

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: P158730

Luminaire Tested: **VST-E11-LED-E-U-SL4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P158730
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33714)
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-SL4
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(11) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 W/ SPILL LIGHT CONTROL
Light Source: (231) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 31910.3 lumens
Efficiency: N/A
Efficacy: 118.3 lumens/watt
Luminous Opening: Rectangular (W 1.83' x L: 1' x H: 0')
IES Classification: Type IV - Short - Full Cutoff
BUG Rating: B3 - 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

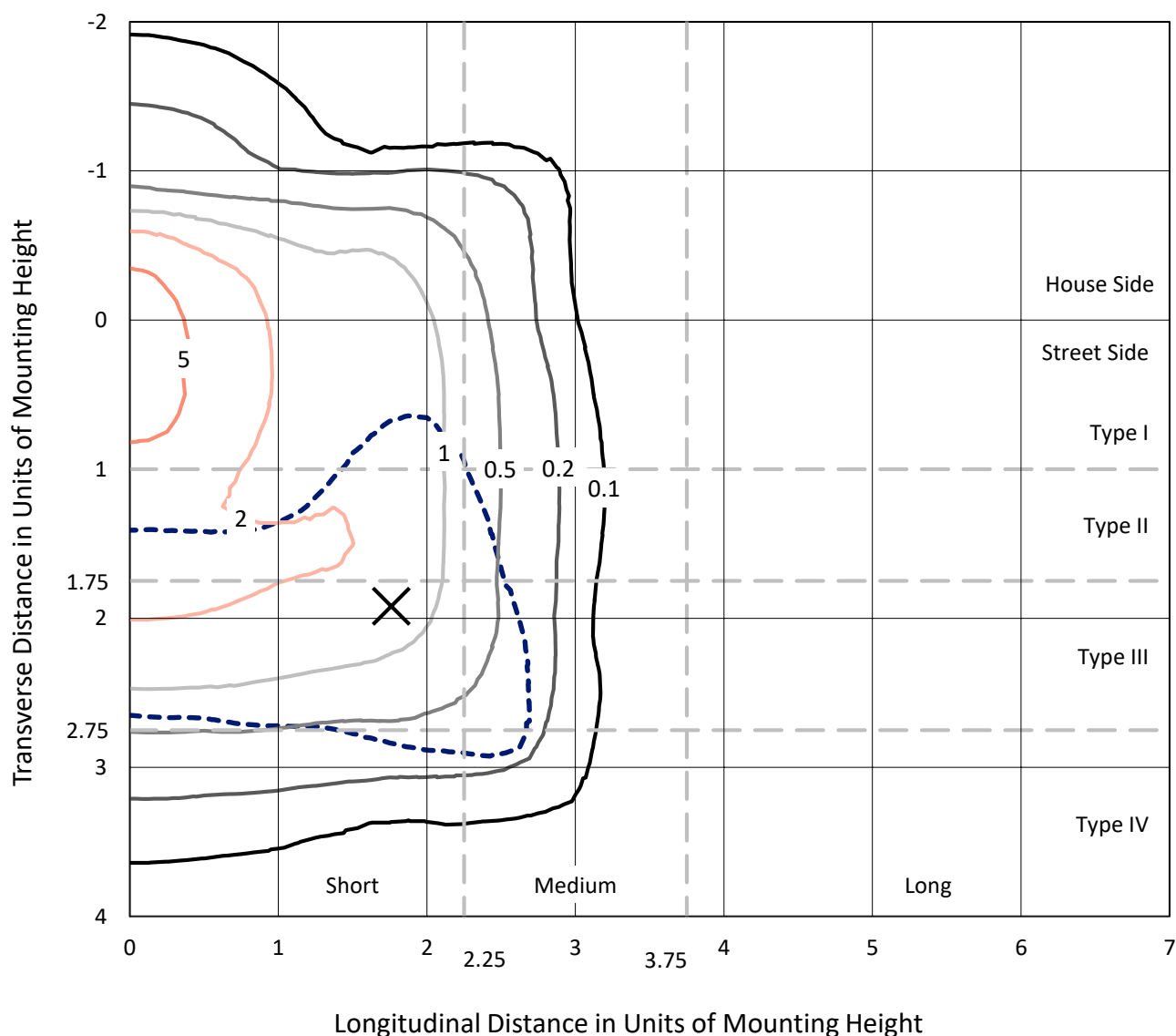


REPORT NUMBER: P158730

CATALOG NUMBER: VST-E11-LED-E-U-SL4

Iso-Footcandle Lines of Horizontal Illumination

× Max cd
- - - 1/2 Max cd

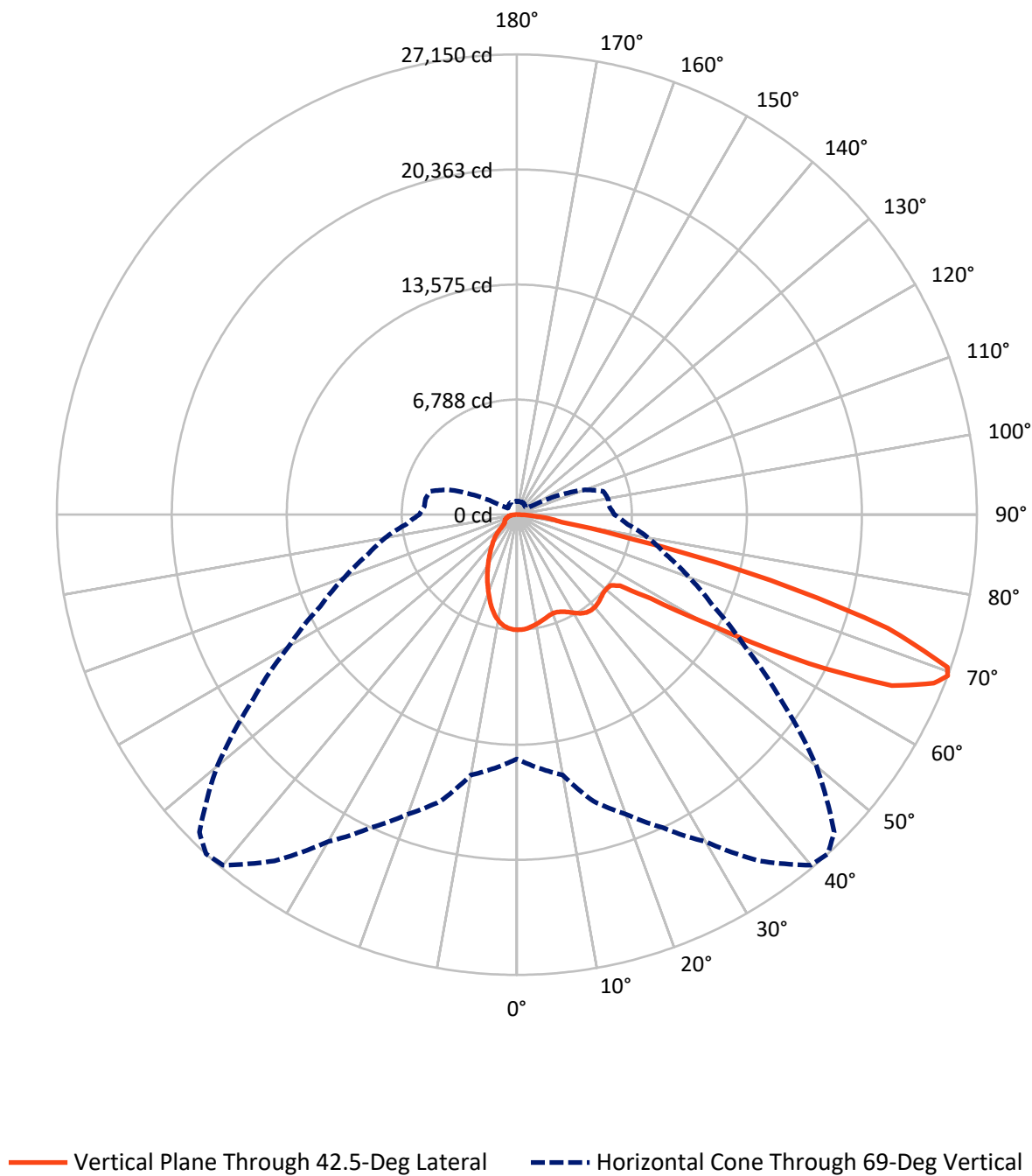


Based on 30 foot mounting height. Maximum calculated value = 7.6 fc
Type IV - Short - Full Cutoff

REPORT NUMBER: P158730

CATALOG NUMBER: VST-E11-LED-E-U-SL4

Luminous Intensity Polar Plot



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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	7094.1	0.0	7094.1
	% Fixture	22.2	0.0	22.2
Street Side	Lumens	24816.1	0.0	24816.1
	% Fixture	77.8	0.0	77.8
Total	Lumens	31910.3	0.0	31910.3
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	632.6	2.0
10°-20°	1705.0	5.3
20°-30°	2486.2	7.8
30°-40°	3169.4	9.9
40°-50°	3687.7	11.6
50°-60°	5610.8	17.6
60°-70°	9911.2	31.1
70°-80°	4089.9	12.8
80°-90°	617.6	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°	31910.3	100.0
0°-180°	31910.3	100.0

Coefficient of Utilization



REPORT NUMBER: P158730

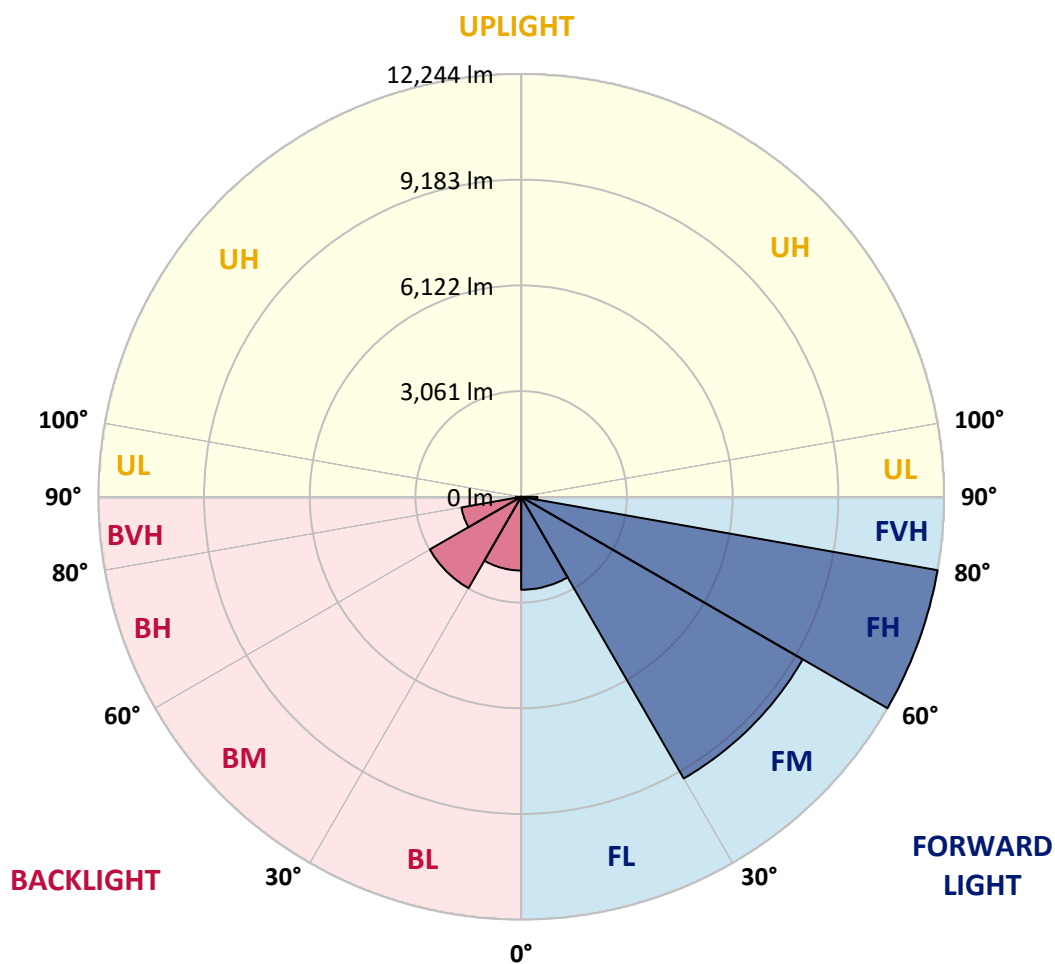
CATALOG NUMBER: VST-E11-LED-E-U-SL4

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2690.8	8.4			
FM	(30°-60°)	9414.4	29.5			
FH	(60°-80°)	12243.9	38.4			G5
FVH	(80°-90°)	467.0	1.5			G3/500
BL	(0°-30°)	2132.9	6.7	B3/2500		
BM	(30°-60°)	3053.5	9.6	B3/5000		
BH	(60°-80°)	1757.2	5.5	B3/2500		G3/2500
BVH	(80°-90°)	150.6	0.5			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G5

Type IV Short





REPORT NUMBER: P158730

CATALOG NUMBER: VST-E11-LED-E-U-SL4

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	42.5°	45°
0°	6795.8	6795.8	6795.8	6795.8	6795.8	6795.8	6795.8	6795.8	6795.8	6795.8	6795.8
2.5°	6773.8	6798.0	6789.2	6789.2	6795.8	6784.8	6784.8	6789.2	6778.2	6784.8	6782.6
5°	6749.6	6762.8	6758.4	6758.4	6758.4	6749.6	6745.2	6743.0	6727.6	6727.6	6721.0
7.5°	6696.8	6701.2	6707.8	6699.0	6696.8	6694.6	6679.2	6670.4	6652.8	6637.4	6641.8
10°	6626.4	6624.2	6635.2	6628.6	6619.8	6613.2	6600.0	6584.6	6564.8	6545.0	6542.8
12.5°	6547.2	6545.0	6553.8	6549.4	6542.8	6529.6	6518.6	6492.2	6461.4	6437.2	6435.0
15°	6496.6	6490.0	6498.8	6490.0	6479.0	6465.8	6446.0	6413.0	6358.0	6333.8	6314.0
17.5°	6545.0	6534.0	6538.4	6527.4	6512.0	6476.8	6430.6	6360.2	6281.0	6239.2	6208.4
20°	6714.4	6694.6	6699.0	6688.0	6652.8	6606.6	6518.6	6395.4	6261.2	6193.0	6144.6
22.5°	6956.4	6941.0	6947.6	6936.6	6901.4	6831.0	6699.0	6523.0	6331.6	6232.6	6155.6
25°	7323.8	7337.0	7341.4	7290.8	7271.0	7141.2	6958.6	6714.4	6459.2	6342.6	6237.0
27.5°	7737.4	7737.4	7757.2	7737.4	7697.8	7546.0	7288.6	6993.8	6666.0	6507.6	6380.0
30°	8140.0	8135.6	8173.0	8168.6	8104.8	7933.2	7640.6	7282.0	6908.0	6729.8	6567.0
32.5°	8566.8	8580.0	8604.2	8595.4	8511.8	8274.2	7922.2	7532.8	7139.0	6943.2	6760.6
35°	9028.8	9035.4	9044.2	9039.8	8870.4	8571.2	8129.0	7693.4	7284.2	7090.6	6901.4
37.5°	9490.8	9484.2	9473.2	9378.6	9185.0	8769.2	8254.4	7785.8	7356.8	7147.8	6952.0
40°	9904.4	9867.0	9831.8	9684.4	9387.4	8881.4	8302.8	7807.8	7350.2	7134.6	6943.2
42.5°	10131.0	10089.2	10016.6	9831.8	9471.0	8892.4	8269.8	7741.8	7282.0	7068.6	6879.4
45°	10172.8	10142.0	10071.6	9864.8	9451.2	8822.0	8168.6	7634.0	7180.8	6967.4	6789.2
47.5°	10073.8	10049.6	9981.4	9776.8	9365.4	8716.4	8052.0	7519.6	7081.8	6881.6	6710.0
50°	9922.0	9900.0	9847.2	9660.2	9268.6	8643.8	7992.6	7460.2	7048.8	6866.2	6707.8
52.5°	10168.4	10186.0	10032.0	9827.4	9372.0	8707.6	8058.6	7521.8	7108.2	6927.8	6762.8
55°	13998.6	13974.4	13048.2	12271.6	10883.4	9625.0	8685.6	8010.2	7568.0	7387.6	7233.6
57.5°	18189.6	18106.0	17725.4	16999.4	15507.8	13516.8	11706.2	10166.2	9559.0	9299.4	9317.0
60°	19558.0	19588.8	19507.4	19250.0	18715.4	17679.2	16302.0	15144.8	14005.2	13448.6	13512.4
62.5°	20317.0	20372.0	20442.4	20385.2	20211.4	19971.6	19797.8	19903.4	19745.0	19344.6	19025.6
65°	20422.6	20534.8	20768.0	20952.8	21043.0	21269.6	21802.0	23078.0	24244.0	24321.0	23760.0
67.5°	18332.6	18642.8	19148.8	20004.6	20737.2	21542.4	22827.2	24767.6	26488.0	26545.2	26021.6
69°	14414.4	15010.6	15602.4	17514.2	18801.2	20378.6	22279.4	24930.4	26991.8	27150.2	26490.2
70°	11550.0	11904.2	12414.6	14335.2	16258.0	18268.8	21023.2	24393.6	26646.4	26965.4	26237.2
72.5°	6934.4	7070.8	7246.8	7935.4	8925.4	10716.2	14368.2	19888.0	22477.4	22904.2	21978.0
75°	4483.6	4474.8	4490.2	4681.6	4738.8	5082.0	6232.6	10232.2	14663.0	15437.4	14328.6
77.5°	3377.0	3407.8	3359.4	3377.0	3361.6	3454.0	3489.2	3663.0	5788.2	7130.2	6375.6
80°	2981.0	2996.4	2998.6	2989.8	2882.0	2873.2	2930.4	2831.4	2631.2	2670.8	2558.6
82.5°	1700.6	1698.4	1718.2	1867.8	1929.4	2131.8	2215.4	2261.6	2087.8	1958.0	1771.0
85°	1102.2	1111.0	1133.0	1179.2	1133.0	1150.6	1130.8	1170.4	1073.6	996.6	891.0
87.5°	451.0	451.0	479.6	521.4	486.2	477.4	409.2	404.8	343.2	310.2	242.0
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: P158730

CATALOG NUMBER: VST-E11-LED-E-U-SL4

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°
0°	6795.8	6795.8	6795.8	6795.8	6795.8	6795.8	6795.8	6795.8	6795.8	6795.8	6795.8
2.5°	6769.4	6782.6	6776.0	6784.8	6778.2	6778.2	6769.4	6767.2	6773.8	6765.0	6767.2
5°	6710.0	6712.2	6701.2	6705.6	6692.4	6688.0	6681.4	6663.8	6674.8	6663.8	6668.2
7.5°	6624.2	6617.6	6602.2	6580.2	6564.8	6558.2	6545.0	6520.8	6525.2	6505.4	6516.4
10°	6514.2	6492.2	6465.8	6432.8	6410.8	6391.0	6362.4	6333.8	6318.4	6300.8	6298.6
12.5°	6391.0	6364.6	6329.4	6278.8	6230.4	6197.4	6153.4	6102.8	6087.4	6058.8	6043.4
15°	6256.8	6215.0	6173.2	6116.0	6063.2	6012.6	5953.2	5889.4	5847.6	5803.6	5770.6
17.5°	6135.8	6087.4	6032.4	5977.4	5920.2	5858.6	5783.8	5704.6	5643.0	5561.6	5495.6
20°	6041.2	5979.6	5924.6	5867.4	5803.6	5728.8	5638.6	5537.4	5434.0	5343.8	5266.8
22.5°	6003.8	5907.0	5841.0	5783.8	5720.0	5632.0	5522.0	5403.2	5277.8	5152.4	5051.2
25°	6034.6	5891.6	5788.2	5720.0	5665.0	5574.8	5451.6	5306.4	5161.2	5011.6	4875.2
27.5°	6124.8	5942.2	5792.6	5684.8	5621.0	5530.8	5401.0	5247.0	5075.4	4908.2	4741.0
30°	6265.6	6028.0	5838.8	5687.0	5588.0	5484.6	5348.2	5170.0	4996.2	4804.8	4622.2
32.5°	6402.0	6118.2	5891.6	5695.8	5544.0	5409.8	5258.0	5082.0	4895.0	4694.8	4505.6
35°	6498.8	6177.6	5911.4	5676.0	5475.8	5308.6	5145.8	4969.8	4787.2	4582.6	4389.0
37.5°	6545.0	6210.6	5913.6	5623.2	5385.6	5200.8	5027.0	4853.2	4681.6	4488.0	4305.4
40°	6542.8	6208.4	5882.8	5555.0	5277.8	5082.0	4910.4	4741.0	4580.4	4411.0	4246.0
42.5°	6494.4	6173.2	5838.8	5489.0	5200.8	4983.0	4804.8	4642.0	4505.6	4356.0	4217.4
45°	6419.6	6113.8	5792.6	5458.2	5178.8	4961.0	4771.8	4613.4	4492.4	4356.0	4237.2
47.5°	6362.4	6080.8	5799.2	5513.2	5247.0	5020.4	4820.2	4646.4	4543.0	4433.0	4349.4
50°	6371.2	6096.2	5821.2	5546.2	5295.4	5066.6	4873.0	4714.6	4639.8	4611.2	4591.4
52.5°	6417.4	6120.4	5887.2	5722.2	5636.4	5464.8	5350.4	5251.4	5306.4	5198.6	5071.0
55°	7007.0	6910.2	7136.8	7350.2	7620.8	7722.0	7625.2	7607.6	7695.6	7330.4	6492.2
57.5°	9442.4	9693.2	10043.0	10227.8	10452.2	10392.8	10168.4	9981.4	9761.4	9334.6	8289.6
60°	13585.0	13395.8	13237.4	12790.8	12425.6	11998.8	11523.6	11116.6	10727.2	10113.4	8982.6
62.5°	17853.0	16539.6	15441.8	14381.4	13527.8	12819.4	12130.8	11519.2	10929.6	10073.8	8857.2
65°	21544.6	18779.2	16717.8	15162.4	13915.0	12839.2	11954.8	11110.0	10359.8	9356.6	8153.2
67.5°	23203.4	19738.4	16739.8	14511.2	12784.2	11323.4	10179.4	8903.4	8063.0	7420.6	6743.0
69°	23080.2	19005.8	15545.2	12801.8	10817.4	9114.6	7887.0	6556.0	5750.8	5478.0	5462.6
70°	22495.0	17765.0	14150.4	11413.6	9143.2	7451.4	6274.4	5079.8	4329.6	4142.6	4474.8
72.5°	18365.6	12553.2	8868.2	6771.6	5207.4	4116.2	3357.2	2664.2	2127.4	1843.6	1905.2
75°	10373.0	5812.4	3757.6	2840.2	2400.2	1984.4	1702.8	1452.0	1313.4	1067.0	844.8
77.5°	3770.8	2494.8	1984.4	1716.0	1216.6	838.2	701.8	613.8	556.6	556.6	530.2
80°	2384.8	1878.8	1311.2	897.6	664.4	578.6	506.0	444.4	409.2	400.4	409.2
82.5°	1489.4	1150.6	734.8	563.2	473.0	424.6	369.6	323.4	294.8	288.2	301.4
85°	734.8	569.8	446.6	398.2	374.0	347.6	305.8	261.8	253.0	270.6	316.8
87.5°	220.0	195.8	160.6	167.2	176.0	171.6	136.4	118.8	112.2	147.4	231.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	6795.8	6795.8	6795.8	6795.8	6795.8	6795.8	6795.8	6795.8	6795.8	6795.8	6795.8
2.5°	6771.6	6769.4	6773.8	6767.2	6771.6	6773.8	6769.4	6789.2	6776.0	6778.2	6787.0
5°	6672.6	6668.2	6685.8	6681.4	6690.2	6699.0	6694.6	6723.2	6712.2	6721.0	6738.6
7.5°	6507.6	6516.4	6518.6	6518.6	6536.2	6564.8	6571.4	6589.0	6589.0	6613.2	6630.8
10°	6287.6	6289.8	6303.0	6300.8	6322.8	6353.6	6358.0	6388.8	6399.8	6439.4	6463.6
12.5°	6032.4	6021.4	6019.2	6017.0	6045.6	6078.6	6083.0	6135.8	6157.8	6193.0	6232.6
15°	5746.4	5717.8	5709.0	5726.6	5720.0	5739.8	5759.6	5788.2	5819.0	5889.4	5924.6
17.5°	5467.0	5409.8	5394.4	5374.6	5354.8	5354.8	5363.6	5398.8	5462.6	5500.0	5579.2
20°	5181.0	5112.8	5057.8	5005.0	4958.8	4941.2	4943.4	4987.4	5033.6	5095.2	5170.0
22.5°	4941.2	4837.8	4743.2	4672.8	4578.2	4576.0	4562.8	4576.0	4626.6	4642.0	4683.8
25°	4734.4	4595.8	4468.2	4353.8	4261.4	4213.0	4199.8	4195.4	4171.2	4164.6	4133.8
27.5°	4573.8	4406.6	4241.6	4103.0	3988.6	3922.6	3839.0	3779.6	3693.8	3671.8	3616.8
30°	4441.8	4261.4	4081.0	3900.6	3770.8	3652.0	3511.2	3407.8	3275.8	3190.0	3115.2
32.5°	4314.2	4131.6	3949.0	3770.8	3570.6	3385.8	3201.0	3040.4	2893.0	2761.0	2651.0
35°	4208.6	4034.8	3850.0	3634.4	3379.2	3113.0	2890.8	2708.2	2505.8	2367.2	2228.6
37.5°	4140.4	3982.0	3797.2	3500.2	3172.4	2886.4	2633.4	2411.2	2204.4	1995.4	1839.2
40°	4109.6	3971.0	3740.0	3377.0	2992.0	2675.2	2395.8	2149.4	1885.4	1650.0	1482.8
42.5°	4107.4	3966.6	3660.8	3240.6	2842.4	2497.0	2186.8	1892.0	1599.4	1357.4	1192.4
45°	4147.0	3960.0	3577.2	3126.2	2710.4	2349.6	1980.0	1621.4	1293.6	1113.2	1025.2
47.5°	4252.6	3971.0	3509.0	3020.6	2585.0	2171.4	1742.4	1324.4	1053.8	970.2	970.2
50°	4441.8	4034.8	3491.4	2945.8	2459.6	1964.6	1452.0	1069.2	932.8	932.8	959.2
52.5°	4732.2	4169.0	3522.2	2893.0	2303.4	1691.8	1144.0	921.8	895.4	919.6	954.8
55°	5401.0	4406.6	3564.0	2802.8	2065.8	1342.0	943.8	871.2	882.2	910.8	943.8
57.5°	6628.6	4914.8	3608.0	2604.8	1683.0	1034.0	855.8	851.4	871.2	897.6	926.2
60°	7436.0	5561.6	3720.2	2305.6	1273.8	853.6	811.8	838.2	862.4	884.4	906.4
62.5°	7436.0	5744.2	3803.8	1971.2	957.0	776.6	783.2	825.0	853.6	864.6	877.8
65°	6960.8	5409.8	3520.0	1606.0	778.8	732.6	756.8	798.6	825.0	833.8	844.8
67.5°	6083.0	4778.4	2965.6	1210.0	695.2	695.2	726.0	756.8	778.8	796.4	814.0
69°	5288.8	4287.8	2611.4	1025.2	662.2	666.6	697.4	723.8	750.2	772.2	794.2
70°	4716.8	3920.4	2365.0	930.6	642.4	644.6	675.4	704.0	728.2	752.4	778.8
72.5°	2525.6	2708.2	1797.4	763.4	591.8	598.4	627.0	653.4	675.4	699.6	723.8
75°	860.2	1163.8	1144.0	624.8	534.6	552.2	569.8	594.0	622.6	638.0	651.2
77.5°	503.8	521.4	609.4	508.2	481.8	490.6	510.4	530.2	554.4	569.8	580.8
80°	422.4	420.2	422.4	413.6	420.2	440.0	453.2	479.6	501.6	506.0	503.8
82.5°	343.2	360.8	363.0	358.6	378.4	393.8	404.8	420.2	418.0	422.4	431.2
85°	305.8	303.6	319.0	321.2	321.2	310.2	312.4	312.4	312.4	319.0	321.2
87.5°	305.8	255.2	198.0	178.2	187.0	176.0	167.2	165.0	182.6	200.2	195.8
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: P158730

CATALOG NUMBER: VST-E11-LED-E-U-SL4

CANDELA DISTRIBUTION (continued):

	160°	165°	170°	175°	180°
0°	6795.8	6795.8	6795.8	6795.8	6795.8
2.5°	6791.4	6798.0	6793.6	6793.6	6798.0
5°	6745.2	6756.2	6751.8	6756.2	6756.2
7.5°	6639.6	6655.0	6666.0	6677.0	6670.4
10°	6487.8	6514.2	6531.8	6545.0	6538.4
12.5°	6261.2	6285.4	6322.8	6344.8	6327.2
15°	5951.0	6019.2	6041.2	6072.0	6054.4
17.5°	5627.6	5669.4	5695.8	5724.4	5742.0
20°	5196.4	5229.4	5264.6	5277.8	5258.0
22.5°	4677.2	4694.8	4688.2	4708.0	4668.4
25°	4107.4	4118.4	4111.8	4129.4	4096.4
27.5°	3568.4	3566.2	3568.4	3546.4	3524.4
30°	3049.2	3029.4	3020.6	2987.6	2981.0
32.5°	2585.0	2516.8	2481.6	2433.2	2422.2
35°	2120.8	2024.0	1960.2	1905.2	1881.0
37.5°	1705.0	1588.4	1513.6	1465.2	1458.6
40°	1348.6	1240.8	1188.0	1161.6	1157.2
42.5°	1100.0	1053.8	1040.6	1040.6	1040.6
45°	1003.2	1001.0	1012.0	1020.8	1023.0
47.5°	983.4	996.6	1012.0	1025.2	1029.6
50°	983.4	996.6	1007.6	1020.8	1025.2
52.5°	979.0	990.0	994.4	1003.2	1007.6
55°	965.8	972.4	972.4	976.8	981.2
57.5°	943.8	948.2	941.6	946.0	957.0
60°	921.8	926.2	915.2	926.2	932.8
62.5°	897.6	899.8	895.4	904.2	904.2
65°	858.0	853.6	860.2	866.8	869.0
67.5°	818.4	807.4	814.0	816.2	820.6
69°	787.6	781.0	783.2	787.6	792.0
70°	765.6	761.2	765.6	772.2	778.8
72.5°	710.6	712.8	728.2	741.4	754.6
75°	660.0	675.4	695.2	723.8	739.2
77.5°	598.4	609.4	624.8	655.6	684.2
80°	517.0	523.6	525.8	536.8	534.6
82.5°	420.2	413.6	409.2	404.8	402.6
85°	301.4	299.2	281.6	268.4	268.4
87.5°	180.4	171.6	162.8	151.8	145.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)