

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: P158715

Luminaire Tested: **VST-F09-LED-E-U-SL4**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P158715  
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-F09-LED-E-U-SL4  
Description: VENTUS LED SITE/ROADWAY LUMINAIRE  
(9) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 W/ SPILL LIGHT CONTROL  
Light Source: (63) 4000K CCT, 70 CRI LEDs  
Ballast/Driver: -

**Summary**

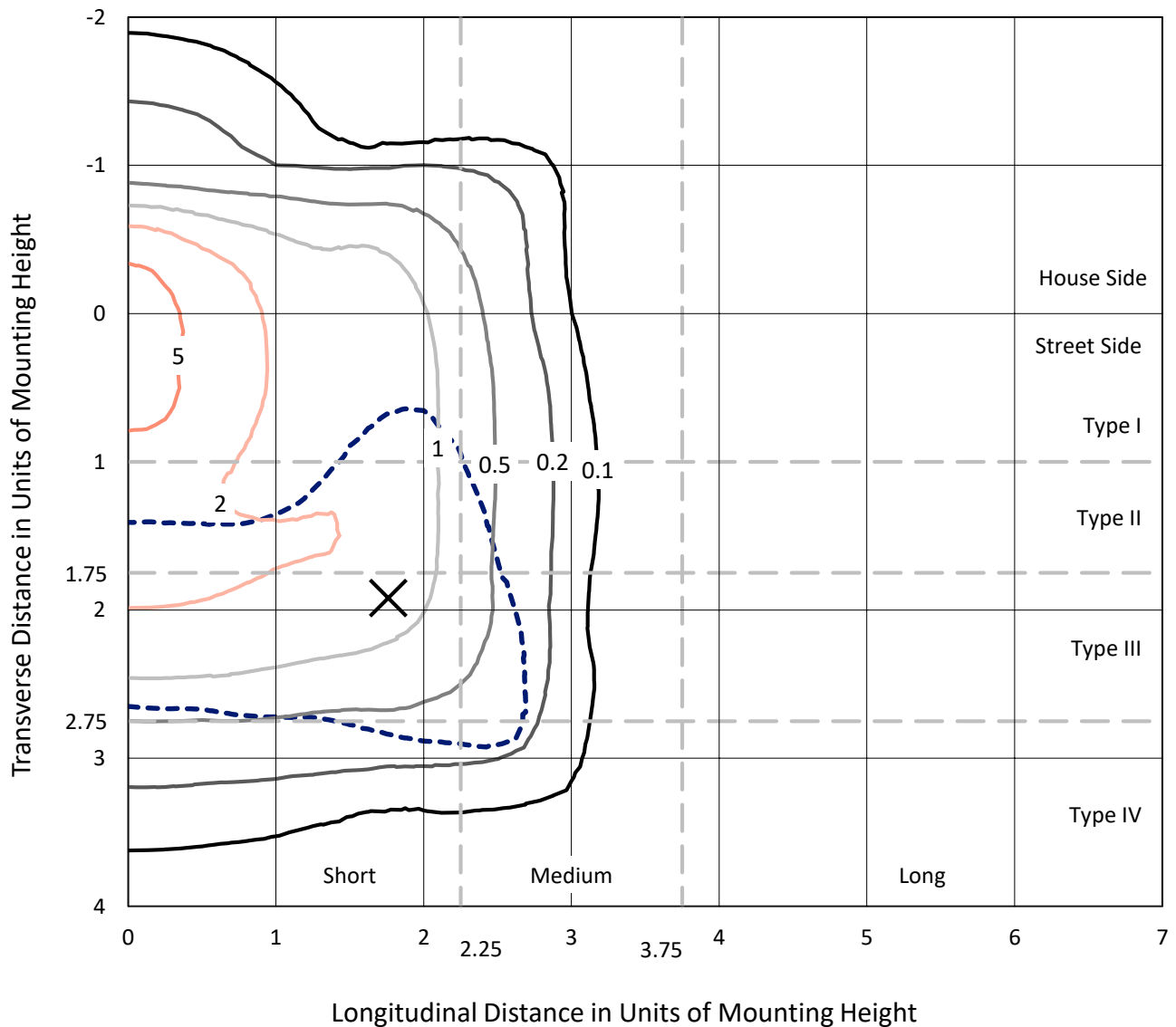
Lumens per Lamp: N/A  
Luminaire Lumens: 21553.1 lumens  
Efficiency: N/A  
Efficacy: 91.8 lumens/watt  
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')  
IES Classification: Type IV - Short - Full Cutoff  
BUG Rating: B3 - U0 - G4  
  
Input Watts (W): 234.8  
Input Voltage (V): NR  
Input Current (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: P158715  
 CATALOG NUMBER: VST-F09-LED-E-U-SL4

### Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd  
 - - - 1/2 Max cd

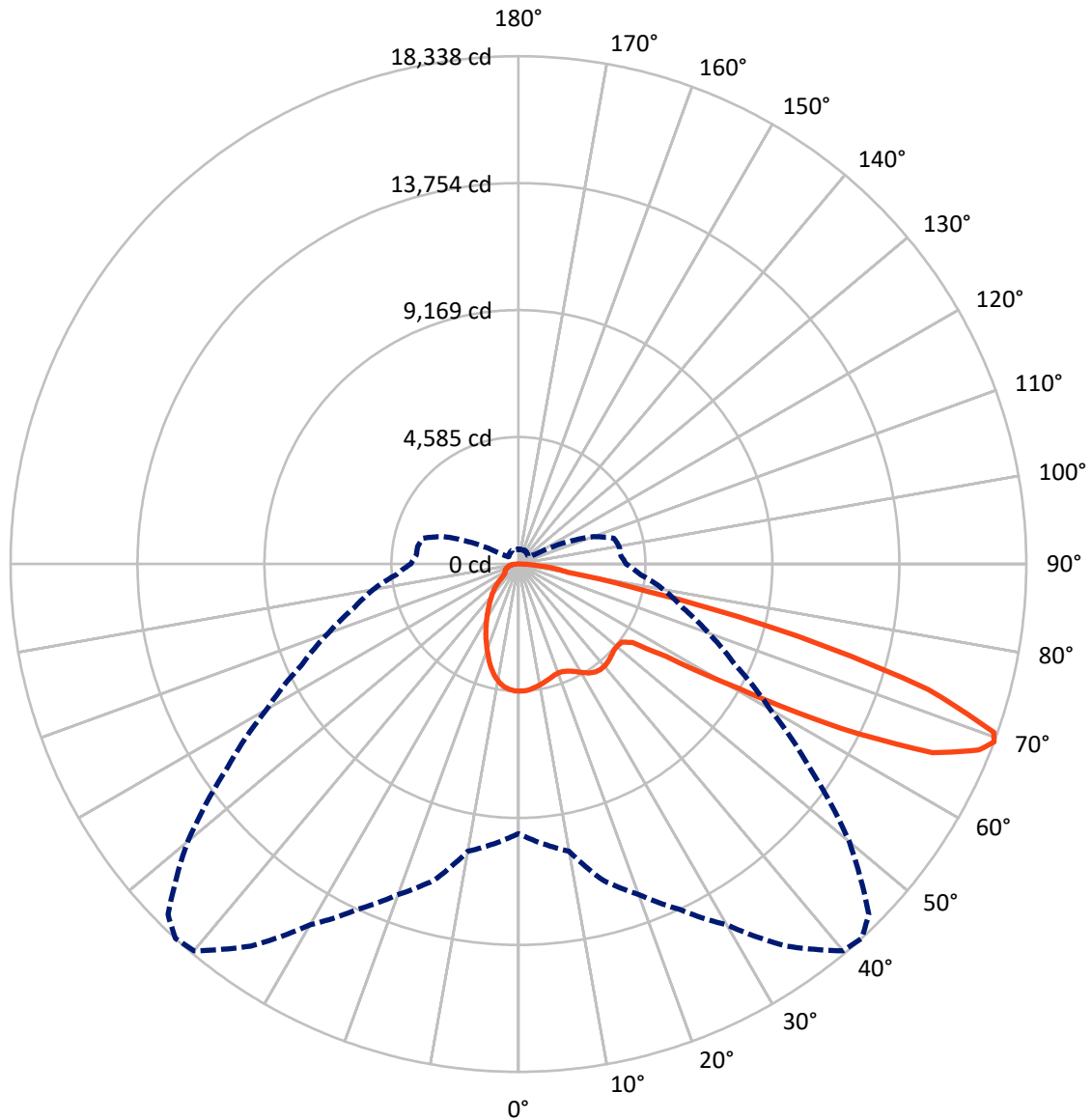


Based on 25 foot mounting height. Maximum calculated value = 7.3 fc  
 Type IV - Short - Full Cutoff

REPORT NUMBER: P158715

CATALOG NUMBER: VST-F09-LED-E-U-SL4

### Luminous Intensity Polar Plot



— Vertical Plane Through 42.5-Deg Lateral    - - - Horizontal Cone Through 69-Deg Vertical

REPORT NUMBER: P158715

CATALOG NUMBER: VST-F09-LED-E-U-SL4

**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	4791.6	0.0	4791.6
	% Fixture	22.2	0.0	22.2
<b>Street Side</b>	Lumens	16761.5	0.0	16761.5
	% Fixture	77.8	0.0	77.8
<b>Total</b>	Lumens	21553.1	0.0	21553.1
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	427.3	2.0
10°-20°	1151.6	5.3
20°-30°	1679.2	7.8
30°-40°	2140.7	9.9
40°-50°	2490.8	11.6
50°-60°	3789.7	17.6
60°-70°	6694.3	31.1
70°-80°	2762.5	12.8
80°-90°	417.1	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°	21553.1	100.0
0°-180°	21553.1	100.0



REPORT NUMBER: P158715

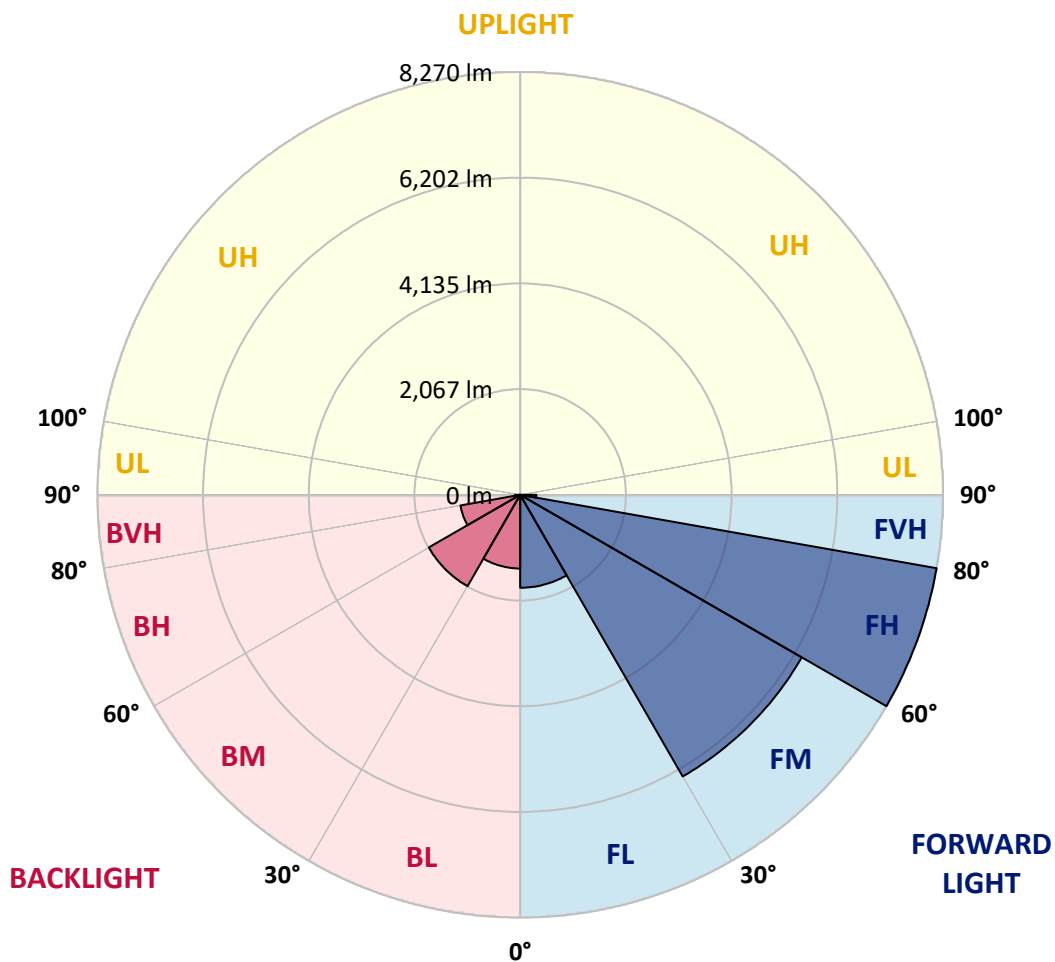
CATALOG NUMBER: VST-F09-LED-E-U-SL4

**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1817.5	8.4			
FM	(30°-60°)	6358.7	29.5			
FH	(60°-80°)	8269.9	38.4			G4/12000
FVH	(80°-90°)	315.4	1.5			G3/500
BL	(0°-30°)	1440.6	6.7	B3/2500		
BM	(30°-60°)	2062.4	9.6	B2/2500		
BH	(60°-80°)	1186.9	5.5	B3/2500		G3/2500
BVH	(80°-90°)	101.7	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-G4**

Type IV Short





REPORT NUMBER: P158715

CATALOG NUMBER: VST-F09-LED-E-U-SL4

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	42.5°	45°
0°	4590.1	4590.1	4590.1	4590.1	4590.1	4590.1	4590.1	4590.1	4590.1	4590.1	4590.1
2.5°	4575.2	4591.6	4585.6	4585.6	4590.1	4582.7	4582.7	4585.6	4578.2	4582.7	4581.2
5°	4558.9	4567.8	4564.8	4564.8	4564.8	4558.9	4555.9	4554.4	4544.0	4544.0	4539.6
7.5°	4523.2	4526.2	4530.6	4524.7	4523.2	4521.7	4511.3	4505.4	4493.5	4483.1	4486.1
10°	4475.7	4474.2	4481.6	4477.2	4471.2	4466.8	4457.8	4447.4	4434.1	4420.7	4419.2
12.5°	4422.2	4420.7	4426.6	4423.7	4419.2	4410.3	4402.9	4385.0	4364.2	4347.9	4346.4
15°	4388.0	4383.5	4389.5	4383.5	4376.1	4367.2	4353.8	4331.5	4294.4	4278.0	4264.7
17.5°	4420.7	4413.3	4416.2	4408.8	4398.4	4374.6	4343.4	4295.9	4242.4	4214.1	4193.3
20°	4535.1	4521.7	4524.7	4517.3	4493.5	4462.3	4402.9	4319.6	4229.0	4182.9	4150.2
22.5°	4698.6	4688.2	4692.6	4685.2	4661.4	4613.9	4524.7	4405.8	4276.5	4209.7	4157.7
25°	4946.7	4955.6	4958.6	4924.4	4911.0	4823.4	4700.0	4535.1	4362.7	4284.0	4212.7
27.5°	5226.1	5226.1	5239.4	5226.1	5199.3	5096.8	4922.9	4723.8	4502.4	4395.4	4309.2
30°	5498.0	5495.0	5520.3	5517.3	5474.2	5358.3	5160.7	4918.5	4665.9	4545.5	4435.5
32.5°	5786.3	5795.2	5811.5	5805.6	5749.1	5588.6	5350.9	5087.9	4821.9	4689.6	4566.3
35°	6098.3	6102.8	6108.7	6105.7	5991.3	5789.2	5490.6	5196.3	4920.0	4789.2	4661.4
37.5°	6410.4	6405.9	6398.5	6334.6	6203.8	5923.0	5575.3	5258.8	4969.0	4827.8	4695.6
40°	6689.7	6664.5	6640.7	6541.1	6340.5	5998.8	5608.0	5273.6	4964.5	4818.9	4689.6
42.5°	6842.8	6814.5	6765.5	6640.7	6397.0	6006.2	5585.7	5229.0	4918.5	4774.3	4646.5
45°	6871.0	6850.2	6802.7	6663.0	6383.6	5958.6	5517.3	5156.2	4850.1	4706.0	4585.6
47.5°	6804.1	6787.8	6741.7	6603.5	6325.7	5887.3	5438.6	5079.0	4783.3	4648.0	4532.1
50°	6701.6	6686.8	6651.1	6524.8	6260.3	5838.3	5398.4	5038.8	4761.0	4637.6	4530.6
52.5°	6868.0	6879.9	6775.9	6637.7	6330.1	5881.4	5443.0	5080.4	4801.1	4679.2	4567.8
55°	9455.1	9438.7	8813.1	8288.6	7351.0	6501.0	5866.5	5410.3	5111.7	4989.8	4885.8
57.5°	12285.8	12229.3	11972.3	11481.9	10474.4	9129.6	7906.7	6866.6	6456.4	6281.1	6293.0
60°	13210.0	13230.9	13175.9	13002.0	12640.9	11941.1	11010.9	10229.2	9459.5	9083.6	9126.7
62.5°	13722.7	13759.8	13807.4	13768.8	13651.4	13489.4	13372.0	13443.3	13336.4	13065.9	12850.5
65°	13794.0	13869.8	14027.3	14152.1	14213.1	14366.1	14725.7	15587.6	16375.1	16427.1	16048.2
67.5°	12382.4	12591.9	12933.7	13511.7	14006.5	14550.4	15418.2	16728.8	17890.8	17929.4	17575.8
69°	9735.9	10138.6	10538.3	11829.6	12698.9	13764.3	15048.2	16838.7	18231.1	18338.0	17892.3
70°	7801.2	8040.4	8385.2	9682.4	10981.1	12339.3	14199.7	16476.2	17997.8	18213.2	17721.4
72.5°	4683.7	4775.8	4894.7	5359.8	6028.5	7238.0	9704.7	13432.9	15181.9	15470.2	14844.6
75°	3028.4	3022.4	3032.8	3162.1	3200.7	3432.5	4209.7	6911.1	9903.8	10426.9	9678.0
77.5°	2280.9	2301.7	2269.0	2280.9	2270.5	2332.9	2356.7	2474.1	3909.5	4815.9	4306.3
80°	2013.5	2023.9	2025.3	2019.4	1946.6	1940.6	1979.3	1912.4	1777.2	1803.9	1728.2
82.5°	1148.6	1147.1	1160.5	1261.6	1303.2	1439.9	1496.3	1527.6	1410.2	1322.5	1196.2
85°	744.5	750.4	765.3	796.5	765.3	777.1	763.8	790.5	725.1	673.1	601.8
87.5°	304.6	304.6	323.9	352.2	328.4	322.5	276.4	273.4	231.8	209.5	163.5
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: P158715

CATALOG NUMBER: VST-F09-LED-E-U-SL4

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°
0°	4590.1	4590.1	4590.1	4590.1	4590.1	4590.1	4590.1	4590.1	4590.1	4590.1	4590.1
2.5°	4572.3	4581.2	4576.7	4582.7	4578.2	4578.2	4572.3	4570.8	4575.2	4569.3	4570.8
5°	4532.1	4533.6	4526.2	4529.2	4520.2	4517.3	4512.8	4500.9	4508.4	4500.9	4503.9
7.5°	4474.2	4469.7	4459.3	4444.5	4434.1	4429.6	4420.7	4404.3	4407.3	4393.9	4401.4
10°	4399.9	4385.0	4367.2	4344.9	4330.0	4316.7	4297.4	4278.0	4267.6	4255.7	4254.3
12.5°	4316.7	4298.8	4275.1	4240.9	4208.2	4185.9	4156.2	4122.0	4111.6	4092.3	4081.9
15°	4226.0	4197.8	4169.6	4130.9	4095.3	4061.1	4021.0	3977.9	3949.6	3919.9	3897.6
17.5°	4144.3	4111.6	4074.5	4037.3	3998.7	3957.1	3906.5	3853.1	3811.4	3756.5	3711.9
20°	4080.4	4038.8	4001.6	3963.0	3919.9	3869.4	3808.5	3740.1	3670.3	3609.4	3557.4
22.5°	4055.1	3989.8	3945.2	3906.5	3863.5	3804.0	3729.7	3649.5	3564.8	3480.1	3411.7
25°	4075.9	3979.4	3909.5	3863.5	3826.3	3765.4	3682.2	3584.1	3486.0	3385.0	3292.9
27.5°	4136.9	4013.5	3912.5	3839.7	3796.6	3735.7	3648.0	3544.0	3428.1	3315.1	3202.2
30°	4232.0	4071.5	3943.7	3841.2	3774.3	3704.5	3612.3	3492.0	3374.6	3245.3	3122.0
32.5°	4324.1	4132.4	3979.4	3847.1	3744.6	3653.9	3551.4	3432.5	3306.2	3171.0	3043.2
35°	4389.5	4172.5	3992.7	3833.7	3698.5	3585.6	3475.6	3356.7	3233.4	3095.2	2964.5
37.5°	4420.7	4194.8	3994.2	3798.1	3637.6	3512.8	3395.4	3278.0	3162.1	3031.3	2908.0
40°	4419.2	4193.3	3973.4	3752.0	3564.8	3432.5	3316.6	3202.2	3093.7	2979.3	2867.9
42.5°	4386.5	4169.6	3943.7	3707.4	3512.8	3365.7	3245.3	3135.3	3043.2	2942.2	2848.6
45°	4336.0	4129.4	3912.5	3686.6	3497.9	3350.8	3223.0	3116.0	3034.3	2942.2	2861.9
47.5°	4297.4	4107.2	3917.0	3723.8	3544.0	3390.9	3255.7	3138.3	3068.5	2994.2	2937.7
50°	4303.3	4117.6	3931.8	3746.1	3576.7	3422.1	3291.4	3184.4	3133.9	3114.5	3101.2
52.5°	4334.5	4133.9	3976.4	3864.9	3807.0	3691.1	3613.8	3547.0	3584.1	3511.3	3425.1
55°	4732.7	4667.4	4820.4	4964.5	5147.3	5215.7	5150.3	5138.4	5197.8	4951.2	4385.0
57.5°	6377.7	6547.1	6783.3	6908.2	7059.7	7019.6	6868.0	6741.7	6593.1	6304.9	5599.0
60°	9175.7	9047.9	8940.9	8639.3	8392.6	8104.3	7783.4	7508.5	7245.5	6830.9	6067.1
62.5°	12058.4	11171.3	10429.8	9713.6	9137.1	8658.6	8193.5	7780.4	7382.2	6804.1	5982.4
65°	14551.9	12684.0	11291.7	10241.1	9398.6	8672.0	8074.6	7504.0	6997.3	6319.7	5506.9
67.5°	15672.3	13331.9	11306.6	9801.3	8634.8	7648.2	6875.5	6013.6	5446.0	5012.1	4554.4
69°	15589.0	12837.1	10499.7	8646.7	7306.4	6156.3	5327.1	4428.1	3884.3	3700.0	3689.6
70°	15193.8	11999.0	9557.6	7709.1	6175.6	5032.9	4237.9	3431.0	2924.3	2798.0	3022.4
72.5°	12404.7	8478.8	5989.8	4573.7	3517.2	2780.2	2267.6	1799.5	1436.9	1245.2	1286.8
75°	7006.2	3925.9	2538.0	1918.4	1621.2	1340.3	1150.1	980.7	887.1	720.7	570.6
77.5°	2546.9	1685.1	1340.3	1159.0	821.7	566.1	474.0	414.6	375.9	375.9	358.1
80°	1610.8	1269.0	885.6	606.3	448.8	390.8	341.8	300.2	276.4	270.4	276.4
82.5°	1006.0	777.1	496.3	380.4	319.5	286.8	249.6	218.4	199.1	194.7	203.6
85°	496.3	384.9	301.6	269.0	252.6	234.8	206.5	176.8	170.9	182.8	214.0
87.5°	148.6	132.2	108.5	112.9	118.9	115.9	92.1	80.2	75.8	99.6	156.0
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: P158715

CATALOG NUMBER: VST-F09-LED-E-U-SL4

**CANDELA DISTRIBUTION (continued):**

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	4590.1	4590.1	4590.1	4590.1	4590.1	4590.1	4590.1	4590.1	4590.1	4590.1	4590.1
2.5°	4573.7	4572.3	4575.2	4570.8	4573.7	4575.2	4572.3	4585.6	4576.7	4578.2	4584.1
5°	4506.9	4503.9	4515.8	4512.8	4518.8	4524.7	4521.7	4541.0	4533.6	4539.6	4551.4
7.5°	4395.4	4401.4	4402.9	4402.9	4414.7	4434.1	4438.5	4450.4	4450.4	4466.8	4478.6
10°	4246.8	4248.3	4257.2	4255.7	4270.6	4291.4	4294.4	4315.2	4322.6	4349.4	4365.7
12.5°	4074.5	4067.0	4065.5	4064.1	4083.4	4105.7	4108.6	4144.3	4159.2	4182.9	4209.7
15°	3881.3	3862.0	3856.0	3867.9	3863.5	3876.8	3890.2	3909.5	3930.3	3977.9	4001.6
17.5°	3692.6	3653.9	3643.5	3630.2	3616.8	3616.8	3622.7	3646.5	3689.6	3714.9	3768.4
20°	3499.4	3453.3	3416.2	3380.5	3349.3	3337.4	3338.9	3368.6	3399.8	3441.4	3492.0
22.5°	3337.4	3267.6	3203.7	3156.1	3092.3	3090.8	3081.8	3090.8	3124.9	3135.3	3163.6
25°	3197.8	3104.1	3018.0	2940.7	2878.3	2845.6	2836.7	2833.7	2817.4	2812.9	2792.1
27.5°	3089.3	2976.3	2864.9	2771.3	2694.0	2649.4	2593.0	2552.9	2494.9	2480.0	2442.9
30°	3000.1	2878.3	2756.4	2634.6	2546.9	2466.7	2371.6	2301.7	2212.6	2154.6	2104.1
32.5°	2913.9	2790.6	2667.3	2546.9	2411.7	2286.9	2162.0	2053.6	1954.0	1864.9	1790.6
35°	2842.6	2725.2	2600.4	2454.8	2282.4	2102.6	1952.5	1829.2	1692.5	1598.9	1505.3
37.5°	2796.5	2689.6	2564.7	2364.1	2142.7	1949.6	1778.7	1628.6	1488.9	1347.8	1242.2
40°	2775.7	2682.1	2526.1	2280.9	2020.9	1806.9	1618.2	1451.8	1273.5	1114.5	1001.5
42.5°	2774.3	2679.2	2472.6	2188.8	1919.8	1686.5	1477.0	1277.9	1080.3	916.8	805.4
45°	2801.0	2674.7	2416.1	2111.5	1830.7	1587.0	1337.4	1095.1	873.7	751.9	692.5
47.5°	2872.3	2682.1	2370.1	2040.2	1746.0	1466.6	1176.9	894.5	711.8	655.3	655.3
50°	3000.1	2725.2	2358.2	1989.7	1661.3	1326.9	980.7	722.2	630.0	630.0	647.9
52.5°	3196.3	2815.9	2379.0	1954.0	1555.8	1142.7	772.7	622.6	604.8	621.1	644.9
55°	3648.0	2976.3	2407.2	1893.1	1395.3	906.4	637.5	588.4	595.9	615.2	637.5
57.5°	4477.2	3319.6	2436.9	1759.4	1136.7	698.4	578.0	575.1	588.4	606.3	625.6
60°	5022.5	3756.5	2512.7	1557.3	860.4	576.5	548.3	566.1	582.5	597.3	612.2
62.5°	5022.5	3879.8	2569.2	1331.4	646.4	524.5	529.0	557.2	576.5	584.0	592.9
65°	4701.5	3653.9	2377.5	1084.7	526.0	494.8	511.2	539.4	557.2	563.2	570.6
67.5°	4108.6	3227.5	2003.1	817.3	469.6	469.6	490.4	511.2	526.0	537.9	549.8
69°	3572.2	2896.1	1763.8	692.5	447.3	450.2	471.0	488.9	506.7	521.6	536.4
70°	3185.9	2648.0	1597.4	628.6	433.9	435.4	456.2	475.5	491.8	508.2	526.0
72.5°	1705.9	1829.2	1214.0	515.6	399.7	404.2	423.5	441.3	456.2	472.5	488.9
75°	581.0	786.1	772.7	422.0	361.1	373.0	384.9	401.2	420.5	430.9	439.8
77.5°	340.3	352.2	411.6	343.3	325.4	331.4	344.7	358.1	374.5	384.9	392.3
80°	285.3	283.8	285.3	279.4	283.8	297.2	306.1	323.9	338.8	341.8	340.3
82.5°	231.8	243.7	245.2	242.2	255.6	266.0	273.4	283.8	282.3	285.3	291.2
85°	206.5	205.1	215.5	216.9	216.9	209.5	211.0	211.0	211.0	215.5	216.9
87.5°	206.5	172.4	133.7	120.4	126.3	118.9	112.9	111.4	123.3	135.2	132.2
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: P158715

CATALOG NUMBER: VST-F09-LED-E-U-SL4

**CANDELA DISTRIBUTION (continued):**

	160°	165°	170°	175°	180°
0°	4590.1	4590.1	4590.1	4590.1	4590.1
2.5°	4587.1	4591.6	4588.6	4588.6	4591.6
5°	4555.9	4563.3	4560.4	4563.3	4563.3
7.5°	4484.6	4495.0	4502.4	4509.8	4505.4
10°	4382.1	4399.9	4411.8	4420.7	4416.2
12.5°	4229.0	4245.3	4270.6	4285.5	4273.6
15°	4019.5	4065.5	4080.4	4101.2	4089.3
17.5°	3801.0	3829.3	3847.1	3866.4	3878.3
20°	3509.8	3532.1	3555.9	3564.8	3551.4
22.5°	3159.1	3171.0	3166.5	3179.9	3153.2
25°	2774.3	2781.7	2777.2	2789.1	2766.8
27.5°	2410.2	2408.7	2410.2	2395.3	2380.5
30°	2059.5	2046.1	2040.2	2017.9	2013.5
32.5°	1746.0	1699.9	1676.1	1643.5	1636.0
35°	1432.5	1367.1	1324.0	1286.8	1270.5
37.5°	1151.6	1072.9	1022.3	989.6	985.2
40°	910.9	838.1	802.4	784.6	781.6
42.5°	743.0	711.8	702.9	702.9	702.9
45°	677.6	676.1	683.5	689.5	691.0
47.5°	664.2	673.1	683.5	692.5	695.4
50°	664.2	673.1	680.6	689.5	692.5
52.5°	661.2	668.7	671.6	677.6	680.6
55°	652.3	656.8	656.8	659.8	662.7
57.5°	637.5	640.4	636.0	639.0	646.4
60°	622.6	625.6	618.2	625.6	630.0
62.5°	606.3	607.8	604.8	610.7	610.7
65°	579.5	576.5	581.0	585.5	586.9
67.5°	552.8	545.3	549.8	551.3	554.3
69°	532.0	527.5	529.0	532.0	534.9
70°	517.1	514.1	517.1	521.6	526.0
72.5°	480.0	481.4	491.8	500.8	509.7
75°	445.8	456.2	469.6	488.9	499.3
77.5°	404.2	411.6	422.0	442.8	462.1
80°	349.2	353.7	355.1	362.6	361.1
82.5°	283.8	279.4	276.4	273.4	271.9
85°	203.6	202.1	190.2	181.3	181.3
87.5°	121.8	115.9	110.0	102.5	98.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)