

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: P158745

Luminaire Tested: **VST-F12-LED-E-U-SL4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P158745
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-F12-LED-E-U-SL4
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(12) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 W/ SPILL LIGHT CONTROL
Light Source: (84) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 28737.5 lumens
Efficiency: N/A
Efficacy: 93.7 lumens/watt
Luminous Opening: Rectangular (W 2' x L: 1' x H: 0')
IES Classification: Type IV - Short - Full Cutoff
BUG Rating: B3 - U0 - G4

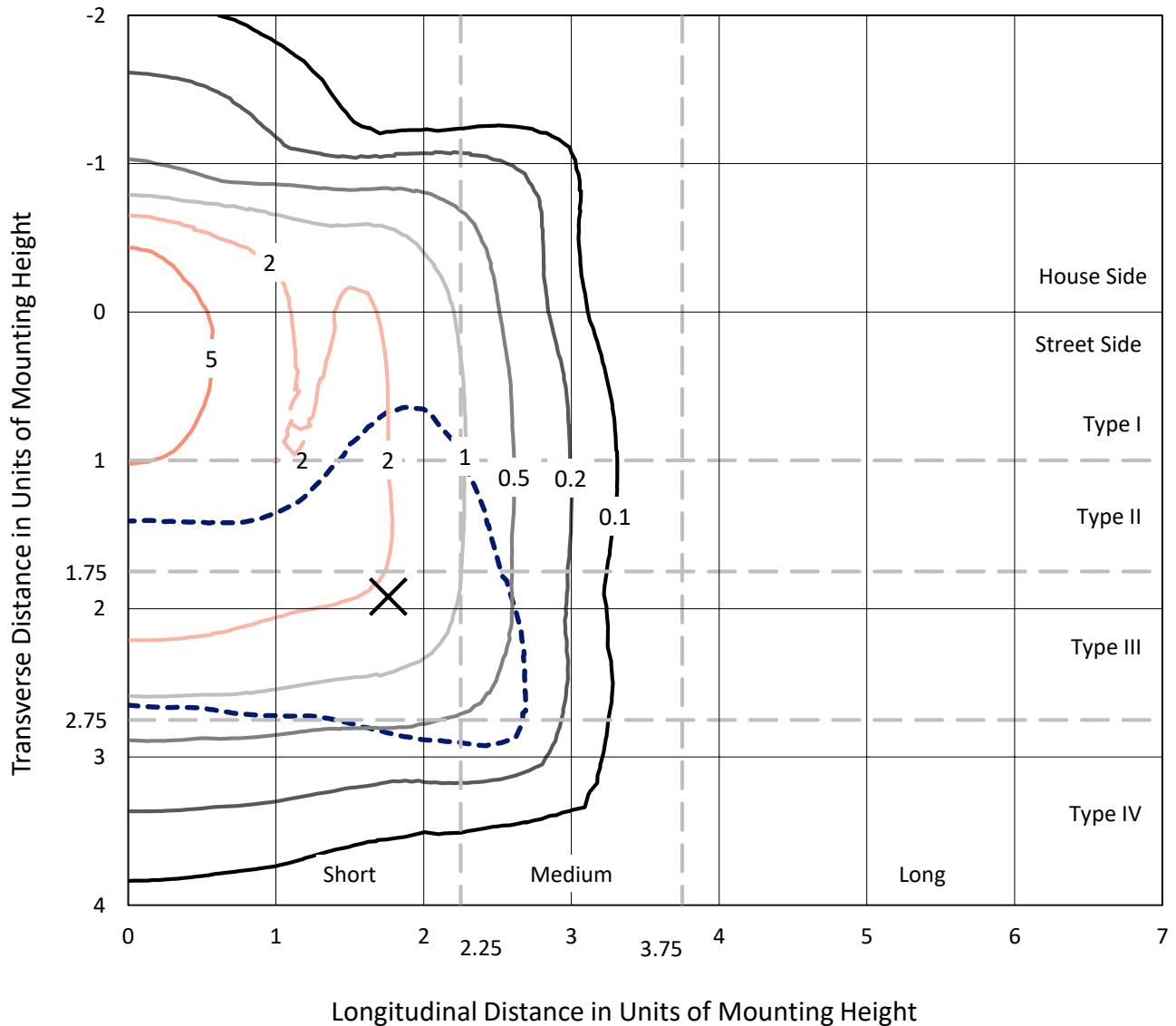
Input Watts (W): 306.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

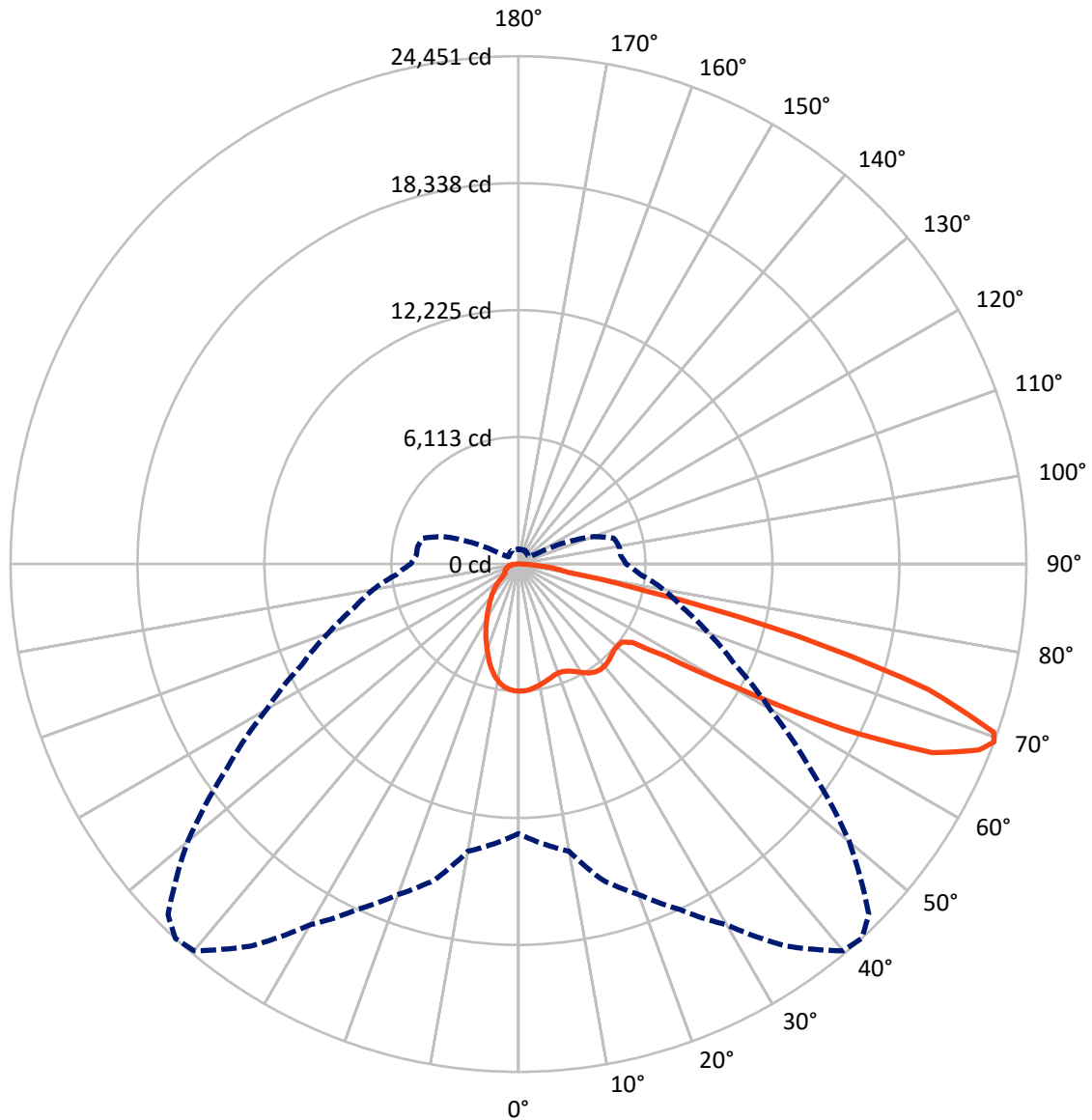


Based on 25 foot mounting height. Maximum calculated value = 9.8 fc
 Type IV - Short - Full Cutoff

REPORT NUMBER: P158745

CATALOG NUMBER: VST-F12-LED-E-U-SL4

Luminous Intensity Polar Plot



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



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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	6388.8	0.0	6388.8
	% Fixture	22.2	0.0	22.2
Street Side	Lumens	22348.7	0.0	22348.7
	% Fixture	77.8	0.0	77.8
Total	Lumens	28737.5	0.0	28737.5
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	569.7	2.0
10°-20°	1535.4	5.3
20°-30°	2239.0	7.8
30°-40°	2854.3	9.9
40°-50°	3321.0	11.6
50°-60°	5052.9	17.6
60°-70°	8925.8	31.1
70°-80°	3683.3	12.8
80°-90°	556.1	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°	28737.5	100.0
0°-180°	28737.5	100.0



REPORT NUMBER: P158745

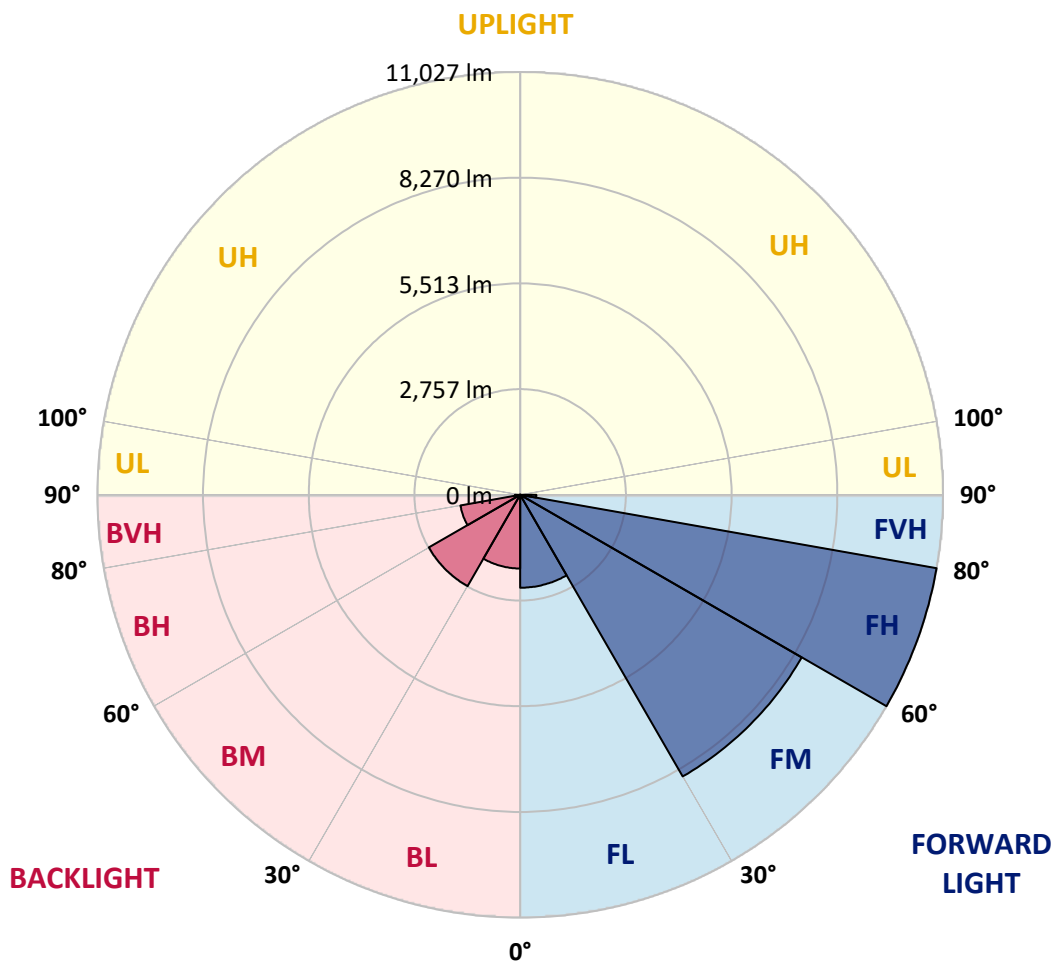
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2423.3	8.4			
FM	(30°-60°)	8478.3	29.5			
FH	(60°-80°)	11026.6	38.4			G4/12000
FVH	(80°-90°)	420.6	1.5			G3/500
BL	(0°-30°)	1920.9	6.7	B3/2500		
BM	(30°-60°)	2749.9	9.6	B3/5000		
BH	(60°-80°)	1582.5	5.5	B3/2500		G3/2500
BVH	(80°-90°)	135.6	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-G4

Type IV Short





REPORT NUMBER: P158745

CATALOG NUMBER: VST-F12-LED-E-U-SL4

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	42.5°	45°
0°	6120.1	6120.1	6120.1	6120.1	6120.1	6120.1	6120.1	6120.1	6120.1	6120.1	6120.1
2.5°	6100.3	6122.1	6114.2	6114.2	6120.1	6110.2	6110.2	6114.2	6104.3	6110.2	6108.2
5°	6078.5	6090.4	6086.4	6086.4	6086.4	6078.5	6074.5	6072.6	6058.7	6058.7	6052.7
7.5°	6031.0	6034.9	6040.9	6032.9	6031.0	6029.0	6015.1	6007.2	5991.3	5977.5	5981.4
10°	5967.6	5965.6	5975.5	5969.5	5961.6	5955.7	5943.8	5929.9	5912.1	5894.2	5892.3
12.5°	5896.2	5894.2	5902.2	5898.2	5892.3	5880.4	5870.5	5846.7	5819.0	5797.2	5795.2
15°	5850.7	5844.7	5852.6	5844.7	5834.8	5822.9	5805.1	5775.4	5725.8	5704.0	5686.2
17.5°	5894.2	5884.3	5888.3	5878.4	5864.5	5832.8	5791.2	5727.8	5656.5	5618.9	5591.1
20°	6046.8	6029.0	6032.9	6023.0	5991.3	5949.7	5870.5	5759.5	5638.7	5577.2	5533.7
22.5°	6264.7	6250.9	6256.8	6246.9	6215.2	6151.8	6032.9	5874.4	5702.1	5612.9	5543.6
25°	6595.6	6607.5	6611.5	6565.9	6548.1	6431.2	6266.7	6046.8	5817.0	5712.0	5616.9
27.5°	6968.1	6968.1	6985.9	6968.1	6932.4	6795.7	6563.9	6298.4	6003.2	5860.6	5745.7
30°	7330.7	7326.7	7360.4	7356.4	7299.0	7144.4	6880.9	6558.0	6221.2	6060.7	5914.1
32.5°	7715.0	7726.9	7748.7	7740.8	7665.5	7451.5	7134.5	6783.8	6429.2	6252.9	6088.4
35°	8131.1	8137.0	8145.0	8141.0	7988.4	7719.0	7320.8	6928.5	6560.0	6385.6	6215.2
37.5°	8547.2	8541.2	8531.3	8446.1	8271.8	7897.3	7433.7	7011.7	6625.3	6437.1	6260.8
40°	8919.6	8886.0	8854.3	8721.5	8454.0	7998.3	7477.3	7031.5	6619.4	6425.2	6252.9
42.5°	9123.7	9086.1	9020.7	8854.3	8529.3	8008.3	7447.6	6972.1	6558.0	6365.8	6195.4
45°	9161.3	9133.6	9070.2	8884.0	8511.5	7944.9	7356.4	6875.0	6466.8	6274.6	6114.2
47.5°	9072.2	9050.4	8989.0	8804.7	8434.2	7849.8	7251.4	6771.9	6377.7	6197.4	6042.8
50°	8935.5	8915.7	8868.1	8699.7	8347.0	7784.4	7197.9	6718.5	6348.0	6183.5	6040.9
52.5°	9157.4	9173.2	9034.5	8850.3	8440.2	7841.8	7257.4	6773.9	6401.5	6239.0	6090.4
55°	12606.8	12585.0	11750.9	11051.5	9801.3	8668.0	7822.0	7213.8	6815.5	6653.1	6514.4
57.5°	16381.1	16305.8	15963.0	15309.2	13965.9	12172.9	10542.3	9155.4	8608.6	8374.8	8390.6
60°	17613.4	17641.1	17567.8	17336.0	16854.6	15921.4	14681.1	13639.0	12612.7	12111.4	12168.9
62.5°	18296.9	18346.5	18409.9	18358.4	18201.8	17985.9	17829.4	17924.5	17781.8	17421.2	17133.9
65°	18392.0	18493.1	18703.1	18869.5	18950.8	19154.8	19634.3	20783.4	21833.5	21902.8	21397.6
67.5°	16509.8	16789.2	17244.9	18015.6	18675.4	19400.5	20557.6	22305.0	23854.4	23905.9	23434.3
69°	12981.2	13518.1	14051.1	15772.8	16931.8	18352.4	20064.2	22451.6	24308.1	24450.7	23856.3
70°	10401.6	10720.6	11180.2	12909.9	14641.5	16452.4	18932.9	21968.2	23997.0	24284.3	23628.5
72.5°	6244.9	6367.8	6526.3	7146.4	8038.0	9650.7	12939.6	17910.6	20242.5	20626.9	19792.8
75°	4037.8	4029.9	4043.8	4216.1	4267.6	4576.7	5612.9	9214.8	13205.1	13902.5	12903.9
77.5°	3041.2	3069.0	3025.4	3041.2	3027.4	3110.6	3142.3	3298.8	5212.7	6421.3	5741.7
80°	2684.6	2698.5	2700.5	2692.5	2595.5	2587.5	2639.0	2549.9	2369.6	2405.2	2304.2
82.5°	1531.5	1529.5	1547.4	1682.1	1737.6	1919.8	1995.1	2036.7	1880.2	1763.3	1594.9
85°	992.6	1000.5	1020.3	1062.0	1020.3	1036.2	1018.4	1054.0	966.9	897.5	802.4
87.5°	406.2	406.2	431.9	469.6	437.9	429.9	368.5	364.6	309.1	279.4	217.9
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: P158745

CATALOG NUMBER: VST-F12-LED-E-U-SL4

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°
0°	6120.1	6120.1	6120.1	6120.1	6120.1	6120.1	6120.1	6120.1	6120.1	6120.1	6120.1
2.5°	6096.3	6108.2	6102.3	6110.2	6104.3	6104.3	6096.3	6094.4	6100.3	6092.4	6094.4
5°	6042.8	6044.8	6034.9	6038.9	6027.0	6023.0	6017.1	6001.2	6011.1	6001.2	6005.2
7.5°	5965.6	5959.6	5945.8	5925.9	5912.1	5906.1	5894.2	5872.5	5876.4	5858.6	5868.5
10°	5866.5	5846.7	5822.9	5793.2	5773.4	5755.6	5729.8	5704.0	5690.2	5674.3	5672.3
12.5°	5755.6	5731.8	5700.1	5654.5	5610.9	5581.2	5541.6	5496.0	5482.1	5456.4	5442.5
15°	5634.7	5597.1	5559.4	5507.9	5460.4	5414.8	5361.3	5303.8	5266.2	5226.6	5196.8
17.5°	5525.7	5482.1	5432.6	5383.1	5331.6	5276.1	5208.7	5137.4	5081.9	5008.6	4949.2
20°	5440.5	5385.1	5335.5	5284.0	5226.6	5159.2	5078.0	4986.8	4893.7	4812.5	4743.1
22.5°	5406.9	5319.7	5260.2	5208.7	5151.3	5072.0	4973.0	4866.0	4753.0	4640.1	4549.0
25°	5434.6	5305.8	5212.7	5151.3	5101.7	5020.5	4909.6	4778.8	4648.0	4513.3	4390.5
27.5°	5515.8	5351.4	5216.7	5119.6	5062.1	4980.9	4864.0	4725.3	4570.8	4420.2	4269.6
30°	5642.6	5428.7	5258.3	5121.6	5032.4	4939.3	4816.4	4656.0	4499.4	4327.1	4162.6
32.5°	5765.5	5509.9	5305.8	5129.5	4992.8	4871.9	4735.2	4576.7	4408.3	4228.0	4057.6
35°	5852.6	5563.4	5323.6	5111.7	4931.4	4780.8	4634.2	4475.7	4311.2	4127.0	3952.6
37.5°	5894.2	5593.1	5325.6	5064.1	4850.1	4683.7	4527.2	4370.7	4216.1	4041.8	3877.3
40°	5892.3	5591.1	5297.9	5002.7	4753.0	4576.7	4422.2	4269.6	4125.0	3972.4	3823.8
42.5°	5848.7	5559.4	5258.3	4943.2	4683.7	4487.6	4327.1	4180.5	4057.6	3922.9	3798.1
45°	5781.3	5505.9	5216.7	4915.5	4663.9	4467.7	4297.4	4154.7	4045.7	3922.9	3815.9
47.5°	5729.8	5476.2	5222.6	4965.0	4725.3	4521.2	4340.9	4184.4	4091.3	3992.2	3917.0
50°	5737.7	5490.1	5242.4	4994.8	4768.9	4562.8	4388.5	4245.8	4178.5	4152.7	4134.9
52.5°	5779.3	5511.9	5301.9	5153.3	5076.0	4921.4	4818.4	4729.3	4778.8	4681.7	4566.8
55°	6310.3	6223.1	6427.2	6619.4	6863.1	6954.2	6867.0	6851.2	6930.4	6601.6	5846.7
57.5°	8503.6	8729.4	9044.5	9210.9	9413.0	9359.5	9157.4	8989.0	8790.8	8406.5	7465.4
60°	12234.3	12063.9	11921.2	11519.0	11190.2	10805.8	10377.8	10011.3	9660.6	9107.9	8089.5
62.5°	16077.9	14895.1	13906.5	12951.5	12182.8	11544.8	10924.7	10373.9	9842.9	9072.2	7976.6
65°	19402.5	16912.0	15055.6	13654.8	12531.5	11562.6	10766.2	10005.4	9329.8	8426.3	7342.5
67.5°	20896.3	17775.9	15075.4	13068.4	11513.1	10197.5	9167.3	8018.2	7261.3	6682.8	6072.6
69°	20785.4	17116.1	13999.6	11529.0	9741.9	8208.4	7102.8	5904.2	5179.0	4933.3	4919.5
70°	20258.4	15998.7	12743.5	10278.8	8234.1	6710.5	5650.6	4574.7	3899.1	3730.7	4029.9
72.5°	16539.6	11305.1	7986.5	6098.3	4689.6	3706.9	3023.4	2399.3	1915.9	1660.3	1715.8
75°	9341.6	5234.5	3384.0	2557.8	2161.6	1787.1	1533.5	1307.6	1182.8	960.9	760.8
77.5°	3395.9	2246.7	1787.1	1545.4	1095.6	754.9	632.0	552.8	501.3	501.3	477.5
80°	2147.7	1692.0	1180.8	808.4	598.3	521.1	455.7	400.2	368.5	360.6	368.5
82.5°	1341.3	1036.2	661.7	507.2	426.0	382.4	332.9	291.2	265.5	259.5	271.4
85°	661.7	513.1	402.2	358.6	336.8	313.0	275.4	235.8	227.8	243.7	285.3
87.5°	198.1	176.3	144.6	150.6	158.5	154.5	122.8	107.0	101.0	132.7	208.0
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°	6120.1	6120.1	6120.1	6120.1	6120.1	6120.1	6120.1	6120.1	6120.1	6120.1	6120.1
2.5°	6098.3	6096.3	6100.3	6094.4	6098.3	6100.3	6096.3	6114.2	6102.3	6104.3	6112.2
5°	6009.2	6005.2	6021.0	6017.1	6025.0	6032.9	6029.0	6054.7	6044.8	6052.7	6068.6
7.5°	5860.6	5868.5	5870.5	5870.5	5886.3	5912.1	5918.0	5933.9	5933.9	5955.7	5971.5
10°	5662.4	5664.4	5676.3	5674.3	5694.1	5721.9	5725.8	5753.6	5763.5	5799.1	5820.9
12.5°	5432.6	5422.7	5420.7	5418.7	5444.5	5474.2	5478.2	5525.7	5545.5	5577.2	5612.9
15°	5175.1	5149.3	5141.4	5157.2	5151.3	5169.1	5186.9	5212.7	5240.4	5303.8	5335.5
17.5°	4923.4	4871.9	4858.0	4840.2	4822.4	4822.4	4830.3	4862.0	4919.5	4953.1	5024.5
20°	4665.9	4604.4	4554.9	4507.4	4465.8	4449.9	4451.9	4491.5	4533.1	4588.6	4656.0
22.5°	4449.9	4356.8	4271.6	4208.2	4123.0	4121.0	4109.1	4121.0	4166.6	4180.5	4218.1
25°	4263.7	4138.9	4023.9	3920.9	3837.7	3794.1	3782.2	3778.3	3756.5	3750.5	3722.8
27.5°	4119.0	3968.5	3819.9	3695.0	3592.0	3532.6	3457.3	3403.8	3326.5	3306.7	3257.2
30°	4000.2	3837.7	3675.2	3512.8	3395.9	3288.9	3162.1	3069.0	2950.1	2872.8	2805.5
32.5°	3885.3	3720.8	3556.4	3395.9	3215.6	3049.2	2882.7	2738.1	2605.4	2486.5	2387.4
35°	3790.2	3633.6	3467.2	3273.0	3043.2	2803.5	2603.4	2438.9	2256.7	2131.8	2007.0
37.5°	3728.7	3586.1	3419.7	3152.2	2857.0	2599.4	2371.6	2171.5	1985.2	1797.0	1656.3
40°	3701.0	3576.2	3368.1	3041.2	2694.5	2409.2	2157.6	1935.7	1697.9	1485.9	1335.4
42.5°	3699.0	3572.2	3296.8	2918.4	2559.8	2248.7	1969.4	1703.9	1440.4	1222.4	1073.8
45°	3734.7	3566.3	3221.5	2815.4	2440.9	2116.0	1783.1	1460.2	1165.0	1002.5	923.3
47.5°	3829.8	3576.2	3160.1	2720.3	2328.0	1955.5	1569.2	1192.7	949.0	873.7	873.7
50°	4000.2	3633.6	3144.3	2652.9	2215.0	1769.3	1307.6	962.9	840.1	840.1	863.8
52.5°	4261.7	3754.5	3172.0	2605.4	2074.4	1523.6	1030.3	830.1	806.4	828.2	859.9
55°	4864.0	3968.5	3209.6	2524.1	1860.4	1208.6	850.0	784.6	794.5	820.2	850.0
57.5°	5969.5	4426.1	3249.3	2345.8	1515.7	931.2	770.7	766.7	784.6	808.4	834.1
60°	6696.7	5008.6	3350.3	2076.4	1147.1	768.7	731.1	754.9	776.7	796.5	816.3
62.5°	6696.7	5173.1	3425.6	1775.2	861.8	699.4	705.3	743.0	768.7	778.6	790.5
65°	6268.7	4871.9	3170.0	1446.3	701.4	659.8	681.6	719.2	743.0	750.9	760.8
67.5°	5478.2	4303.3	2670.7	1089.7	626.1	626.1	653.8	681.6	701.4	717.2	733.1
69°	4762.9	3861.5	2351.8	923.3	596.4	600.3	628.1	651.8	675.6	695.4	715.2
70°	4247.8	3530.6	2129.9	838.1	578.5	580.5	608.2	634.0	655.8	677.6	701.4
72.5°	2274.5	2438.9	1618.7	687.5	533.0	538.9	564.7	588.4	608.2	630.0	651.8
75°	774.7	1048.1	1030.3	562.7	481.4	497.3	513.1	534.9	560.7	574.6	586.5
77.5°	453.7	469.6	548.8	457.7	433.9	441.8	459.7	477.5	499.3	513.1	523.1
80°	380.4	378.4	380.4	372.5	378.4	396.3	408.1	431.9	451.7	455.7	453.7
82.5°	309.1	324.9	326.9	322.9	340.8	354.6	364.6	378.4	376.4	380.4	388.3
85°	275.4	273.4	287.3	289.3	289.3	279.4	281.3	281.3	281.3	287.3	289.3
87.5°	275.4	229.8	178.3	160.5	168.4	158.5	150.6	148.6	164.4	180.3	176.3
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: P158745

CATALOG NUMBER: VST-F12-LED-E-U-SL4

CANDELA DISTRIBUTION (continued):

	160°	165°	170°	175°	180°
0°	6120.1	6120.1	6120.1	6120.1	6120.1
2.5°	6116.1	6122.1	6118.1	6118.1	6122.1
5°	6074.5	6084.4	6080.5	6084.4	6084.4
7.5°	5979.4	5993.3	6003.2	6013.1	6007.2
10°	5842.7	5866.5	5882.4	5894.2	5888.3
12.5°	5638.7	5660.5	5694.1	5714.0	5698.1
15°	5359.3	5420.7	5440.5	5468.3	5452.4
17.5°	5068.1	5105.7	5129.5	5155.2	5171.1
20°	4679.7	4709.5	4741.2	4753.0	4735.2
22.5°	4212.2	4228.0	4222.1	4239.9	4204.2
25°	3699.0	3708.9	3703.0	3718.8	3689.1
27.5°	3213.6	3211.6	3213.6	3193.8	3174.0
30°	2746.0	2728.2	2720.3	2690.6	2684.6
32.5°	2328.0	2266.6	2234.9	2191.3	2181.4
35°	1909.9	1822.8	1765.3	1715.8	1694.0
37.5°	1535.5	1430.5	1363.1	1319.5	1313.6
40°	1214.5	1117.4	1069.9	1046.1	1042.1
42.5°	990.6	949.0	937.1	937.1	937.1
45°	903.5	901.5	911.4	919.3	921.3
47.5°	885.6	897.5	911.4	923.3	927.2
50°	885.6	897.5	907.4	919.3	923.3
52.5°	881.7	891.6	895.5	903.5	907.4
55°	869.8	875.7	875.7	879.7	883.6
57.5°	850.0	853.9	848.0	851.9	861.8
60°	830.1	834.1	824.2	834.1	840.1
62.5°	808.4	810.3	806.4	814.3	814.3
65°	772.7	768.7	774.7	780.6	782.6
67.5°	737.0	727.1	733.1	735.0	739.0
69°	709.3	703.3	705.3	709.3	713.3
70°	689.5	685.5	689.5	695.4	701.4
72.5°	639.9	641.9	655.8	667.7	679.6
75°	594.4	608.2	626.1	651.8	665.7
77.5°	538.9	548.8	562.7	590.4	616.2
80°	465.6	471.5	473.5	483.4	481.4
82.5°	378.4	372.5	368.5	364.6	362.6
85°	271.4	269.5	253.6	241.7	241.7
87.5°	162.5	154.5	146.6	136.7	130.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)