

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: P159840

Luminaire Tested: **VST-E12-LED-E-U-T4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P159840
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33707)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: VST-E12-LED-E-U-T4
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(12) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 SHORT
Light Source: (252) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 35716.3 lumens
Efficiency: N/A
Efficacy: 122.4 lumens/watt
Luminous Opening: Rectangular (W 2' x L: 1' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B3 - U0 - G5

Input Watts (W): 291.7
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



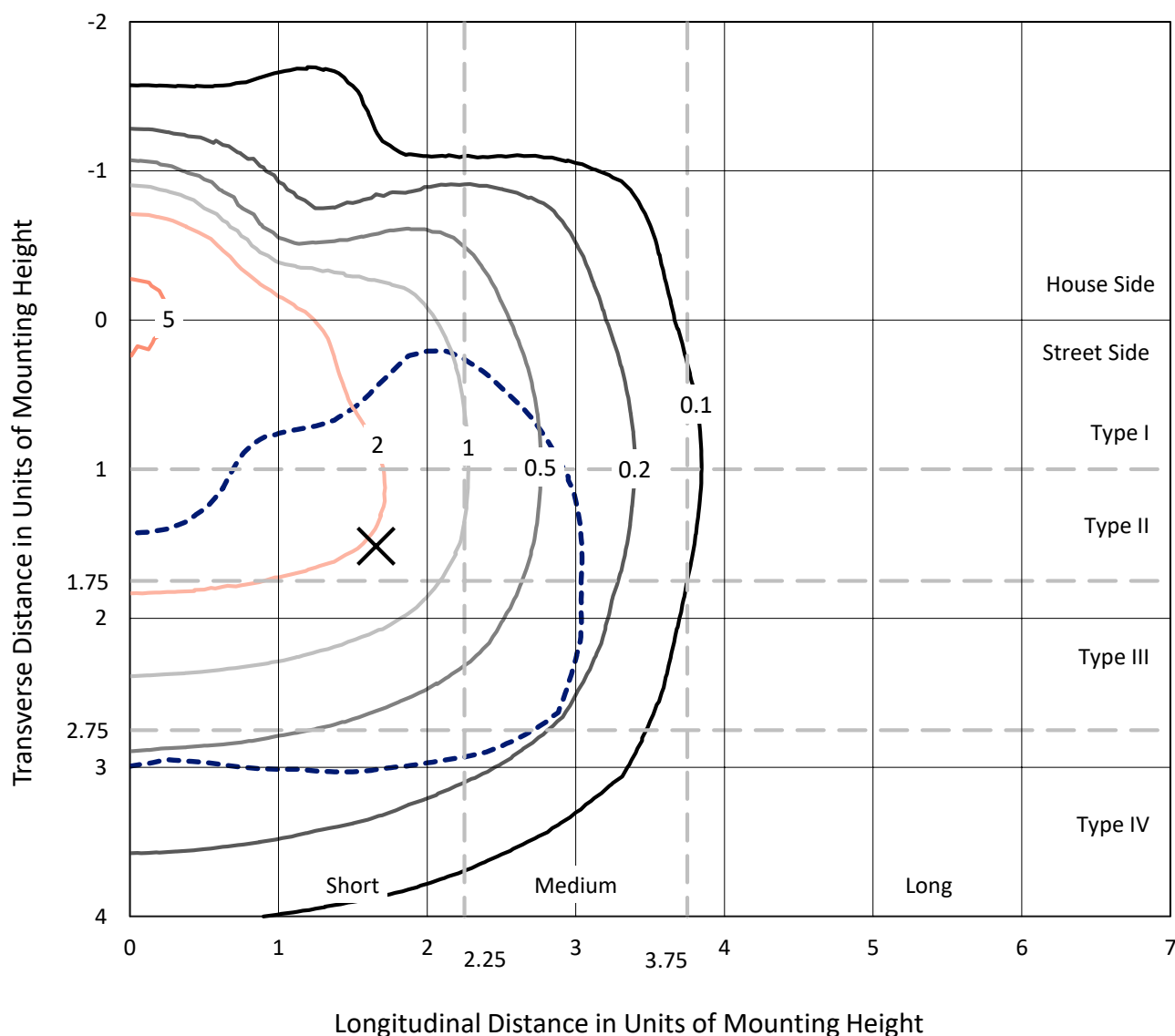
REPORT NUMBER: P159840

CATALOG NUMBER: VST-E12-LED-E-U-T4

Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

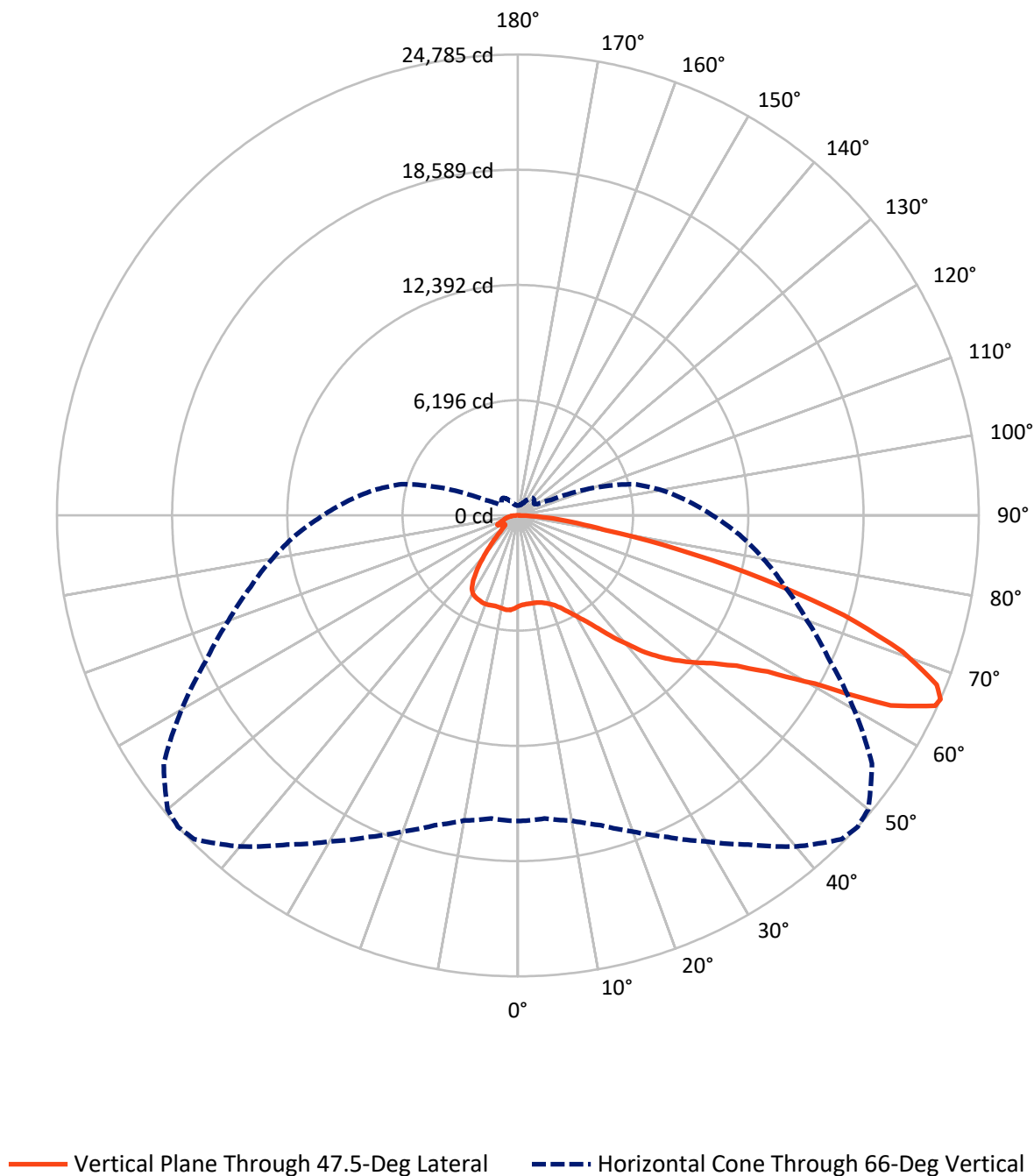


Based on 30 foot mounting height. Maximum calculated value = 5.5 fc
 Type IV - Short - Semi-Cutoff

REPORT NUMBER: P159840

CATALOG NUMBER: VST-E12-LED-E-U-T4

Luminous Intensity Polar Plot



REPORT NUMBER: P159840

CATALOG NUMBER: VST-E12-LED-E-U-T4

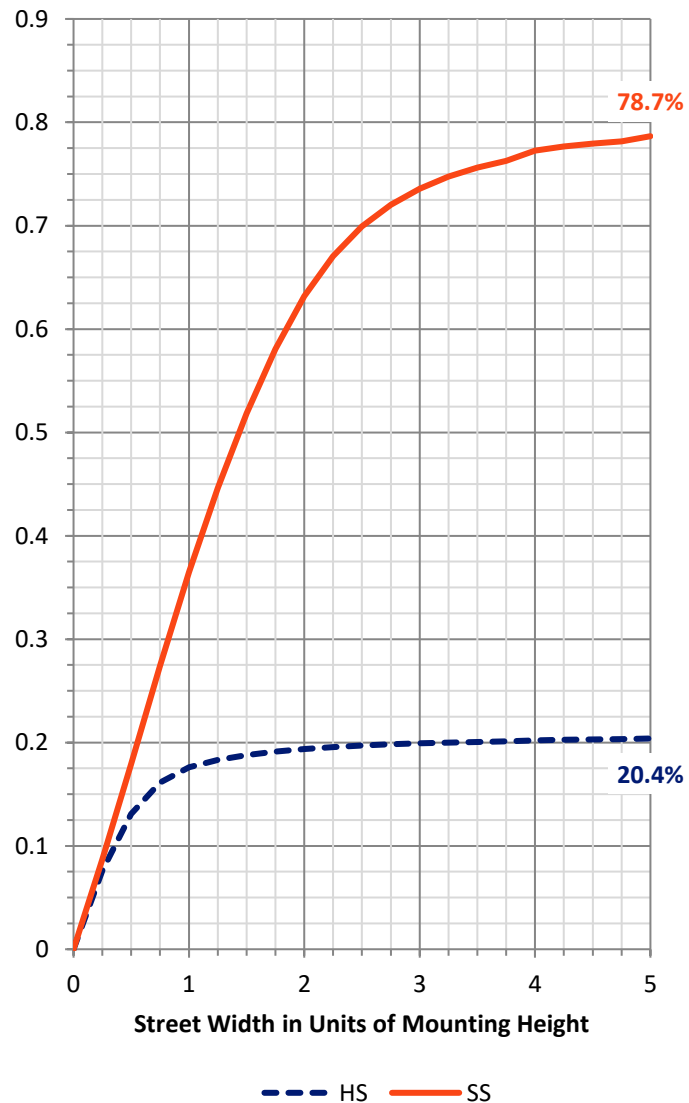
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	7394.8	0.0	7394.8
	% Fixture	20.7	0.0	20.7
Street Side	Lumens	28321.4	0.0	28321.4
	% Fixture	79.3	0.0	79.3
Total	Lumens	35716.3	0.0	35716.3
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	471.0	1.3
10°-20°	1412.3	4.0
20°-30°	2409.8	6.7
30°-40°	3637.2	10.2
40°-50°	4727.5	13.2
50°-60°	6485.7	18.2
60°-70°	9977.0	27.9
70°-80°	5767.3	16.1
80°-90°	828.5	2.3
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°	35716.3	100.0
0°-180°	35716.3	100.0

Coefficient of Utilization



REPORT NUMBER: P159840

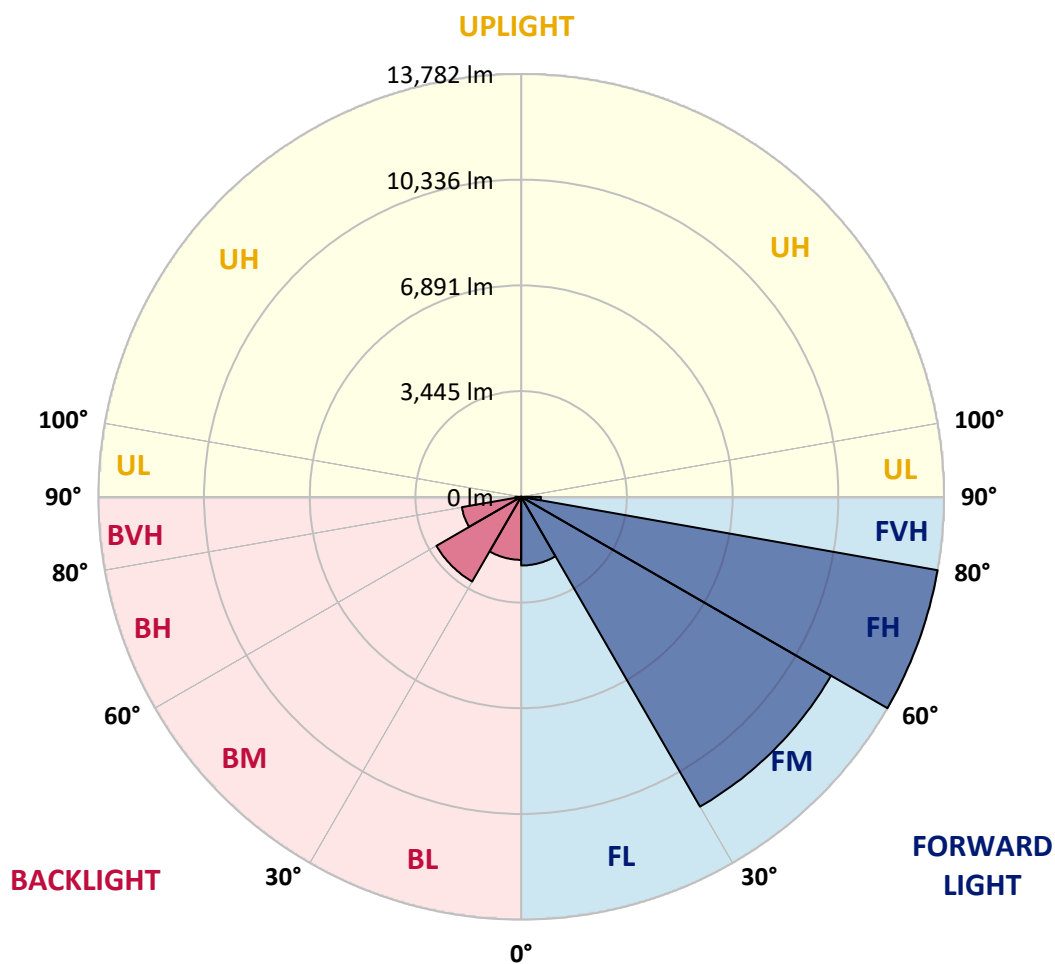
CATALOG NUMBER: VST-E12-LED-E-U-T4

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2238.7	6.3			
FM	(30°-60°)	11659.8	32.6			
FH	(60°-80°)	13781.7	38.6			G5
FVH	(80°-90°)	641.2	1.8			G4/750
BL	(0°-30°)	2054.4	5.8	B3/2500		
BM	(30°-60°)	3190.5	8.9	B3/5000		
BH	(60°-80°)	1962.7	5.5	B3/2500		G3/2500
BVH	(80°-90°)	187.3	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: P159840

CATALOG NUMBER: VST-E12-LED-E-U-T4

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	47.5°
0°	4886.4	4886.4	4886.4	4886.4	4886.4	4886.4	4886.4	4886.4	4886.4	4886.4	4886.4
2.5°	4761.6	4764.0	4766.4	4766.4	4773.6	4773.6	4785.6	4792.8	4795.2	4809.6	4819.2
5°	4672.8	4670.4	4672.8	4677.6	4689.6	4699.2	4723.2	4740.0	4754.4	4778.4	4790.4
7.5°	4634.4	4639.2	4644.0	4646.4	4656.0	4680.0	4701.6	4718.4	4747.2	4776.0	4788.0
10°	4684.8	4692.0	4684.8	4689.6	4689.6	4711.2	4720.8	4732.8	4754.4	4780.8	4788.0
12.5°	4802.4	4816.8	4802.4	4790.4	4780.8	4800.0	4795.2	4785.6	4797.6	4804.8	4804.8
15°	4996.8	4996.8	4987.2	4970.4	4946.4	4948.8	4927.2	4905.6	4896.0	4879.2	4867.2
17.5°	5186.4	5181.6	5160.0	5138.4	5121.6	5114.4	5083.2	5054.4	5020.8	4994.4	4965.6
20°	5371.2	5390.4	5364.0	5332.8	5306.4	5289.6	5265.6	5208.0	5167.2	5124.0	5095.2
22.5°	5690.4	5673.6	5644.8	5599.2	5572.8	5544.0	5493.6	5431.2	5368.8	5316.0	5280.0
25°	6019.2	6002.4	5961.6	5928.0	5889.6	5865.6	5810.4	5733.6	5673.6	5592.0	5544.0
27.5°	6372.0	6357.6	6309.6	6283.2	6256.8	6228.0	6180.0	6100.8	6045.6	5952.0	5901.6
30°	6770.4	6768.0	6703.2	6698.4	6660.0	6628.8	6595.2	6528.0	6472.8	6379.2	6319.2
32.5°	7195.2	7185.6	7140.0	7125.6	7152.0	7130.4	7082.4	7012.8	6940.8	6885.6	6818.4
35°	7800.0	7783.2	7756.8	7768.8	7785.6	7845.6	7771.2	7711.2	7624.8	7552.8	7459.2
37.5°	8241.6	8217.6	8248.8	8316.0	8412.0	8457.6	8522.4	8524.8	8484.0	8388.0	8306.4
40°	8647.2	8637.6	8709.6	8803.2	8980.8	9110.4	9232.8	9292.8	9307.2	9244.8	9122.4
42.5°	8990.4	9019.2	9115.2	9259.2	9508.8	9705.6	9933.6	10075.2	10164.0	10130.4	10075.2
45°	9398.4	9412.8	9530.4	9712.8	9950.4	10276.8	10576.8	10816.8	10972.8	10970.4	10908.0
47.5°	9909.6	9912.0	10012.8	10226.4	10480.8	10812.0	11191.2	11510.4	11716.8	11726.4	11678.4
50°	10516.8	10512.0	10622.4	10824.0	11095.2	11414.4	11817.6	12216.0	12504.0	12504.0	12434.4
52.5°	11299.2	11289.6	11349.6	11527.2	11788.8	12124.8	12525.6	12986.4	13298.4	13365.6	13214.4
55°	12343.2	12357.6	12372.0	12528.0	12751.2	13017.6	13478.4	13903.2	14320.8	14359.2	14270.4
57.5°	13550.4	13502.4	13605.6	13860.0	14114.4	14448.0	14774.4	15276.0	15770.4	15854.4	15842.4
60°	15436.8	15374.4	15480.0	15804.0	16084.8	16610.4	17169.6	17817.6	18403.2	18576.0	18367.2
62.5°	17172.0	17248.8	17392.8	17769.6	18177.6	18878.4	19718.4	20829.6	21940.8	22545.6	22502.4
65°	17016.0	16944.0	17220.0	17733.6	18472.8	19365.6	20409.6	21748.8	23349.6	24564.0	24672.0
66°	16437.6	16363.2	16660.8	17248.8	18093.6	19087.2	20246.4	21609.6	23246.4	24619.2	24784.8
67.5°	15482.4	15408.0	15744.0	16279.2	17150.4	18400.8	19653.6	21144.0	22845.6	24160.8	24295.2
70°	13639.2	13538.4	13800.0	14404.8	15110.4	16320.0	17512.8	19092.0	20839.2	21890.4	21940.8
72.5°	11553.6	11318.4	11596.8	12062.4	12566.4	13567.2	14606.4	15686.4	17078.4	18050.4	18328.8
75°	8383.2	8505.6	8587.2	8894.4	9228.0	10056.0	10665.6	11570.4	12648.0	13351.2	13574.4
77.5°	4447.2	4632.0	4747.2	5054.4	5606.4	6237.6	6897.6	7456.8	8164.8	8558.4	8832.0
80°	2496.0	2625.6	2812.8	3055.2	3324.0	3808.8	4200.0	4488.0	4588.8	4658.4	4720.8
82.5°	1372.8	1701.6	1980.0	2148.0	2306.4	2500.8	2733.6	2973.6	3050.4	2935.2	2875.2
85°	213.6	314.4	957.6	1168.8	1272.0	1420.8	1588.8	1766.4	1768.8	1521.6	1660.8
87.5°	60.0	67.2	136.8	206.4	201.6	163.2	201.6	367.2	216.0	108.0	124.8
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: P159840

CATALOG NUMBER: VST-E12-LED-E-U-T4

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°
0°	4886.4	4886.4	4886.4	4886.4	4886.4	4886.4	4886.4	4886.4	4886.4	4886.4	4886.4
2.5°	4824.0	4828.8	4840.8	4852.8	4864.8	4876.8	4884.0	4896.0	4905.6	4920.0	4936.8
5°	4804.8	4816.8	4838.4	4864.8	4888.8	4910.4	4927.2	4951.2	4972.8	4992.0	5020.8
7.5°	4804.8	4828.8	4864.8	4893.6	4915.2	4941.6	4968.0	4992.0	5016.0	5035.2	5054.4
10°	4807.2	4831.2	4867.2	4900.8	4924.8	4953.6	4975.2	4996.8	5023.2	5035.2	5059.2
12.5°	4816.8	4826.4	4852.8	4886.4	4915.2	4944.0	4965.6	4987.2	5016.0	5020.8	5037.6
15°	4864.8	4850.4	4857.6	4881.6	4912.8	4936.8	4960.8	4977.6	4996.8	4992.0	5006.4
17.5°	4953.6	4917.6	4903.2	4905.6	4920.0	4936.8	4946.4	4948.8	4951.2	4929.6	4932.0
20°	5073.6	5023.2	4989.6	4972.8	4953.6	4936.8	4910.4	4879.2	4850.4	4807.2	4802.4
22.5°	5253.6	5179.2	5143.2	5097.6	5040.0	4968.0	4903.2	4826.4	4764.0	4699.2	4675.2
25°	5515.2	5438.4	5400.0	5328.0	5224.8	5121.6	5028.0	4924.8	4833.6	4756.8	4720.8
27.5°	5865.6	5788.8	5748.0	5673.6	5546.4	5443.2	5313.6	5203.2	5092.8	4980.0	4934.4
30°	6290.4	6223.2	6177.6	6117.6	6007.2	5894.4	5743.2	5572.8	5397.6	5217.6	5128.8
32.5°	6792.0	6717.6	6684.0	6614.4	6499.2	6381.6	6213.6	5995.2	5702.4	5419.2	5241.6
35°	7418.4	7334.4	7296.0	7204.8	7070.4	6897.6	6717.6	6424.8	6028.8	5635.2	5344.8
37.5°	8256.0	8068.8	7941.6	7732.8	7516.8	7274.4	7017.6	6717.6	6249.6	5762.4	5359.2
40°	8997.6	8808.0	8563.2	8263.2	7927.2	7593.6	7300.8	6960.0	6451.2	5853.6	5313.6
42.5°	9919.2	9583.2	9192.0	8786.4	8340.0	7929.6	7581.6	7180.8	6588.0	5877.6	5186.4
45°	10761.6	10360.8	9837.6	9297.6	8743.2	8227.2	7836.0	7389.6	6705.6	5877.6	5032.8
47.5°	11529.6	11049.6	10423.2	9751.2	9105.6	8541.6	8097.6	7603.2	6871.2	5952.0	4987.2
50°	12240.0	11688.0	10975.2	10195.2	9470.4	8868.0	8390.4	7876.8	7123.2	6144.0	5097.6
52.5°	12988.8	12403.2	11534.4	10706.4	9907.2	9261.6	8752.8	8215.2	7449.6	6446.4	5292.0
55°	13970.4	13284.0	12297.6	11385.6	10507.2	9794.4	9216.0	8620.8	7807.2	6787.2	5529.6
57.5°	15518.4	14522.4	13536.0	12350.4	11522.4	10584.0	9950.4	9266.4	8388.0	7231.2	5887.2
60°	18228.0	17004.0	15818.4	14455.2	13432.8	12451.2	11493.6	10600.8	9542.4	8234.4	6672.0
62.5°	22096.8	20853.6	18991.2	17323.2	15780.0	14479.2	13231.2	12096.0	10737.6	9307.2	7639.2
65°	24408.0	22984.8	20764.8	18523.2	16648.8	15036.0	13608.0	12218.4	10752.0	9357.6	7932.0
66°	24592.8	23246.4	20875.2	18506.4	16560.0	14887.2	13401.6	11964.0	10461.6	9127.2	7836.0
67.5°	24249.6	23090.4	20649.6	18180.0	16190.4	14383.2	12856.8	11349.6	9840.0	8604.0	7516.8
70°	21828.0	20990.4	18897.6	16584.0	14599.2	13005.6	11395.2	9945.6	8515.2	7476.0	6669.6
72.5°	17894.4	16833.6	15369.6	13814.4	12252.0	10838.4	9374.4	8140.8	6940.8	6184.8	5613.6
75°	13144.8	12189.6	10576.8	9607.2	8575.2	7687.2	6700.8	5532.0	4680.0	4300.8	4161.6
77.5°	8332.8	7296.0	5935.2	4864.8	4183.2	3595.2	2834.4	2253.6	1804.8	1879.2	2080.8
80°	4209.6	3626.4	2714.4	2143.2	1852.8	1540.8	1219.2	924.0	674.4	770.4	871.2
82.5°	2702.4	2256.0	1797.6	1416.0	1195.2	1053.6	842.4	612.0	456.0	513.6	628.8
85°	1627.2	1375.2	1096.8	897.6	780.0	650.4	477.6	338.4	336.0	360.0	444.0
87.5°	247.2	352.8	204.0	218.4	230.4	247.2	218.4	184.8	160.8	208.8	264.0
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: P159840

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CANDELA DISTRIBUTION (continued):

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	4886.4	4886.4	4886.4	4886.4	4886.4	4886.4	4886.4	4886.4	4886.4	4886.4	4886.4
2.5°	4953.6	4958.4	4968.0	4980.0	4977.6	4994.4	5004.0	4994.4	5016.0	5016.0	5028.0
5°	5044.8	5052.0	5068.8	5080.8	5085.6	5100.0	5104.8	5102.4	5107.2	5109.6	5114.4
7.5°	5071.2	5090.4	5097.6	5104.8	5107.2	5112.0	5112.0	5107.2	5107.2	5104.8	5109.6
10°	5064.0	5071.2	5076.0	5073.6	5073.6	5068.8	5066.4	5064.0	5064.0	5059.2	5066.4
12.5°	5040.0	5040.0	5040.0	5035.2	5035.2	5032.8	5032.8	5032.8	5037.6	5040.0	5052.0
15°	4992.0	4992.0	4996.8	4994.4	5001.6	5013.6	5028.0	5037.6	5049.6	5052.0	5059.2
17.5°	4917.6	4920.0	4934.4	4965.6	4996.8	5032.8	5059.2	5066.4	5056.8	5032.8	5016.0
20°	4788.0	4819.2	4876.8	4951.2	5020.8	5066.4	5078.4	5049.6	5004.0	4941.6	4908.0
22.5°	4672.8	4735.2	4838.4	4960.8	5047.2	5078.4	5042.4	4975.2	4893.6	4821.6	4771.2
25°	4718.4	4790.4	4898.4	5004.0	5059.2	5042.4	4970.4	4874.4	4788.0	4704.0	4622.4
27.5°	4910.4	4982.4	5059.2	5090.4	5071.2	5008.8	4908.0	4804.8	4689.6	4569.6	4468.8
30°	5092.8	5133.6	5138.4	5107.2	5037.6	4936.8	4819.2	4699.2	4552.8	4408.8	4281.6
32.5°	5150.4	5102.4	5016.0	4927.2	4831.2	4728.0	4591.2	4432.8	4276.8	4113.6	3972.0
35°	5133.6	4939.2	4725.6	4536.0	4420.8	4303.2	4178.4	3967.2	3792.0	3652.8	3561.6
37.5°	4982.4	4627.2	4298.4	4022.4	3842.4	3703.2	3518.4	3343.2	3192.0	3129.6	3055.2
40°	4771.2	4228.8	3772.8	3386.4	3199.2	3021.6	2815.2	2680.8	2637.6	2580.0	2582.4
42.5°	4468.8	3763.2	3175.2	2731.2	2527.2	2332.8	2186.4	2107.2	2109.6	2061.6	2071.2
45°	4149.6	3295.2	2556.0	2114.4	1912.8	1747.2	1665.6	1641.6	1644.0	1646.4	1632.0
47.5°	3955.2	2930.4	2049.6	1603.2	1425.6	1332.0	1288.8	1276.8	1279.2	1281.6	1264.8
50°	3926.4	2740.8	1711.2	1226.4	1111.2	1058.4	1036.8	1024.8	1024.8	1015.2	1000.8
52.5°	4008.0	2692.8	1545.6	1063.2	952.8	904.8	888.0	878.4	864.0	844.8	818.4
55°	4137.6	2736.0	1495.2	1008.0	900.0	852.0	830.4	825.6	801.6	765.6	722.4
57.5°	4377.6	2892.0	1528.8	1022.4	909.6	866.4	852.0	847.2	813.6	758.4	703.2
60°	5066.4	3345.6	1696.8	1104.0	979.2	943.2	943.2	936.0	890.4	811.2	732.0
62.5°	6016.8	4010.4	1924.8	1216.8	1075.2	1070.4	1111.2	1113.6	1032.0	904.8	780.0
65°	6475.2	4322.4	2004.0	1240.8	1101.6	1156.8	1238.4	1238.4	1123.2	948.0	787.2
66°	6477.6	4315.2	1980.0	1212.0	1072.8	1144.8	1228.8	1228.8	1108.8	936.0	775.2
67.5°	6312.0	4180.8	1900.8	1159.2	1008.0	1075.2	1149.6	1147.2	1039.2	888.0	741.6
70°	5661.6	3698.4	1675.2	1072.8	931.2	933.6	960.0	943.2	871.2	768.0	674.4
72.5°	4881.6	3093.6	1452.0	1017.6	871.2	825.6	804.0	789.6	744.0	681.6	624.0
75°	3744.0	2402.4	1264.8	967.2	818.4	739.2	710.4	698.4	667.2	631.2	585.6
77.5°	2294.4	1646.4	1072.8	885.6	758.4	686.4	655.2	631.2	600.0	566.4	535.2
80°	988.8	993.6	859.2	751.2	660.0	576.0	535.2	506.4	489.6	477.6	460.8
82.5°	691.2	712.8	655.2	583.2	504.0	444.0	408.0	400.8	403.2	403.2	398.4
85°	518.4	508.8	458.4	417.6	381.6	343.2	314.4	312.0	321.6	321.6	314.4
87.5°	300.0	302.4	259.2	242.4	252.0	216.0	196.8	199.2	223.2	220.8	216.0
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: P159840

CATALOG NUMBER: VST-E12-LED-E-U-T4

CANDELA DISTRIBUTION (continued):

	160°	165°	170°	175°	180°
0°	4886.4	4886.4	4886.4	4886.4	4886.4
2.5°	5028.0	5035.2	5032.8	5040.0	5032.8
5°	5121.6	5119.2	5116.8	5126.4	5114.4
7.5°	5107.2	5109.6	5109.6	5109.6	5107.2
10°	5071.2	5080.8	5085.6	5095.2	5092.8
12.5°	5059.2	5073.6	5088.0	5102.4	5104.8
15°	5061.6	5071.2	5078.4	5085.6	5088.0
17.5°	4999.2	4996.8	4989.6	4984.8	4980.0
20°	4872.0	4860.0	4848.0	4828.8	4838.4
22.5°	4713.6	4680.0	4641.6	4610.4	4608.0
25°	4528.8	4466.4	4404.0	4363.2	4348.8
27.5°	4365.6	4291.2	4226.4	4190.4	4180.8
30°	4171.2	4104.0	4046.4	4015.2	3996.0
32.5°	3883.2	3830.4	3758.4	3734.4	3732.0
35°	3482.4	3441.6	3391.2	3381.6	3369.6
37.5°	3028.8	3014.4	2990.4	2961.6	2956.8
40°	2544.0	2553.6	2546.4	2529.6	2503.2
42.5°	2076.0	2092.8	2095.2	2107.2	2119.2
45°	1653.6	1668.0	1668.0	1680.0	1694.4
47.5°	1269.6	1260.0	1267.2	1279.2	1286.4
50°	960.0	952.8	940.8	931.2	921.6
52.5°	772.8	758.4	724.8	715.2	705.6
55°	681.6	655.2	631.2	621.6	621.6
57.5°	655.2	621.6	595.2	583.2	578.4
60°	660.0	612.0	578.4	559.2	552.0
62.5°	681.6	614.4	568.8	547.2	540.0
65°	679.2	609.6	566.4	542.4	535.2
66°	667.2	602.4	561.6	540.0	535.2
67.5°	648.0	592.8	556.8	537.6	530.4
70°	609.6	573.6	547.2	530.4	523.2
72.5°	578.4	554.4	530.4	511.2	506.4
75°	549.6	525.6	504.0	494.4	487.2
77.5°	506.4	484.8	472.8	463.2	458.4
80°	448.8	434.4	420.0	410.4	403.2
82.5°	391.2	372.0	357.6	350.4	345.6
85°	319.2	307.2	285.6	271.2	268.8
87.5°	213.6	201.6	194.4	182.4	170.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)