

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: P158068

Luminaire Tested: **VST-E11-LED-E-U-RW-8030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P158068
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33711)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: VST-E11-LED-E-U-RW-8030
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(11) LIGHTBARS WITH AccuLED OPTICS - RECTANGULAR WIDE
Light Source: (231) 3000K CCT, 80 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 28923.2 lumens
Efficiency: N/A
Efficacy: 107.2 lumens/watt
Luminous Opening: Rectangular (W 1.83' x L: 1' x H: 0')
IES Classification: Type I - Medium - Full Cutoff
BUG Rating: B5 - U0 - G5

Input Watts (W): 269.7
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

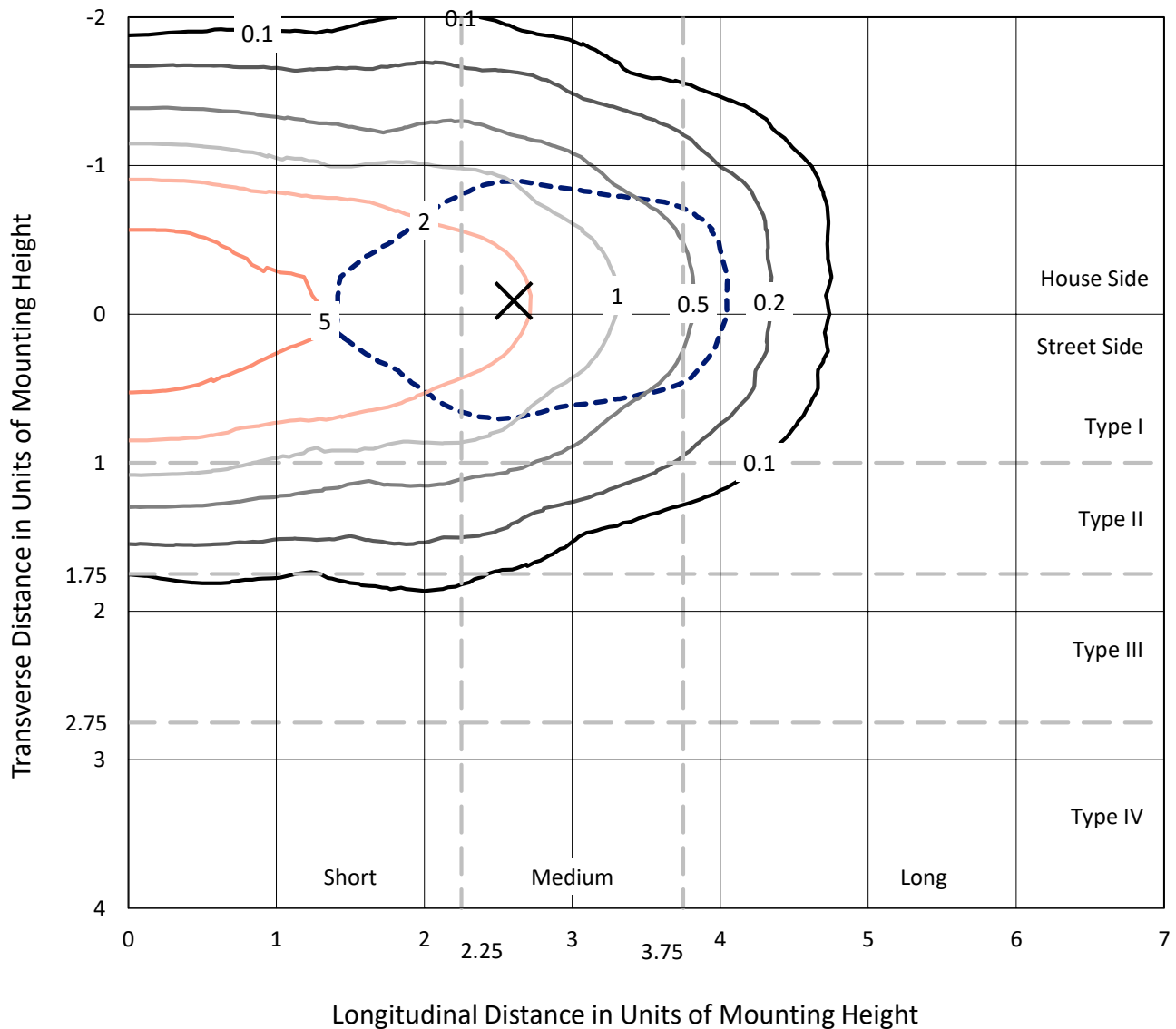


REPORT NUMBER: P158068

CATALOG NUMBER: VST-E11-LED-E-U-RW-8030

Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

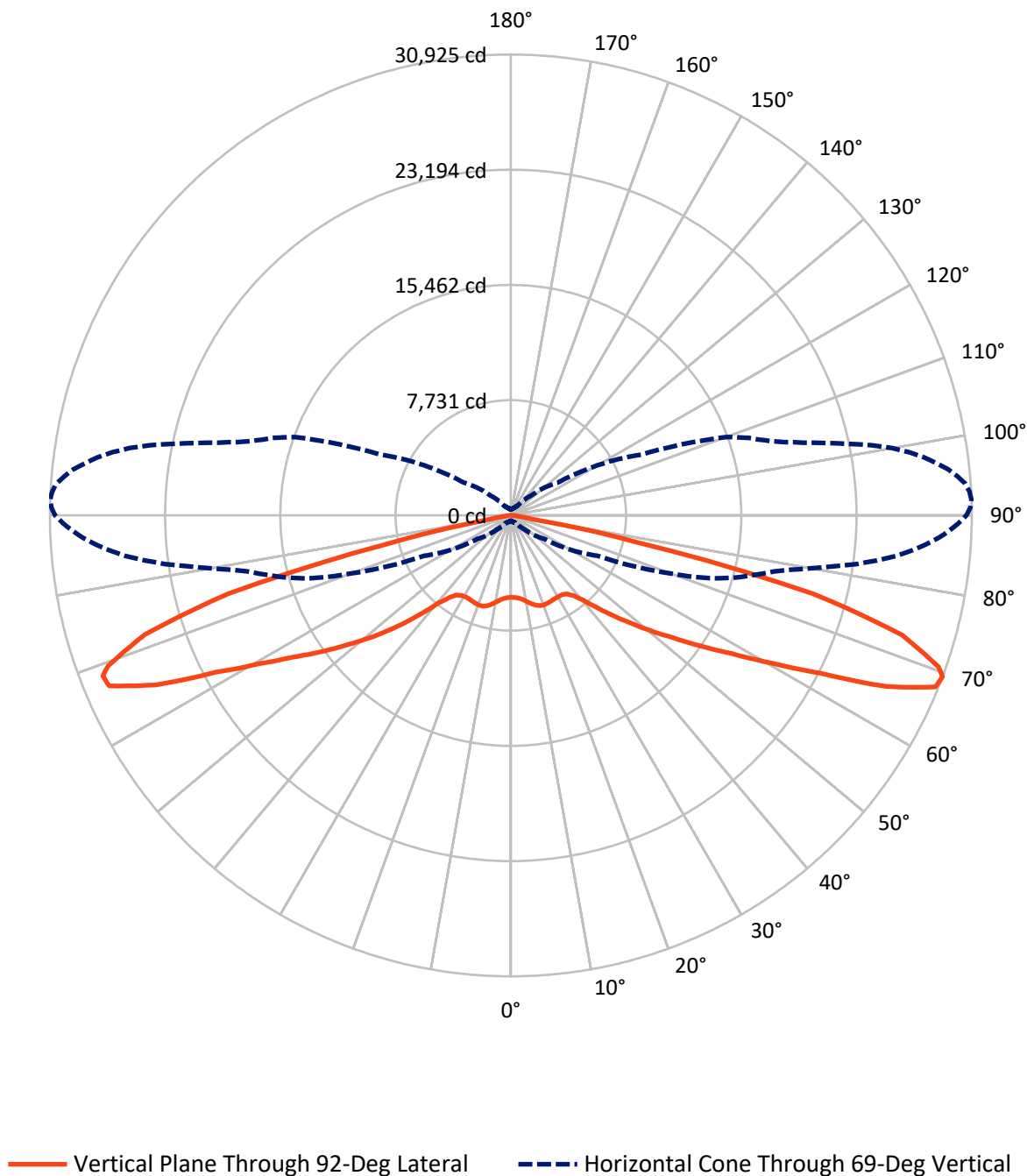


Based on 25 foot mounting height. Maximum calculated value = 9 fc
 Type I - Medium - Full Cutoff

REPORT NUMBER: P158068

CATALOG NUMBER: VST-E11-LED-E-U-RW-8030

Luminous Intensity Polar Plot



REPORT NUMBER: P158068

CATALOG NUMBER: VST-E11-LED-E-U-RW-8030

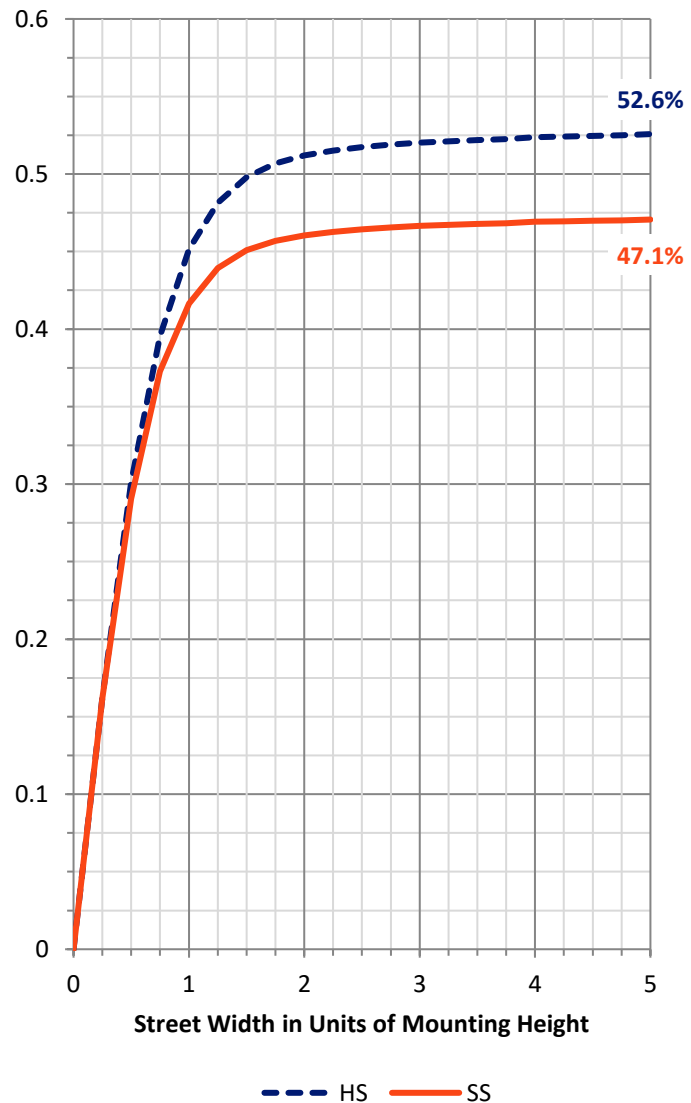
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	15339.5	0.0	15339.5
	% Fixture	53.0	0.0	53.0
Street Side	Lumens	13583.7	0.0	13583.7
	% Fixture	47.0	0.0	47.0
Total	Lumens	28923.2	0.0	28923.2
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	537.6	1.9
10°-20°	1698.3	5.9
20°-30°	2755.4	9.5
30°-40°	3434.0	11.9
40°-50°	4275.6	14.8
50°-60°	5272.9	18.2
60°-70°	6548.6	22.6
70°-80°	4023.7	13.9
80°-90°	377.1	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°-90°	28923.2	100.0
0°-180°	28923.2	100.0

Coefficient of Utilization



REPORT NUMBER: P158068

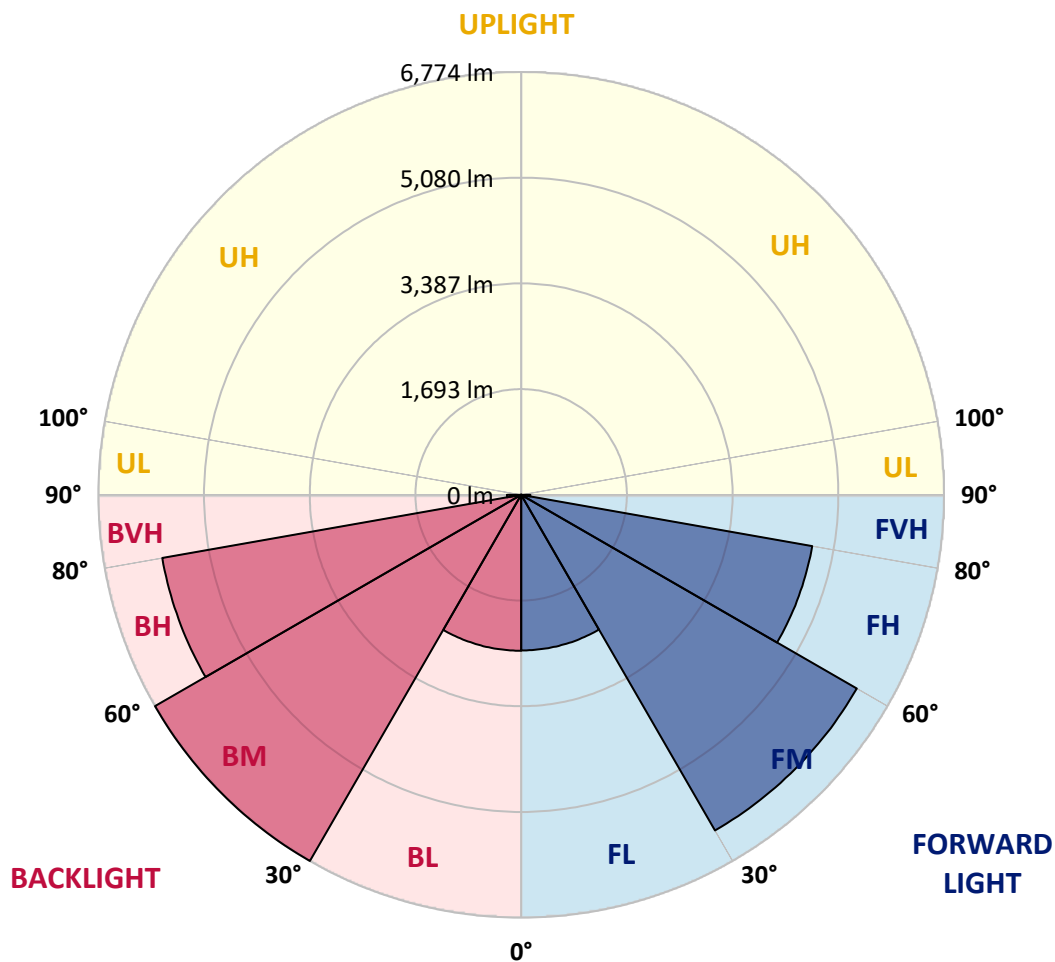
CATALOG NUMBER: VST-E11-LED-E-U-RW-8030

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2493.0	8.6			
FM	(30°-60°)	6208.7	21.5			
FH	(60°-80°)	4734.3	16.4			G2/5000
FVH	(80°-90°)	147.7	0.5			G2/225
BL	(0°-30°)	2498.3	8.6	B3/2500		
BM	(30°-60°)	6773.8	23.4	B4/8500		
BH	(60°-80°)	5838.0	20.2	B5		G5
BVH	(80°-90°)	229.5	0.8			G3/500
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B5-U0-G5

Type I Medium





REPORT NUMBER: P158068

CATALOG NUMBER: VST-E11-LED-E-U-RW-8030

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	70°	71°	72°
0°	5494.2	5494.2	5494.2	5494.2	5494.2	5494.2	5494.2	5494.2	5494.2	5494.2	5494.2
2.5°	5581.5	5566.6	5579.6	5581.5	5579.6	5579.6	5562.9	5559.2	5536.9	5542.5	5540.6
5°	5657.6	5652.0	5661.3	5665.0	5668.7	5661.3	5648.3	5642.8	5627.9	5622.3	5620.5
7.5°	5728.2	5718.9	5733.7	5746.7	5756.0	5757.9	5759.7	5750.4	5750.4	5743.0	5743.0
10°	5787.6	5780.2	5804.3	5821.0	5850.7	5867.4	5886.0	5899.0	5906.4	5908.3	5906.4
12.5°	5813.6	5808.0	5847.0	5897.1	5952.8	5991.8	6038.2	6071.7	6081.0	6079.1	6088.4
15°	5769.0	5772.7	5832.1	5930.6	6049.4	6147.8	6212.8	6240.6	6248.1	6251.8	6253.6
17.5°	5648.3	5655.8	5741.2	5900.8	6108.8	6287.1	6383.6	6383.6	6368.8	6368.8	6366.9
20°	5455.2	5462.6	5574.1	5804.3	6110.7	6383.6	6521.0	6493.2	6437.5	6426.3	6415.2
22.5°	5187.8	5217.6	5340.1	5607.5	6030.8	6411.5	6606.4	6565.6	6478.3	6454.2	6437.5
25°	4885.2	4881.5	5028.2	5329.0	5837.7	6344.6	6630.6	6623.1	6530.3	6504.3	6474.6
27.5°	4539.8	4551.0	4686.5	4991.0	5542.5	6151.5	6589.7	6688.1	6612.0	6586.0	6558.1
30°	4185.2	4196.3	4324.4	4679.1	5206.4	5874.9	6506.2	6751.3	6721.5	6701.1	6682.6
32.5°	3828.7	3832.4	3984.6	4365.3	4922.3	5544.3	6379.9	6808.8	6849.7	6840.4	6833.0
35°	3494.5	3498.2	3663.4	4049.6	4642.0	5262.1	6227.6	6892.4	7024.2	7035.3	7042.8
37.5°	3169.5	3175.1	3344.1	3748.8	4365.3	5048.6	6058.7	7020.5	7269.3	7310.1	7317.6
40°	2846.4	2852.0	3013.6	3442.5	4084.9	4861.1	5928.7	7200.6	7599.8	7655.5	7713.1
42.5°	2538.2	2558.6	2696.0	3106.4	3773.0	4629.0	5873.0	7419.7	7991.6	8078.8	8143.8
45°	2250.4	2252.3	2408.2	2792.6	3403.5	4315.2	5835.9	7668.5	8429.8	8561.6	8650.7
47.5°	1942.2	1964.5	2127.9	2501.1	3058.1	3927.1	5717.0	7960.0	8907.0	9061.1	9241.2
50°	1643.3	1674.8	1832.6	2202.1	2742.5	3526.0	5397.7	8301.7	9443.6	9644.1	9852.1
52.5°	1355.4	1353.6	1520.7	1905.1	2425.0	3186.2	4879.6	8660.0	10063.7	10279.1	10503.8
55°	1024.9	1024.9	1190.2	1541.1	2081.5	2883.6	4324.4	8882.8	10639.3	10899.3	11144.4
57.5°	703.7	722.3	878.3	1180.9	1723.1	2606.9	3899.2	8754.7	11079.4	11402.5	11694.0
60°	521.8	540.3	655.4	848.5	1348.0	2280.1	3579.9	8151.3	11344.9	11773.8	12152.6
62.5°	451.2	464.2	573.7	679.6	971.1	1932.9	3297.6	7384.4	11727.4	12314.2	12841.5
65°	402.9	415.9	525.5	586.7	759.4	1554.1	3139.8	6946.2	12184.2	13081.0	13846.0
67.5°	373.2	388.1	480.9	525.5	662.9	1405.6	3017.3	6844.1	12180.5	13268.6	14245.2
69°	358.4	369.5	445.6	493.9	640.6	1361.0	2751.7	6400.3	11376.5	12544.4	13524.8
70°	349.1	360.2	425.2	473.5	633.2	1281.2	2506.7	5813.6	10461.1	11636.4	12631.7
72.5°	319.4	330.5	378.8	423.3	527.3	856.0	1747.2	3721.0	7475.4	8314.7	9452.9
75°	282.2	295.2	332.4	369.5	399.2	495.8	1008.2	1931.1	4274.3	4911.2	5925.0
77.5°	230.2	243.2	282.2	341.6	337.9	376.9	655.4	1186.5	2001.6	2482.5	2857.6
80°	189.4	198.7	232.1	345.4	276.7	315.7	531.0	973.0	1409.3	1557.8	1647.0
82.5°	126.3	139.3	180.1	271.1	211.7	224.7	397.4	909.8	1192.1	1307.2	1414.9
85°	59.4	65.0	109.6	144.8	128.1	120.7	226.5	642.4	887.5	941.4	982.2
87.5°	0.0	0.0	5.6	11.1	16.7	16.7	40.8	135.5	248.8	300.8	297.1
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: P158068

CATALOG NUMBER: VST-E11-LED-E-U-RW-8030

CANDELA DISTRIBUTION (continued):

	73°	74°	75°	76°	77°	78°	79°	80°	81°	82°	83°
0°	5494.2	5494.2	5494.2	5494.2	5494.2	5494.2	5494.2	5494.2	5494.2	5494.2	5494.2
2.5°	5533.2	5535.1	5533.2	5533.2	5531.3	5527.6	5527.6	5523.9	5525.8	5523.9	5527.6
5°	5618.6	5618.6	5613.0	5609.3	5614.9	5609.3	5611.2	5601.9	5601.9	5596.3	5588.9
7.5°	5741.2	5741.2	5743.0	5731.9	5739.3	5741.2	5735.6	5731.9	5728.2	5718.9	5720.7
10°	5904.6	5904.6	5910.1	5895.3	5902.7	5906.4	5908.3	5908.3	5904.6	5887.8	5889.7
12.5°	6086.5	6082.8	6084.7	6077.2	6084.7	6088.4	6092.1	6088.4	6088.4	6084.7	6082.8
15°	6251.8	6249.9	6253.6	6248.1	6249.9	6253.6	6264.8	6262.9	6261.1	6249.9	6249.9
17.5°	6365.0	6359.5	6355.8	6353.9	6353.9	6352.0	6353.9	6353.9	6348.3	6346.5	6346.5
20°	6407.7	6392.9	6383.6	6378.0	6370.6	6366.9	6363.2	6365.0	6361.3	6355.8	6357.6
22.5°	6415.2	6394.8	6376.2	6359.5	6344.6	6335.3	6326.0	6322.3	6313.1	6307.5	6307.5
25°	6450.5	6418.9	6389.2	6361.3	6339.0	6318.6	6298.2	6283.3	6272.2	6259.2	6255.5
27.5°	6528.4	6495.0	6459.7	6424.5	6394.8	6353.9	6326.0	6296.3	6270.3	6249.9	6235.1
30°	6649.1	6615.7	6580.4	6539.6	6500.6	6457.9	6411.5	6376.2	6339.0	6298.2	6275.9
32.5°	6808.8	6786.5	6751.3	6712.3	6677.0	6632.4	6576.7	6522.9	6487.6	6439.3	6404.0
35°	7037.2	7011.2	7000.1	6983.3	6948.1	6920.2	6858.9	6808.8	6775.4	6708.5	6682.6
37.5°	7349.1	7347.3	7356.6	7351.0	7356.6	7321.3	7293.4	7291.6	7243.3	7178.3	7115.2
40°	7774.3	7796.6	7846.8	7882.0	7915.5	7919.2	7958.2	7917.3	7922.9	7913.6	7848.6
42.5°	8259.0	8335.1	8394.5	8498.5	8578.3	8652.6	8702.7	8771.4	8823.4	8869.8	8881.0
45°	8799.3	8912.5	9049.9	9142.8	9298.8	9423.2	9594.0	9725.8	9863.2	9998.8	10047.0
47.5°	9386.0	9527.1	9679.4	9852.1	10048.9	10243.9	10507.5	10709.9	10930.9	11114.7	11278.1
50°	10034.0	10180.7	10385.0	10583.6	10854.7	11079.4	11424.8	11690.3	12046.8	12291.9	12503.6
52.5°	10709.9	10893.7	11122.1	11341.2	11617.9	11905.7	12290.0	12681.8	13110.7	13482.1	13790.3
55°	11370.9	11597.4	11816.5	12072.8	12379.2	12713.4	13147.9	13664.0	14198.8	14624.0	15032.5
57.5°	11959.5	12221.3	12479.4	12739.4	13053.2	13441.2	13929.6	14486.6	15099.3	15665.7	16226.4
60°	12505.4	12819.2	13134.9	13459.8	13820.0	14299.1	14885.8	15571.0	16363.8	17138.1	17871.5
62.5°	13368.8	13781.0	14172.8	14592.4	15026.9	15589.5	16282.1	17180.8	18090.6	19058.0	19810.0
65°	14538.6	15117.9	15630.4	16174.4	16737.0	17489.0	18317.1	19392.2	20695.7	21687.2	22894.1
67.5°	15119.8	15882.9	16542.1	17147.4	17843.7	18603.1	19587.2	20859.1	22249.8	23686.9	25033.1
69°	14436.5	15223.7	15953.5	16631.2	17334.9	18072.0	19100.7	20406.0	21876.6	23430.7	24745.3
70°	13550.8	14338.1	15116.0	15888.5	16530.9	17249.5	18281.9	19628.0	21096.7	22712.1	24015.6
72.5°	10381.3	11328.2	12031.9	12756.1	13500.6	14109.7	15301.7	16436.2	17966.2	19605.7	21041.0
75°	6641.7	7512.5	8281.2	8897.7	9625.5	10355.3	11235.4	12496.1	13454.2	14800.4	15964.6
77.5°	3412.8	3670.9	4411.7	4632.7	5137.7	5535.1	6019.7	6335.3	7115.2	7280.4	7967.4
80°	1617.3	1457.6	1372.2	1294.2	1316.5	1307.2	1268.2	1216.2	1281.2	1253.3	1242.2
82.5°	1409.3	1257.0	1002.7	852.3	737.1	625.7	538.5	493.9	499.5	514.3	519.9
85°	987.8	928.4	724.1	549.6	428.9	332.4	267.4	256.2	263.7	284.1	276.7
87.5°	285.9	298.9	263.7	183.8	128.1	92.8	72.4	81.7	78.0	76.1	79.8
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: P158068

CATALOG NUMBER: VST-E11-LED-E-U-RW-8030

CANDELA DISTRIBUTION (continued):

	84°	85°	86°	87°	88°	89°	90°	91°	92°	93°	94°
0°	5494.2	5494.2	5494.2	5494.2	5494.2	5494.2	5494.2	5494.2	5494.2	5494.2	5494.2
2.5°	5527.6	5525.8	5520.2	5514.6	5514.6	5510.9	5514.6	5516.5	5514.6	5514.6	5510.9
5°	5590.8	5592.6	5598.2	5587.1	5585.2	5587.1	5579.6	5577.8	5572.2	5577.8	5570.3
7.5°	5711.5	5717.0	5717.0	5709.6	5707.7	5713.3	5702.2	5698.5	5692.9	5691.0	5689.2
10°	5891.6	5897.1	5887.8	5882.3	5876.7	5884.1	5874.9	5874.9	5869.3	5863.7	5861.9
12.5°	6092.1	6088.4	6084.7	6088.4	6082.8	6082.8	6077.2	6073.5	6071.7	6069.8	6066.1
15°	6248.1	6261.1	6261.1	6264.8	6261.1	6261.1	6253.6	6255.5	6251.8	6249.9	6251.8
17.5°	6348.3	6352.0	6361.3	6366.9	6366.9	6368.8	6365.0	6368.8	6365.0	6365.0	6372.5
20°	6361.3	6365.0	6374.3	6383.6	6389.2	6392.9	6392.9	6398.5	6402.2	6405.9	6415.2
22.5°	6309.3	6314.9	6326.0	6342.8	6352.0	6355.8	6363.2	6372.5	6381.8	6389.2	6402.2
25°	6255.5	6257.3	6268.5	6285.2	6296.3	6305.6	6318.6	6329.8	6342.8	6357.6	6372.5
27.5°	6225.8	6223.9	6233.2	6249.9	6259.2	6272.2	6283.3	6300.1	6314.9	6333.5	6346.5
30°	6251.8	6236.9	6238.8	6246.2	6253.6	6262.9	6275.9	6290.8	6307.5	6324.2	6339.0
32.5°	6366.9	6333.5	6311.2	6305.6	6307.5	6309.3	6316.8	6326.0	6339.0	6352.0	6357.6
35°	6615.7	6558.1	6528.4	6504.3	6483.9	6467.2	6470.9	6469.0	6469.0	6480.2	6467.2
37.5°	7089.2	7016.8	6985.2	6942.5	6918.4	6857.1	6840.4	6836.7	6812.5	6812.5	6784.7
40°	7831.9	7789.2	7765.1	7726.1	7609.1	7623.9	7540.4	7542.2	7473.5	7481.0	7432.7
42.5°	8888.4	8894.0	8864.3	8838.3	8747.3	8706.4	8628.5	8517.1	8429.8	8427.9	8331.4
45°	10110.2	10177.0	10082.3	10115.7	10035.9	9926.3	9835.4	9692.4	9556.8	9514.1	9415.7
47.5°	11387.6	11497.2	11424.8	11437.8	11398.8	11242.8	11120.3	10943.9	10767.5	10648.6	10589.2
50°	12752.4	12824.8	12822.9	12787.6	12769.1	12616.8	12420.0	12286.3	12156.3	11996.7	11944.7
52.5°	13989.0	14157.9	14271.2	14245.2	14191.4	14100.4	13925.9	13810.7	13619.5	13597.2	13619.5
55°	15312.9	15532.0	15647.1	15786.3	15788.2	15771.5	15699.1	15656.4	15478.1	15498.5	15472.5
57.5°	16566.2	16887.4	17063.8	17360.9	17463.0	17598.6	17548.4	17604.1	17496.4	17567.0	17546.6
60°	18265.1	18710.8	19004.1	19410.8	19600.2	19940.0	20006.8	20047.7	20107.1	20251.9	20170.2
62.5°	20402.3	21055.9	21664.9	22218.2	22400.2	22910.8	22994.4	23313.7	23330.4	23428.9	23248.7
65°	23900.5	24697.0	25367.3	26030.2	26412.7	27010.6	27252.0	27872.1	27682.7	27762.6	27378.2
67.5°	26191.7	27118.3	28017.0	28644.5	29279.6	29890.4	30330.5	30731.6	30727.9	30649.9	30308.2
69°	25989.4	27021.7	27907.4	28748.5	29417.0	30044.6	30573.7	30833.7	30924.7	30811.4	30568.2
70°	25289.3	26349.6	27433.9	28126.5	28854.4	29543.2	30089.1	30373.2	30436.3	30356.5	30146.7
72.5°	22054.8	23072.3	24268.1	24897.6	25777.7	26275.3	27027.3	27394.9	27459.9	27357.8	27220.4
75°	17212.4	17396.2	18614.2	19015.3	19654.0	20227.8	20695.7	20576.8	20909.2	20844.2	20792.2
77.5°	8108.6	7618.4	8407.5	8775.1	8582.0	8067.7	8816.0	8275.7	8634.0	9100.1	8981.2
80°	1336.9	1333.2	1368.4	1446.4	1353.6	1437.1	1435.3	1394.4	1398.2	1498.4	1446.4
82.5°	514.3	525.5	531.0	545.9	545.9	547.8	557.0	568.2	558.9	577.5	573.7
85°	278.5	297.1	280.4	267.4	276.7	282.2	289.7	298.9	289.7	317.5	302.7
87.5°	72.4	76.1	66.8	66.8	65.0	59.4	59.4	63.1	68.7	81.7	89.1
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: P158068

CATALOG NUMBER: VST-E11-LED-E-U-RW-8030

CANDELA DISTRIBUTION (continued):

	95°	96°	97°	98°	99°	100°	101°	102°	103°	104°	105°
0°	5494.2	5494.2	5494.2	5494.2	5494.2	5494.2	5494.2	5494.2	5494.2	5494.2	5494.2
2.5°	5503.5	5505.4	5507.2	5501.6	5497.9	5497.9	5496.1	5492.4	5490.5	5490.5	5490.5
5°	5566.6	5570.3	5561.1	5559.2	5555.5	5551.8	5551.8	5548.1	5549.9	5549.9	5540.6
7.5°	5692.9	5687.3	5676.2	5668.7	5676.2	5663.2	5657.6	5661.3	5657.6	5659.5	5655.8
10°	5861.9	5861.9	5848.9	5856.3	5847.0	5832.1	5837.7	5832.1	5828.4	5815.4	5822.9
12.5°	6071.7	6066.1	6058.7	6042.0	6036.4	6034.5	6017.8	6019.7	6014.1	6010.4	6004.8
15°	6255.5	6253.6	6236.9	6227.6	6225.8	6218.4	6210.9	6207.2	6197.9	6196.1	6192.4
17.5°	6378.0	6372.5	6365.0	6355.8	6355.8	6344.6	6340.9	6331.6	6329.8	6324.2	6318.6
20°	6418.9	6420.7	6413.3	6405.9	6402.2	6394.8	6389.2	6381.8	6378.0	6370.6	6365.0
22.5°	6409.6	6409.6	6402.2	6400.3	6392.9	6381.8	6374.3	6365.0	6355.8	6346.5	6335.3
25°	6379.9	6378.0	6372.5	6363.2	6353.9	6337.2	6322.3	6307.5	6294.5	6283.3	6266.6
27.5°	6353.9	6350.2	6339.0	6326.0	6307.5	6288.9	6261.1	6240.6	6223.9	6209.1	6190.5
30°	6344.6	6331.6	6314.9	6294.5	6272.2	6244.4	6214.6	6188.6	6170.1	6155.2	6147.8
32.5°	6355.8	6339.0	6313.1	6287.1	6259.2	6225.8	6196.1	6173.8	6157.1	6153.4	6153.4
35°	6457.9	6430.0	6394.8	6357.6	6322.3	6294.5	6274.1	6272.2	6261.1	6274.1	6294.5
37.5°	6756.8	6732.7	6678.8	6630.6	6606.4	6593.4	6574.9	6578.6	6552.6	6593.4	6626.8
40°	7391.8	7362.1	7299.0	7260.0	7211.7	7165.3	7202.4	7191.3	7209.9	7202.4	7237.7
42.5°	8318.4	8288.7	8188.4	8173.5	8153.1	8134.6	8134.6	8119.7	8112.3	8138.3	8108.6
45°	9445.4	9386.0	9348.9	9393.5	9332.2	9350.7	9415.7	9328.5	9348.9	9228.2	9116.8
47.5°	10615.2	10609.6	10600.4	10654.2	10663.5	10691.3	10726.6	10637.5	10476.0	10385.0	10158.4
50°	11961.4	12018.9	12041.2	12093.2	12115.5	12135.9	12080.2	11948.4	11675.4	11434.1	11166.7
52.5°	13597.2	13496.9	13634.3	13684.5	13662.2	13580.5	13380.0	13218.4	12841.5	12494.3	12080.2
55°	15502.3	15526.4	15429.8	15390.8	15314.7	15088.2	14811.5	14447.6	13970.4	13517.4	12993.7
57.5°	17442.6	17433.3	17282.9	17071.2	16813.1	16540.2	16128.0	15606.2	15049.2	14440.2	13807.0
60°	19802.6	19793.3	19488.8	19126.7	18759.0	18319.0	17672.8	17045.2	16298.8	15498.5	14744.7
62.5°	22903.4	22504.2	22205.2	21664.9	21096.7	20521.1	19646.6	18812.9	17815.8	16805.7	15925.6
65°	26876.9	26219.6	25879.8	25096.2	24216.1	23317.4	22428.0	21332.5	19990.1	18768.3	17693.3
67.5°	29816.2	29214.6	28592.6	27810.9	26845.3	25842.7	24624.6	23245.0	21720.6	20350.3	19178.7
69°	30074.3	29511.7	28765.2	27981.7	27068.1	25978.2	24648.8	23103.9	21559.1	20172.1	19019.0
70°	29682.5	29084.6	28299.2	27484.1	26462.8	25434.2	24041.6	22431.8	20885.1	19494.3	18369.1
72.5°	26759.9	26176.9	25341.3	24366.5	23319.3	22439.2	21117.2	19438.6	17756.4	16471.5	15595.1
75°	20348.5	20220.3	19628.0	19059.8	18235.4	17253.2	16044.4	14915.5	13535.9	12176.8	11359.8
77.5°	8682.3	8977.5	9285.8	9330.3	9360.0	9057.4	8869.8	8585.8	7662.9	7243.3	6810.7
80°	1604.3	1433.4	1530.0	1541.1	1604.3	1637.7	1760.2	2087.0	2124.2	2204.0	2302.4
82.5°	570.0	579.3	594.2	599.7	605.3	627.6	711.1	852.3	980.4	1147.5	1370.3
85°	323.1	328.7	341.6	352.8	360.2	382.5	428.9	512.5	638.7	830.0	1125.2
87.5°	98.4	111.4	118.8	133.7	139.3	143.0	163.4	219.1	282.2	417.8	609.0
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: P158068

CATALOG NUMBER: VST-E11-LED-E-U-RW-8030

CANDELA DISTRIBUTION (continued):

	106°	107°	108°	109°	110°	115°	125°	135°	145°	155°	165°
0°	5494.2	5494.2	5494.2	5494.2	5494.2	5494.2	5494.2	5494.2	5494.2	5494.2	5494.2
2.5°	5490.5	5488.6	5484.9	5481.2	5483.1	5479.4	5468.2	5464.5	5451.5	5442.2	5434.8
5°	5540.6	5538.8	5531.3	5533.2	5531.3	5512.8	5499.8	5477.5	5464.5	5444.1	5436.7
7.5°	5644.6	5642.8	5629.8	5635.3	5631.6	5603.8	5581.5	5546.2	5527.6	5501.6	5481.2
10°	5800.6	5800.6	5785.7	5787.6	5787.6	5750.4	5711.5	5652.0	5609.3	5568.5	5533.2
12.5°	5990.0	5982.5	5980.7	5971.4	5964.0	5923.1	5863.7	5783.9	5704.0	5637.2	5588.9
15°	6181.2	6170.1	6164.5	6153.4	6144.1	6106.9	6027.1	5928.7	5821.0	5713.3	5633.5
17.5°	6305.6	6298.2	6287.1	6283.3	6270.3	6233.2	6177.5	6079.1	5945.4	5795.0	5674.3
20°	6352.0	6339.0	6331.6	6324.2	6316.8	6290.8	6290.8	6227.6	6079.1	5867.4	5683.6
22.5°	6322.3	6314.9	6303.8	6298.2	6290.8	6294.5	6366.9	6357.6	6186.8	5884.1	5616.8
25°	6253.6	6244.4	6235.1	6235.1	6233.2	6272.2	6446.7	6470.9	6218.4	5802.4	5470.1
27.5°	6183.1	6170.1	6173.8	6175.7	6184.9	6268.5	6534.0	6500.6	6132.9	5605.6	5217.6
30°	6140.4	6140.4	6149.7	6164.5	6183.1	6329.8	6602.7	6433.7	5912.0	5308.5	4883.3
32.5°	6158.9	6177.5	6197.9	6235.1	6262.9	6465.3	6626.8	6261.1	5590.8	4940.9	4534.3
35°	6324.2	6346.5	6385.5	6443.0	6476.4	6660.3	6626.8	6008.5	5217.6	4625.2	4174.0
37.5°	6684.4	6706.7	6753.1	6797.7	6831.1	6905.4	6599.0	5687.3	4905.6	4298.4	3851.0
40°	7263.7	7295.3	7328.7	7321.3	7299.0	7226.6	6543.3	5388.4	4617.8	4012.5	3533.5
42.5°	8078.8	8049.1	8045.4	7973.0	7898.7	7588.7	6502.4	5193.4	4370.9	3711.7	3217.8
45°	9020.2	8899.5	8775.1	8678.6	8565.3	7986.0	6491.3	5035.6	4097.9	3377.5	2874.3
47.5°	9967.2	9774.1	9532.7	9382.3	9198.5	8409.4	6524.7	4823.9	3747.0	3013.6	2553.1
50°	10895.6	10579.9	10281.0	10100.9	9892.9	8895.8	6578.6	4467.4	3327.3	2683.0	2259.7
52.5°	11755.3	11348.6	11042.3	10830.6	10576.2	9462.2	6530.3	3999.5	2963.4	2365.5	1981.2
55°	12572.3	12122.9	11805.4	11582.6	11283.7	10030.3	6181.2	3574.3	2616.2	2055.5	1667.4
57.5°	13287.1	12856.3	12525.8	12223.2	11970.7	10524.2	5492.4	3223.4	2282.0	1700.8	1327.6
60°	14122.7	13638.0	13246.3	12923.2	12626.1	10778.6	4719.9	2911.4	1925.5	1316.5	960.0
62.5°	15249.7	14692.7	14239.6	13870.1	13482.1	10834.3	4192.6	2599.5	1528.1	952.5	698.1
65°	16920.8	16233.8	15667.5	15158.8	14633.3	10604.1	3932.7	2259.7	1136.3	707.4	584.9
67.5°	18248.4	17535.4	16880.0	16226.4	15554.2	10177.0	3875.1	1945.9	872.7	601.6	525.5
69°	18086.9	17407.3	16805.7	16098.3	15353.7	9640.4	3817.5	1825.2	796.6	558.9	497.6
70°	17464.9	16820.6	16209.7	15634.1	14722.4	9042.5	3665.3	1758.4	766.9	538.5	477.2
72.5°	14757.7	14011.3	13418.9	12702.2	11742.3	6719.7	2779.6	1422.3	703.7	492.0	430.8
75°	10763.8	10145.4	9555.0	8762.1	7828.2	3888.1	1730.5	813.3	516.2	445.6	389.9
77.5°	6285.2	6145.9	5575.9	5054.2	4129.5	1979.3	993.4	486.5	401.1	404.8	343.5
80°	2365.5	2519.7	2577.2	2397.1	2215.1	1366.6	722.3	395.5	349.1	399.2	291.5
82.5°	1724.9	2001.6	2035.0	1949.6	1814.1	1273.8	577.5	317.5	284.1	428.9	250.7
85°	1439.0	1593.1	1617.3	1528.1	1483.6	1078.8	402.9	222.8	208.0	308.2	187.5
87.5°	727.9	766.9	787.3	713.0	716.7	503.2	161.5	94.7	113.3	131.8	104.0
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: P158068

CATALOG NUMBER: VST-E11-LED-E-U-RW-8030

CANDELA DISTRIBUTION (continued):

	175°	180°
0°	5494.2	5494.2
2.5°	5418.1	5429.2
5°	5425.5	5425.5
7.5°	5468.2	5468.2
10°	5514.6	5516.5
12.5°	5557.3	5555.5
15°	5590.8	5585.2
17.5°	5611.2	5605.6
20°	5590.8	5581.5
22.5°	5486.8	5460.8
25°	5297.4	5264.0
27.5°	5046.7	5024.4
30°	4719.9	4686.5
32.5°	4337.4	4320.7
35°	3971.7	3951.2
37.5°	3637.4	3631.9
40°	3355.2	3325.5
42.5°	3024.7	3011.7
45°	2688.6	2681.2
47.5°	2373.0	2365.5
50°	2081.5	2066.6
52.5°	1795.5	1771.4
55°	1478.0	1461.3
57.5°	1134.5	1119.6
60°	798.4	781.7
62.5°	568.2	549.6
65°	473.5	458.6
67.5°	428.9	412.2
69°	408.5	393.6
70°	395.5	384.4
72.5°	367.6	360.2
75°	336.1	330.5
77.5°	295.2	285.9
80°	247.0	237.7
82.5°	208.0	198.7
85°	139.3	126.3
87.5°	63.1	55.7
90°	0.0	0.0

(END OF REPORT)