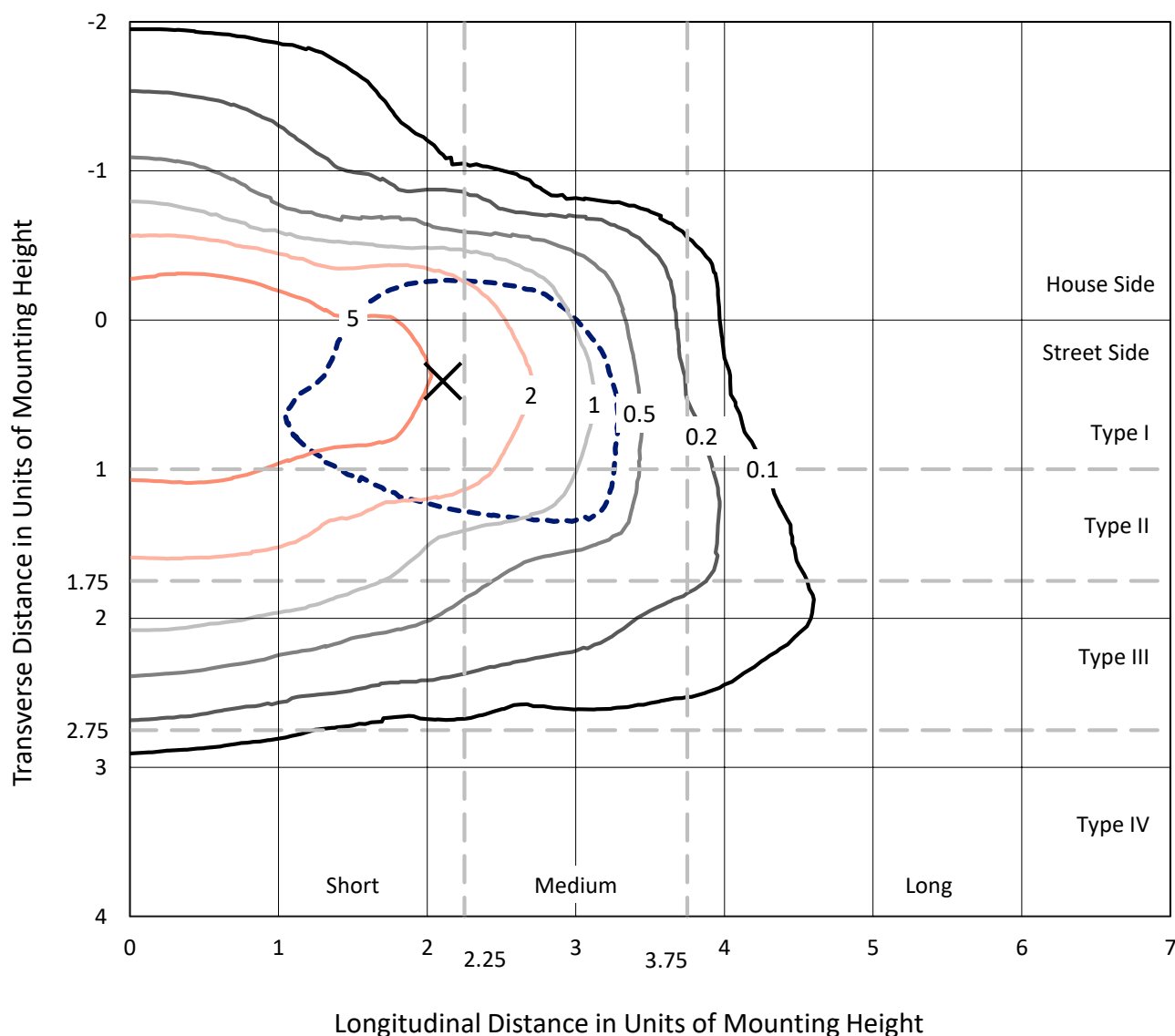


REPORT NUMBER: P158200

CATALOG NUMBER: VST-E02-LED-E-U-SL2

Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

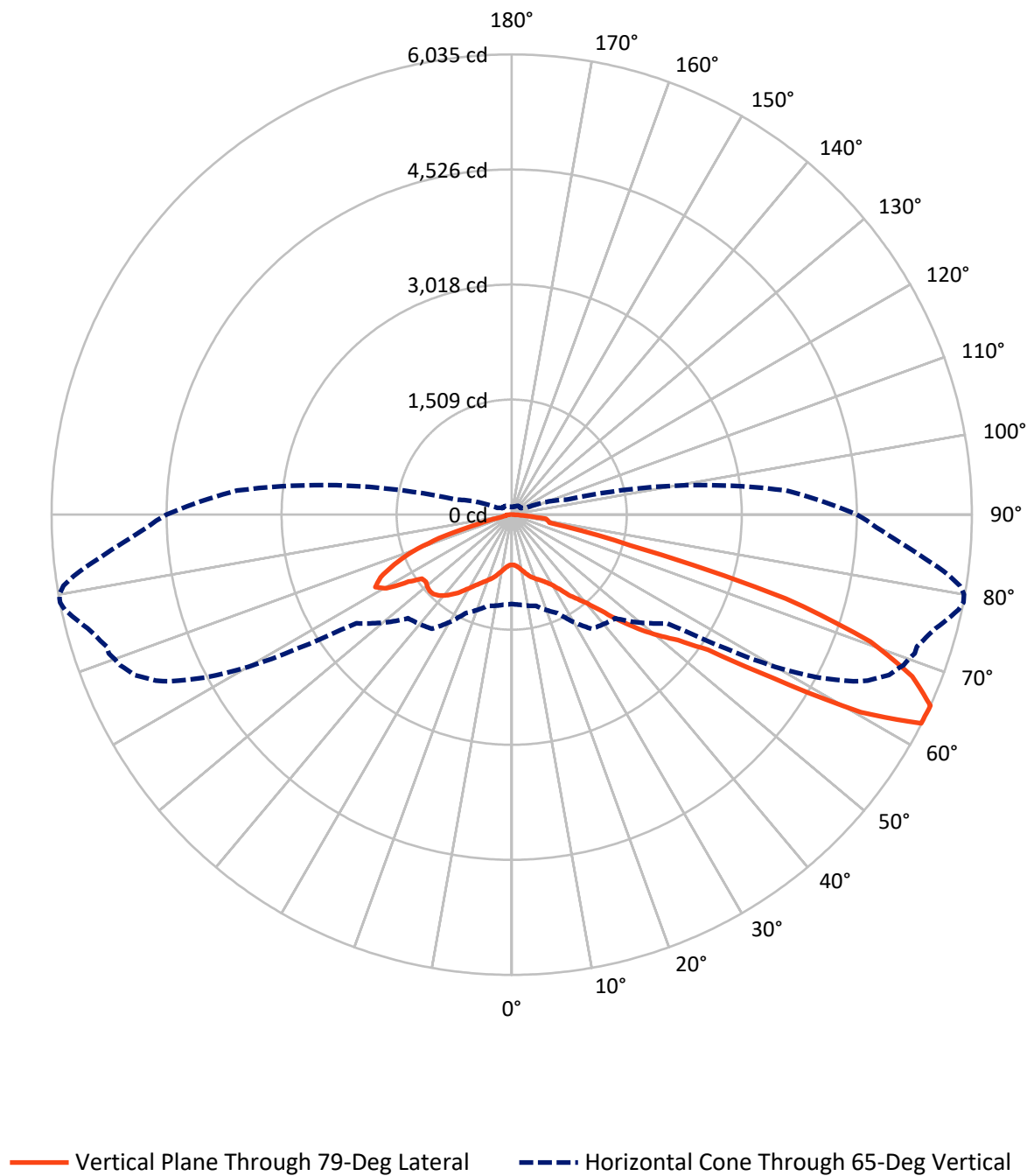


Based on 10 foot mounting height. Maximum calculated value = 8.5 fc
 Type II - Short - Non-Cutoff

REPORT NUMBER: P158200

CATALOG NUMBER: VST-E02-LED-E-U-SL2

Luminous Intensity Polar Plot



REPORT NUMBER: P158200

CATALOG NUMBER: VST-E02-LED-E-U-SL2

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1382.7	0.0	1382.7
	% Fixture	23.0	0.0	23.0
Street Side	Lumens	4634.8	0.0	4634.8
	% Fixture	77.0	0.0	77.0
Total	Lumens	6017.5	0.0	6017.5
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	65.1	1.1
10°-20°	211.6	3.5
20°-30°	364.7	6.1
30°-40°	597.4	9.9
40°-50°	1000.4	16.6
50°-60°	1353.2	22.5
60°-70°	1666.5	27.7
70°-80°	645.1	10.7
80°-90°	113.4	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°	6017.5	100.0
0°-180°	6017.5	100.0

Coefficient of Utilization



REPORT NUMBER: P158200

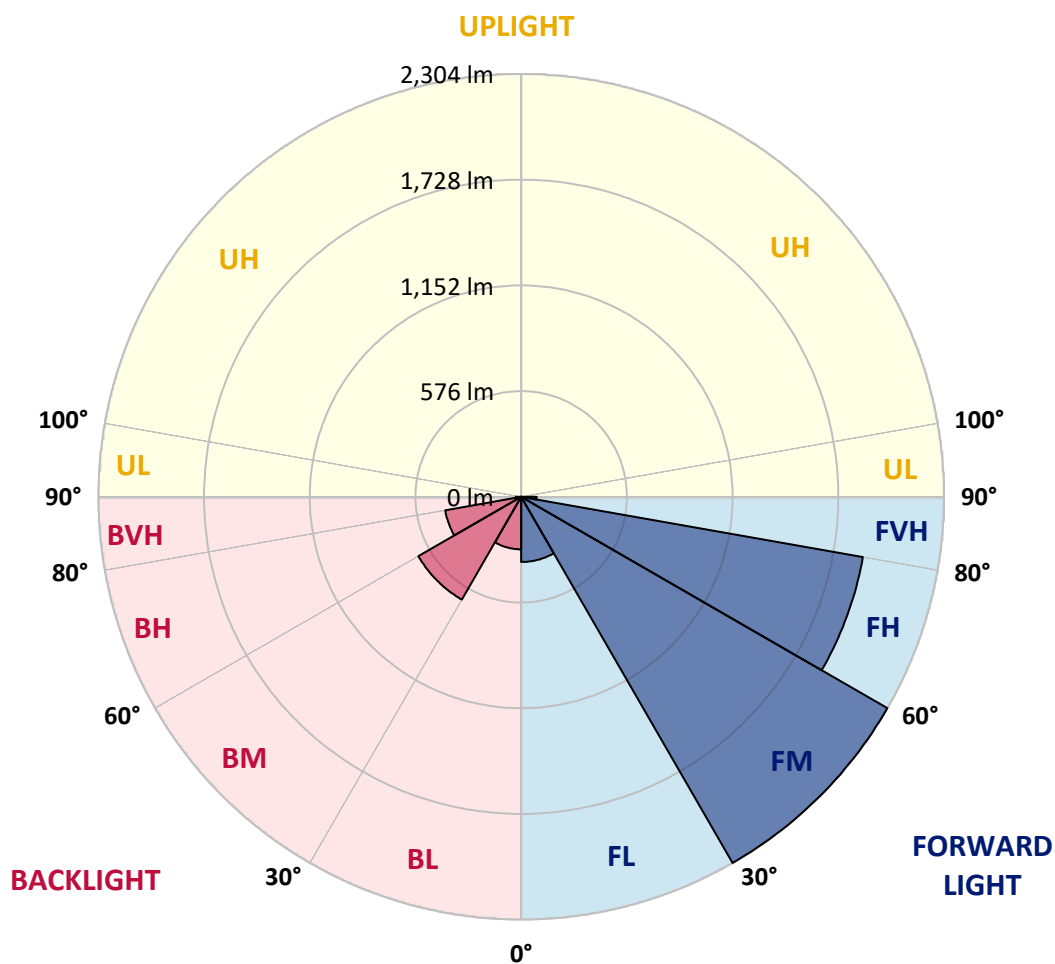
CATALOG NUMBER: VST-E02-LED-E-U-SL2

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	355.3	5.9			
FM	(30°-60°)	2304.5	38.3			
FH	(60°-80°)	1890.9	31.4			G2/5000
FVH	(80°-90°)	84.2	1.4			G1/100
BL	(0°-30°)	286.2	4.8	B1/500		
BM	(30°-60°)	646.6	10.7	B1/1000		
BH	(60°-80°)	420.7	7.0	B1/500		G1/500
BVH	(80°-90°)	29.3	0.5			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G2

Type II Short





REPORT NUMBER: P158200

CATALOG NUMBER: VST-E02-LED-E-U-SL2

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	56°	57°	58°	59°
0°	658.4	658.4	658.4	658.4	658.4	658.4	658.4	658.4	658.4	658.4	658.4
2.5°	659.6	657.6	659.6	661.2	662.4	664.0	663.6	663.2	662.8	663.2	663.2
5°	665.2	664.8	666.8	668.4	671.2	673.2	675.6	675.6	675.6	675.2	676.0
7.5°	683.2	682.8	684.8	686.4	688.8	692.8	696.0	697.6	697.2	697.2	697.2
10°	712.8	711.2	711.2	711.2	714.4	717.2	724.4	725.2	726.8	726.0	726.4
12.5°	741.6	742.0	740.8	739.6	740.0	745.6	756.0	758.0	758.4	759.6	760.4
15°	767.6	767.2	764.4	761.6	765.2	774.8	788.4	792.0	792.0	794.4	796.0
17.5°	791.6	790.8	785.6	780.8	784.4	800.8	822.0	824.4	828.0	829.2	830.8
20°	820.0	818.4	812.4	799.6	799.6	822.0	850.0	852.4	855.6	856.4	859.2
22.5°	859.6	855.6	842.8	819.6	813.2	839.2	873.6	874.8	877.2	880.4	882.8
25°	904.4	905.2	884.4	844.0	830.0	857.2	896.4	898.4	902.8	905.2	908.0
27.5°	950.8	952.0	928.8	878.4	854.8	882.0	927.2	929.6	934.8	937.6	942.0
30°	1003.6	1005.2	982.8	932.0	896.0	918.4	972.8	979.2	983.6	987.2	994.4
32.5°	1130.4	1120.8	1105.2	1051.2	994.4	992.8	1046.4	1053.6	1059.6	1067.2	1074.0
35°	1290.0	1296.0	1304.0	1267.6	1217.6	1181.2	1185.6	1181.6	1187.2	1198.4	1205.2
37.5°	1416.4	1429.6	1464.4	1488.0	1486.0	1478.8	1411.6	1411.6	1415.2	1409.2	1408.4
40°	1515.6	1524.0	1595.2	1686.8	1764.0	1802.0	1748.8	1741.2	1745.2	1714.4	1715.6
42.5°	1566.8	1579.2	1681.6	1842.4	1995.6	2117.6	2101.2	2096.0	2084.0	2076.4	2071.6
45°	1592.8	1607.6	1729.6	1950.4	2173.6	2362.0	2446.8	2446.0	2435.2	2426.4	2422.4
47.5°	1579.6	1592.4	1722.4	1983.2	2267.2	2519.6	2707.2	2718.8	2715.6	2728.4	2733.6
50°	1493.2	1509.6	1640.0	1912.4	2228.0	2581.6	2887.6	2909.2	2938.4	2956.8	2981.2
52.5°	1415.2	1428.8	1546.4	1797.6	2099.2	2531.2	2996.4	3040.8	3080.8	3118.4	3147.6
55°	1333.6	1347.2	1450.4	1678.4	1969.2	2382.4	3046.0	3110.8	3173.2	3236.8	3295.2
57.5°	1302.8	1317.2	1394.0	1586.0	1862.8	2234.8	3070.4	3176.8	3278.4	3386.4	3498.4
60°	1382.8	1395.6	1454.0	1588.4	1781.6	2087.2	3021.2	3188.4	3363.2	3541.2	3713.2
62.5°	1358.4	1365.2	1438.0	1646.4	1885.2	1941.6	2808.0	3028.8	3282.8	3543.6	3807.2
65°	1172.0	1185.2	1240.0	1423.2	1827.2	1922.0	2483.2	2705.2	3004.8	3313.2	3666.4
67.5°	840.8	822.4	864.8	1025.2	1417.6	1918.8	2117.6	2282.0	2516.8	2753.2	3042.8
70°	382.0	373.2	406.4	533.2	855.2	1516.4	1790.4	1846.0	1933.2	2092.4	2288.0
72.5°	150.8	150.4	172.0	220.4	404.4	976.0	1505.6	1537.6	1568.4	1637.6	1722.0
75°	98.8	98.8	105.2	118.8	199.2	471.2	1273.6	1302.8	1350.0	1369.6	1405.6
77.5°	74.4	74.8	77.6	80.8	110.0	248.0	898.8	1002.4	1082.4	1142.0	1185.6
80°	52.8	55.2	60.4	62.4	71.6	141.2	508.0	582.8	673.2	769.6	890.8
82.5°	39.6	42.4	51.2	53.6	56.8	80.4	229.2	260.0	303.6	393.6	566.0
85°	18.4	20.4	35.2	38.4	41.2	46.4	116.4	130.0	147.6	161.6	188.4
87.5°	2.8	2.0	6.0	8.4	13.2	13.6	40.0	47.6	51.6	62.0	64.4
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: P158200

CATALOG NUMBER: VST-E02-LED-E-U-SL2

CANDELA DISTRIBUTION (continued):

	60°	61°	62°	64°	65°	66°	67°	68°	69°	70°	71°
0°	658.4	658.4	658.4	658.4	658.4	658.4	658.4	658.4	658.4	658.4	658.4
2.5°	663.2	663.6	664.0	663.2	663.6	663.6	662.8	662.4	662.4	662.4	662.8
5°	676.0	676.8	676.0	676.4	678.0	677.6	676.8	676.4	678.0	678.4	677.2
7.5°	698.8	699.2	697.6	699.6	700.4	700.8	700.8	701.6	701.6	702.8	701.6
10°	728.0	728.0	730.8	730.4	730.8	731.6	732.0	733.6	734.8	734.8	735.6
12.5°	761.6	762.0	764.8	765.2	766.8	767.2	769.6	768.0	772.0	772.0	773.2
15°	796.4	799.2	799.6	803.6	804.4	804.8	808.0	808.0	810.8	811.2	812.0
17.5°	830.8	833.2	834.8	838.0	840.8	842.0	843.2	845.6	847.6	848.4	850.4
20°	860.4	862.8	864.4	867.6	870.0	872.0	873.2	876.0	878.0	878.8	881.6
22.5°	885.2	886.8	889.6	894.0	894.8	897.2	900.8	902.8	903.6	906.0	909.2
25°	911.6	914.0	915.6	919.6	922.8	926.8	930.0	933.2	934.0	937.2	940.0
27.5°	946.8	949.2	949.6	957.6	960.8	966.4	970.0	974.8	977.2	980.0	985.6
30°	998.8	1004.4	1006.8	1016.0	1017.6	1024.0	1030.4	1032.0	1035.6	1036.0	1045.2
32.5°	1078.4	1086.4	1089.6	1099.2	1101.6	1107.6	1111.2	1119.6	1120.0	1124.0	1126.0
35°	1208.8	1206.8	1219.2	1221.6	1228.8	1234.0	1237.6	1237.6	1245.2	1245.6	1248.0
37.5°	1386.8	1382.8	1386.0	1371.6	1375.2	1368.8	1367.6	1369.2	1366.0	1366.8	1366.4
40°	1671.6	1653.6	1634.8	1590.4	1580.8	1562.4	1548.0	1536.4	1525.2	1513.2	1505.2
42.5°	2028.8	2002.8	1974.8	1903.6	1870.4	1834.8	1800.0	1780.0	1740.0	1715.6	1702.4
45°	2403.2	2372.8	2333.6	2274.4	2227.2	2189.2	2125.6	2095.6	2033.6	2002.8	1961.2
47.5°	2710.0	2710.4	2678.8	2618.8	2568.4	2543.2	2503.6	2445.6	2375.2	2335.6	2261.6
50°	2978.4	2978.0	2976.0	2940.0	2904.8	2877.2	2842.4	2790.0	2732.4	2687.6	2602.8
52.5°	3176.8	3203.2	3214.4	3214.0	3209.6	3196.8	3170.4	3125.2	3066.8	3041.6	2974.0
55°	3340.8	3398.4	3428.4	3494.0	3500.0	3521.2	3498.0	3498.4	3464.0	3466.4	3444.8
57.5°	3589.2	3694.4	3754.8	3900.0	3972.8	4060.8	4045.2	4118.8	4145.6	4179.6	4224.8
60°	3871.2	4067.6	4210.8	4499.6	4617.2	4759.6	4838.0	4921.6	4982.4	5044.8	5090.8
62.5°	4072.8	4330.8	4566.0	4977.6	5130.4	5280.4	5379.2	5480.4	5548.8	5593.6	5626.8
65°	3990.4	4275.6	4553.6	4985.2	5151.6	5260.4	5378.0	5436.4	5504.8	5542.0	5589.6
67.5°	3390.8	3676.8	3974.8	4484.0	4658.0	4808.4	4900.0	4975.6	5030.8	5078.0	5132.8
70°	2521.6	2834.4	3142.4	3700.8	3920.4	4137.6	4245.6	4339.2	4396.8	4444.4	4504.8
72.5°	1814.8	2010.8	2203.2	2828.4	3048.0	3328.8	3440.8	3544.8	3619.6	3617.2	3681.2
75°	1444.8	1524.4	1610.0	1932.8	2090.4	2327.2	2390.0	2448.4	2413.2	2345.6	2341.6
77.5°	1202.8	1235.6	1264.4	1365.6	1388.8	1445.2	1414.0	1381.6	1277.2	1189.2	1142.8
80°	976.4	1041.2	1083.6	1155.6	1185.2	1202.0	1206.4	1195.2	1156.8	1103.6	1018.8
82.5°	726.0	849.2	933.2	1074.8	1126.8	1137.6	1158.4	1145.6	1120.4	1077.2	1016.4
85°	212.8	240.8	276.0	374.4	438.8	493.6	549.6	577.2	594.4	570.4	507.6
87.5°	74.8	84.4	94.4	130.0	138.4	167.2	164.0	193.6	194.8	203.2	194.4
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: P158200

CATALOG NUMBER: VST-E02-LED-E-U-SL2

CANDELA DISTRIBUTION (continued):

	72°	73°	74°	75°	76°	77°	78°	79°	80°	81°	82°
0°	658.4	658.4	658.4	658.4	658.4	658.4	658.4	658.4	658.4	658.4	658.4
2.5°	662.4	662.4	662.4	662.8	662.8	662.8	662.0	661.6	662.0	662.8	662.8
5°	678.0	678.4	679.2	677.6	678.0	679.2	678.4	678.0	678.4	679.2	678.4
7.5°	703.2	703.6	702.8	704.4	704.4	705.2	706.4	705.2	705.6	706.0	706.4
10°	736.0	736.4	737.2	738.4	738.8	739.6	740.4	741.6	741.6	740.8	742.8
12.5°	775.2	774.8	775.6	777.2	778.0	779.2	781.6	781.6	783.2	782.8	784.8
15°	813.6	815.6	816.0	818.8	820.0	822.0	824.8	826.4	826.4	828.8	829.6
17.5°	852.0	853.6	855.2	857.6	859.2	860.4	863.6	865.6	865.2	869.6	869.6
20°	881.6	884.8	886.8	888.4	891.2	893.2	895.6	898.0	899.6	902.4	903.2
22.5°	910.4	912.4	915.2	917.2	920.4	922.8	925.6	927.6	930.4	934.0	935.2
25°	942.4	945.6	948.8	951.6	954.0	956.8	961.6	966.0	970.0	973.2	974.4
27.5°	986.8	990.4	995.2	997.2	1000.8	1003.2	1010.4	1016.0	1018.0	1023.6	1025.2
30°	1046.8	1050.8	1055.6	1058.0	1064.4	1067.6	1075.2	1081.2	1083.2	1090.0	1091.2
32.5°	1133.6	1136.0	1145.6	1145.2	1154.0	1163.2	1167.6	1172.4	1181.2	1184.8	1186.0
35°	1254.0	1259.6	1266.4	1266.0	1277.2	1282.4	1291.2	1296.4	1302.8	1302.4	1309.2
37.5°	1370.4	1372.4	1374.8	1380.0	1388.0	1395.2	1398.4	1403.6	1408.4	1415.6	1424.4
40°	1497.2	1502.0	1502.4	1505.2	1509.2	1518.4	1524.4	1530.0	1546.4	1556.8	1562.0
42.5°	1687.2	1686.0	1678.0	1683.2	1685.6	1699.6	1704.0	1721.2	1739.6	1761.6	1767.6
45°	1931.6	1915.6	1910.8	1908.8	1921.6	1928.8	1946.8	1978.8	1998.0	2018.8	2028.8
47.5°	2232.4	2182.4	2158.8	2153.6	2166.8	2197.6	2203.6	2235.2	2260.4	2275.6	2285.6
50°	2533.6	2494.4	2444.8	2428.0	2424.4	2452.8	2459.6	2486.0	2511.6	2516.0	2510.8
52.5°	2912.0	2848.0	2766.0	2736.4	2712.8	2714.8	2720.4	2731.6	2748.0	2741.2	2727.2
55°	3396.0	3323.2	3282.8	3226.8	3191.2	3184.8	3160.4	3126.8	3125.6	3130.0	3088.0
57.5°	4202.0	4171.6	4188.8	4182.8	4147.6	4168.8	4058.8	4027.6	4002.8	3959.6	3920.8
60°	5131.6	5162.8	5198.4	5280.4	5276.8	5359.2	5282.8	5263.6	5240.4	5107.2	5042.0
62.5°	5684.8	5697.2	5749.6	5826.0	5901.2	5980.0	6015.6	6028.0	5979.6	5870.8	5734.8
65°	5588.4	5643.2	5694.0	5760.0	5837.2	5916.0	5991.2	6035.2	6024.0	5952.0	5802.4
67.5°	5150.4	5208.0	5282.4	5351.6	5434.8	5503.2	5585.6	5666.4	5668.8	5632.8	5528.8
70°	4511.2	4578.0	4654.8	4693.6	4783.6	4845.6	4914.0	4994.0	5020.0	5024.4	4903.2
72.5°	3667.6	3695.6	3733.2	3712.8	3730.8	3770.4	3752.0	3758.4	3659.6	3678.0	3528.4
75°	2233.6	2208.0	2094.4	1990.8	1864.4	1767.2	1790.4	1604.8	1422.0	1412.8	1280.8
77.5°	1132.8	1092.0	1021.6	948.4	841.2	718.4	616.0	505.6	412.4	359.2	308.4
80°	964.8	936.0	897.2	844.0	766.0	675.2	568.4	484.4	406.4	325.2	260.4
82.5°	923.2	835.2	778.8	734.4	650.0	566.0	507.6	450.0	394.8	344.8	273.2
85°	458.0	405.2	342.8	304.0	234.0	183.2	171.6	141.2	131.6	101.6	85.6
87.5°	154.0	126.0	94.0	79.2	63.2	51.6	50.8	45.2	44.8	40.8	37.6
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: P158200

CATALOG NUMBER: VST-E02-LED-E-U-SL2

CANDELA DISTRIBUTION (continued):

	83°	84°	85°	86°	87°	88°	89°	90°	95°	105°	115°
0°	658.4	658.4	658.4	658.4	658.4	658.4	658.4	658.4	658.4	658.4	658.4
2.5°	662.4	663.2	663.2	662.4	662.8	662.0	662.4	662.8	661.6	661.2	660.0
5°	678.8	678.4	678.4	678.8	680.0	680.4	678.4	679.2	679.6	677.6	673.2
7.5°	706.0	706.0	707.2	706.8	709.2	708.4	708.0	708.0	708.0	704.0	696.8
10°	742.8	742.8	744.0	745.6	746.0	745.2	745.2	745.6	747.6	739.6	728.4
12.5°	784.0	786.0	785.6	785.6	790.4	789.2	787.6	789.2	791.2	780.0	764.0
15°	830.0	831.2	832.0	834.8	834.0	836.8	837.6	836.8	838.8	824.4	797.6
17.5°	871.6	874.0	874.8	878.0	878.0	878.4	881.6	880.4	880.8	864.4	826.0
20°	906.0	908.4	909.6	913.2	914.0	915.6	916.8	917.6	919.6	900.0	849.2
22.5°	940.4	942.4	944.4	946.8	950.0	952.0	953.6	954.4	958.0	935.2	871.2
25°	978.8	983.2	985.2	989.2	992.4	995.6	998.0	998.4	1004.4	976.0	889.2
27.5°	1030.0	1036.0	1039.2	1045.6	1048.8	1052.0	1051.2	1056.0	1064.4	1022.8	903.2
30°	1097.2	1104.8	1106.8	1113.2	1118.4	1121.6	1125.2	1129.2	1134.8	1074.8	910.0
32.5°	1190.8	1202.4	1205.2	1208.8	1216.4	1222.0	1224.4	1230.8	1232.4	1124.0	908.0
35°	1319.2	1314.0	1327.6	1330.8	1341.6	1346.0	1348.8	1357.2	1350.8	1177.6	894.8
37.5°	1435.2	1433.6	1446.8	1454.0	1468.0	1464.8	1471.6	1477.2	1454.4	1215.6	870.4
40°	1576.8	1574.8	1593.2	1595.6	1617.2	1612.4	1615.2	1619.6	1568.8	1242.0	826.0
42.5°	1774.4	1775.2	1794.8	1797.2	1800.0	1808.8	1794.4	1795.2	1690.4	1249.2	752.8
45°	2034.8	2048.8	2036.8	2037.2	2036.4	2019.6	2001.6	1980.4	1816.8	1224.4	658.4
47.5°	2287.2	2277.6	2262.4	2248.4	2236.8	2210.4	2184.0	2148.0	1926.0	1165.6	553.2
50°	2503.2	2481.6	2468.0	2429.2	2401.6	2367.2	2330.4	2289.2	2015.6	1080.8	454.8
52.5°	2704.0	2681.6	2630.8	2590.4	2550.8	2505.2	2462.4	2414.0	2094.8	984.0	379.6
55°	3037.6	3018.0	2967.2	2893.2	2844.4	2781.6	2725.2	2659.6	2255.2	905.6	330.0
57.5°	3814.0	3797.2	3690.4	3643.6	3579.2	3421.6	3398.4	3296.0	2685.2	896.4	300.8
60°	4907.2	4835.2	4746.4	4618.4	4467.6	4415.6	4299.6	4163.2	3377.2	921.6	277.2
62.5°	5578.4	5414.4	5284.0	5136.4	4997.6	4878.4	4751.6	4616.8	3731.2	888.4	248.0
65°	5628.8	5436.0	5263.6	5090.4	4934.4	4786.0	4662.8	4528.0	3616.0	763.6	210.0
67.5°	5351.2	5148.0	4960.0	4763.6	4606.0	4472.0	4315.2	4185.6	3291.2	594.4	174.8
70°	4778.8	4600.4	4438.4	4226.8	4096.0	3932.8	3833.2	3671.2	2868.8	405.2	144.4
72.5°	3442.0	3307.6	3254.8	3107.2	2936.0	2840.0	2794.0	2636.8	2120.0	251.6	118.0
75°	1162.8	1196.0	1120.0	1003.6	1060.4	972.8	1008.4	933.6	896.8	144.4	99.2
77.5°	258.0	242.4	224.0	208.0	206.8	194.4	206.0	194.8	208.4	92.0	87.6
80°	203.6	160.8	136.8	124.8	118.4	114.8	112.0	108.8	99.2	78.4	80.8
82.5°	220.0	166.0	121.6	97.2	83.2	78.0	76.8	73.6	72.8	76.0	81.6
85°	70.4	58.8	50.0	47.2	43.6	41.6	40.8	39.6	48.0	82.8	78.4
87.5°	36.8	32.4	28.8	27.6	24.0	22.4	22.0	22.4	33.6	82.8	56.8
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: P158200

CATALOG NUMBER: VST-E02-LED-E-U-SL2

CANDELA DISTRIBUTION (continued):

	125°	135°	145°	155°	165°	175°	180°
0°	658.4	658.4	658.4	658.4	658.4	658.4	658.4
2.5°	658.8	658.4	657.6	657.2	656.8	654.8	656.4
5°	671.2	667.2	663.6	659.2	656.8	654.8	654.8
7.5°	690.0	678.8	669.6	659.6	652.8	647.6	646.8
10°	713.6	692.0	670.8	652.8	640.0	630.4	629.2
12.5°	736.0	703.2	669.6	640.0	620.0	606.4	605.6
15°	756.8	709.2	660.4	616.8	586.8	568.8	566.8
17.5°	773.2	705.6	639.6	584.4	543.6	522.4	521.2
20°	776.8	691.2	610.0	544.4	501.2	478.8	473.6
22.5°	773.6	665.2	573.2	500.4	450.8	428.4	425.6
25°	764.0	633.6	527.6	449.2	403.2	380.4	374.8
27.5°	746.8	596.4	478.4	399.6	354.0	332.0	326.4
30°	721.2	551.6	426.0	353.2	306.0	288.4	282.8
32.5°	685.6	497.2	374.4	305.6	266.4	252.4	250.0
35°	636.4	434.8	320.4	266.4	237.6	229.2	228.0
37.5°	573.6	372.4	275.2	238.4	217.6	212.4	211.6
40°	491.6	308.4	243.2	218.4	203.2	198.8	198.0
42.5°	407.2	260.4	219.6	202.4	190.0	186.0	184.8
45°	333.2	228.0	202.0	189.2	177.6	173.2	172.8
47.5°	278.0	209.2	187.6	177.2	165.6	160.4	160.8
50°	237.6	192.0	175.6	166.8	153.6	148.8	149.2
52.5°	210.0	174.8	164.4	154.4	143.2	138.4	138.4
55°	188.4	160.8	153.6	142.8	134.0	129.6	129.2
57.5°	170.8	149.6	143.2	134.4	125.6	120.4	120.4
60°	160.0	141.6	136.4	128.4	118.0	112.4	112.0
62.5°	153.6	139.2	134.8	123.6	112.0	106.4	105.2
65°	148.8	144.8	139.2	120.8	107.2	101.2	100.0
67.5°	149.2	158.0	150.0	122.4	105.6	96.8	95.2
70°	151.6	168.4	157.6	126.0	112.4	94.8	91.2
72.5°	139.6	152.4	142.0	120.0	109.6	91.2	86.8
75°	116.4	111.2	102.0	97.6	98.4	82.8	81.2
77.5°	94.4	82.8	74.0	77.6	82.8	70.8	69.2
80°	82.0	67.2	62.8	68.8	75.2	60.4	56.4
82.5°	76.8	56.8	54.0	71.6	78.8	52.0	45.6
85°	67.6	46.4	42.4	84.4	78.8	39.2	36.4
87.5°	45.2	27.6	26.4	62.0	54.0	27.2	22.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)