

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: P157835

Luminaire Tested: **VST-F09-LED-E-U-5XQ**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P157835
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33710)
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-5XQ
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(9) LIGHTBARS WITH AccuLED OPTICS - TYPE 5 SQUARE EXTRA WIDE
Light Source: (63) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 23497.2 lumens
Efficiency: N/A
Efficacy: 100.1 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')
IES Classification: Type V - Short - Non-Cutoff
BUG Rating: B5 - U2 - 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

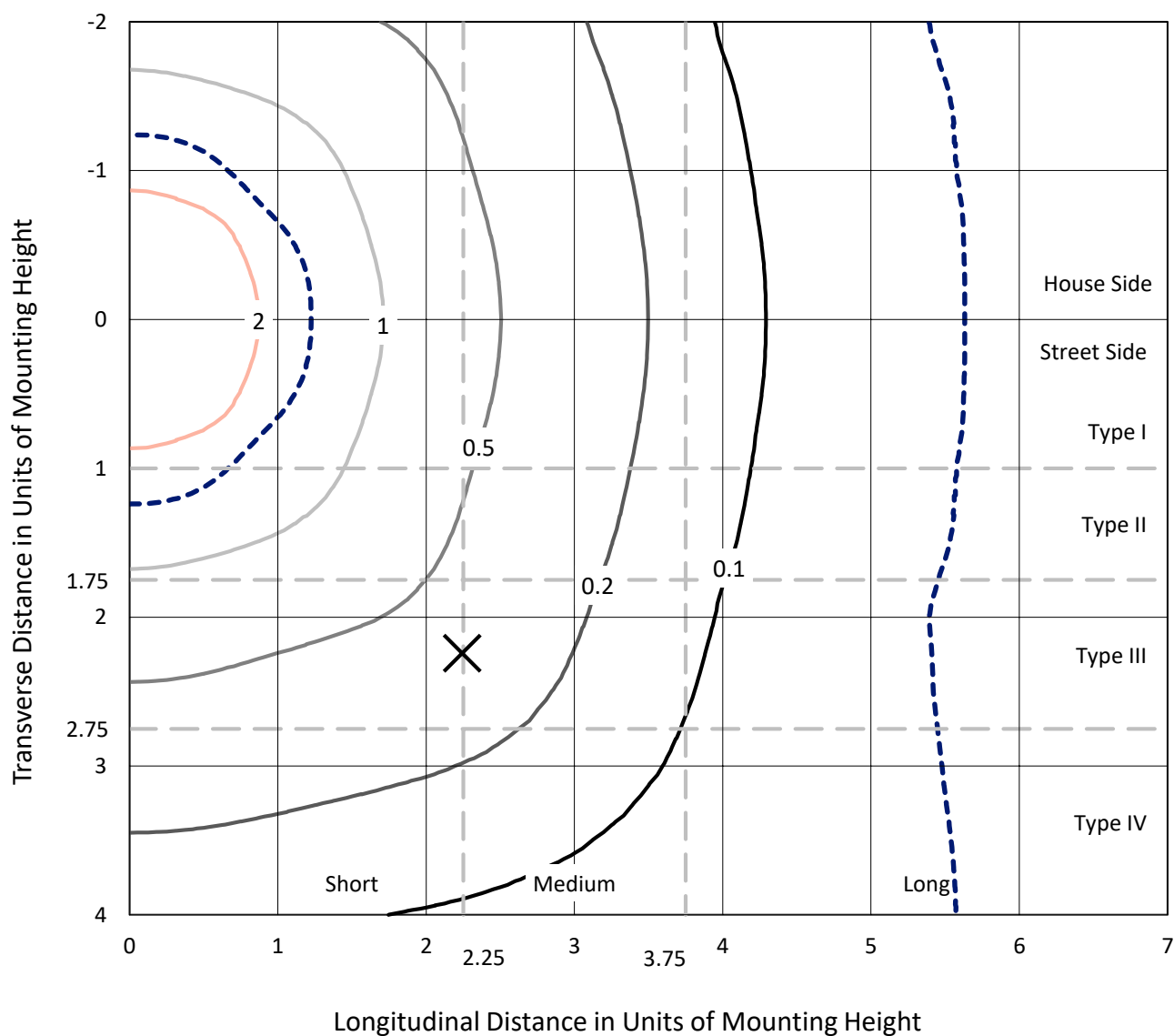


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
- - - 1/2 Max cd

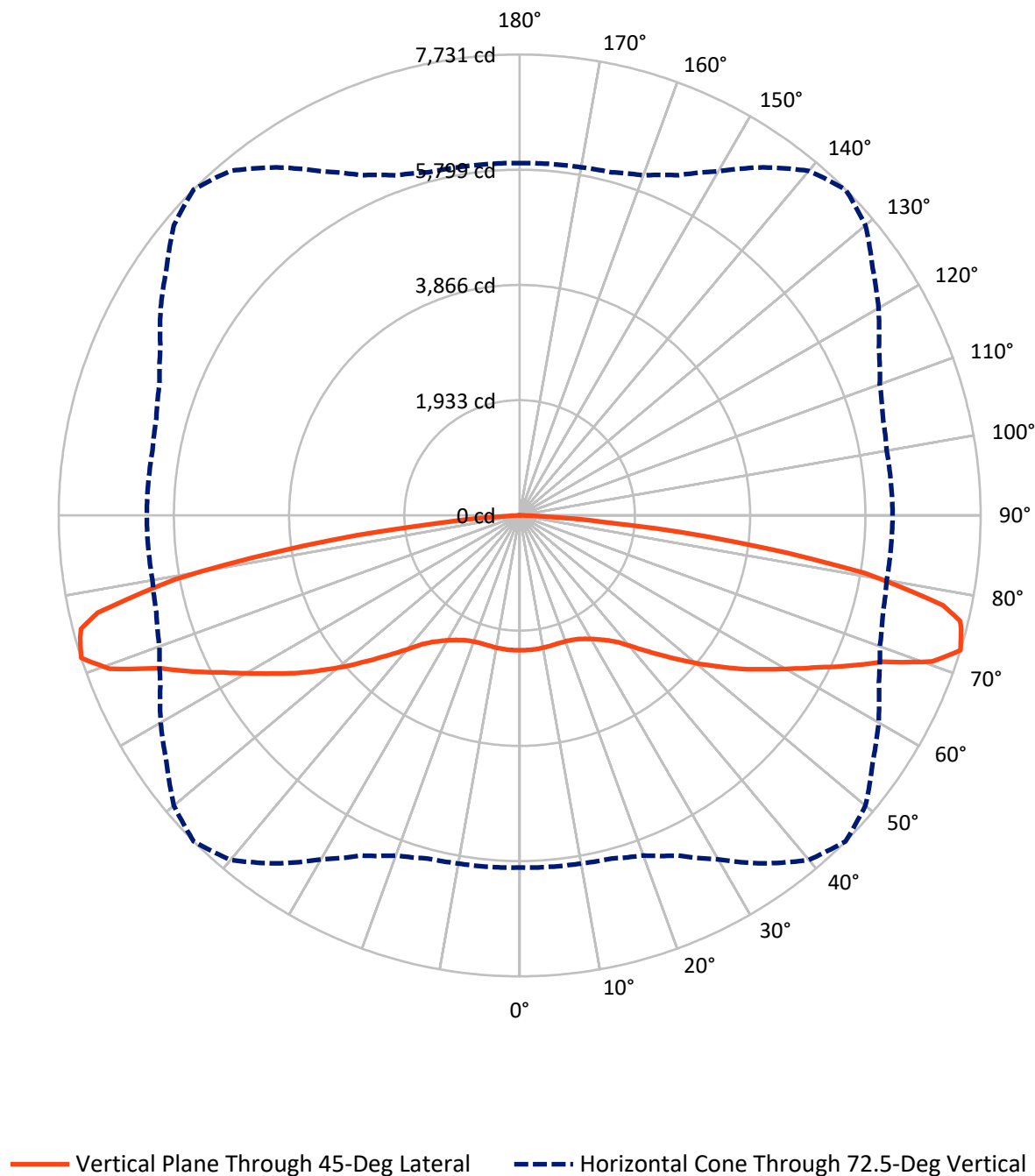


Based on 25 foot mounting height. Maximum calculated value = 3.6 fc
Type V - Short - Non-Cutoff

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Luminous Intensity Polar Plot



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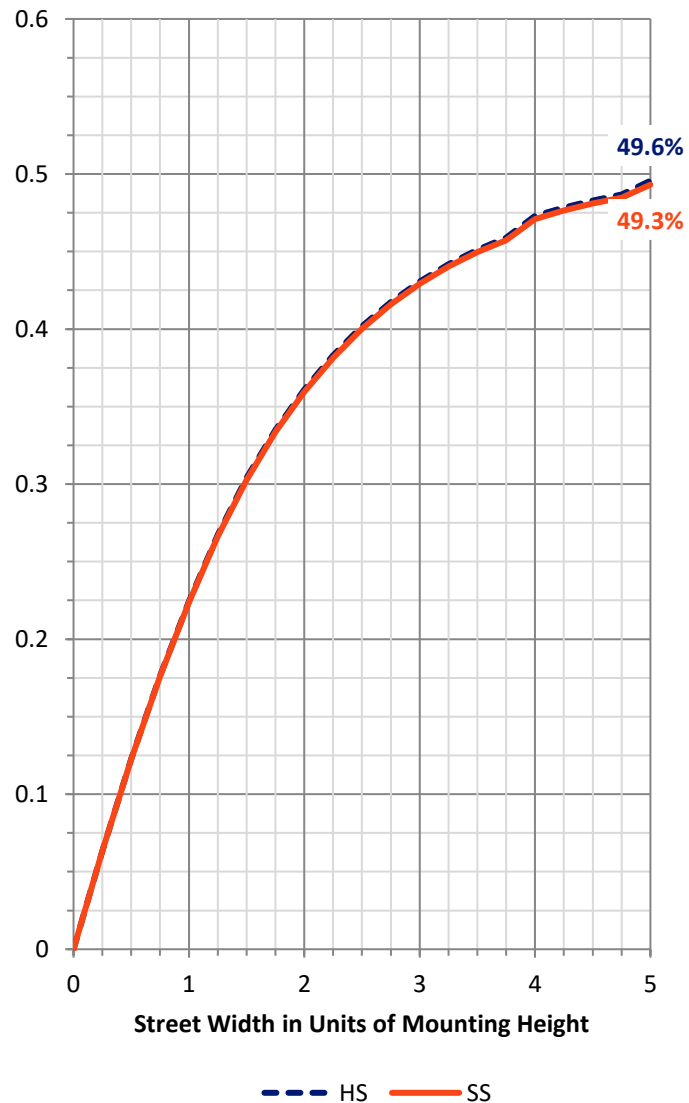
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	11742.8	5.8	11748.6
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	11742.8	5.8	11748.6
	% Fixture	50.0	0.0	50.0
Total	Lumens	23485.6	11.6	23497.2
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	215.8	0.9
10°-20°	637.3	2.7
20°-30°	1065.7	4.5
30°-40°	1619.8	6.9
40°-50°	2565.5	10.9
50°-60°	3924.3	16.7
60°-70°	5616.4	23.9
70°-80°	6426.4	27.3
80°-90°	1414.4	6.0
90°-100°	1.2	0.0
100°-110°	2.5	0.0
110°-120°	1.7	0.0
120°-130°	1.9	0.0
130°-140°	1.7	0.0
140°-150°	1.3	0.0
150°-160°	0.9	0.0
160°-170°	0.4	0.0
170°-180°	0.0	0.0
0°-90°	23485.6	100.0
0°-180°	23497.2	100.0

Coefficient of Utilization



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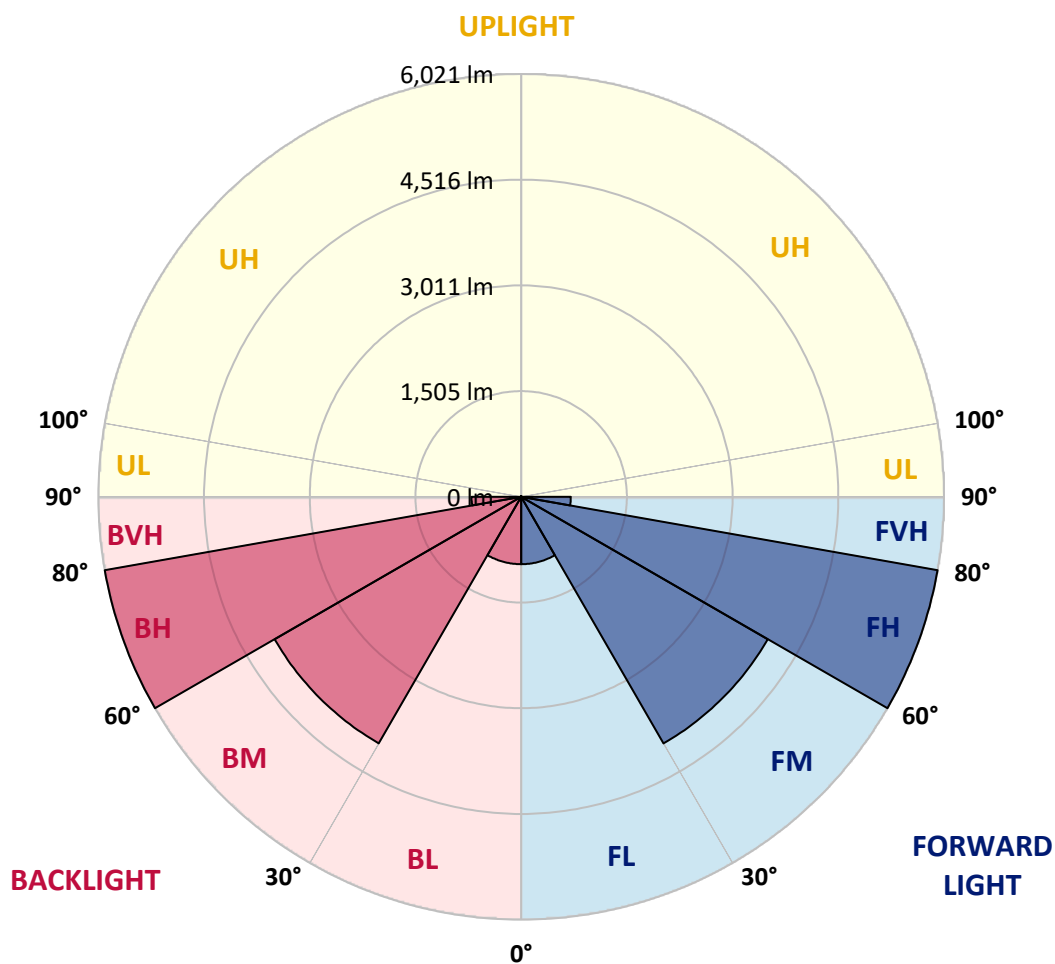
CATALOG NUMBER: VST-F09-LED-E-U-5XQ

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	959.4	4.1			
FM	(30°-60°)	4054.8	17.3			
FH	(60°-80°)	6021.4	25.6			G3/7500
FVH	(80°-90°)	707.2	3.0			G4/750
BL	(0°-30°)	959.4	4.1	B2/1000		
BM	(30°-60°)	4054.8	17.3	B3/5000		
BH	(60°-80°)	6021.4	25.6	B5		G3/7500
BVH	(80°-90°)	707.2	3.0			G4/750
UL	(90°-100°)	1.2	0.0		U1/10	
UH	(100°-180°)	5.8	0.0		U1/10	

BUG Rating: B5-U2-G4

Type V Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2261.6	2261.6	2261.6	2261.6	2261.6	2261.6	2261.6	2261.6	2261.6	2261.6	2261.6
2.5°	2263.1	2260.1	2261.6	2264.6	2263.1	2263.1	2261.6	2261.6	2264.6	2261.6	2263.1
5°	2264.6	2261.6	2263.1	2264.6	2263.1	2264.6	2263.1	2263.1	2263.1	2261.6	2264.6
7.5°	2258.6	2258.6	2260.1	2260.1	2258.6	2260.1	2260.1	2260.1	2258.6	2258.6	2261.6
10°	2255.7	2254.2	2254.2	2255.7	2254.2	2254.2	2255.7	2255.7	2252.7	2252.7	2255.7
12.5°	2251.2	2249.7	2249.7	2249.7	2248.2	2248.2	2249.7	2249.7	2248.2	2246.7	2251.2
15°	2248.2	2246.7	2246.7	2246.7	2243.8	2245.3	2245.3	2245.3	2243.8	2242.3	2246.7
17.5°	2246.7	2245.3	2245.3	2245.3	2243.8	2243.8	2243.8	2243.8	2242.3	2242.3	2245.3
20°	2249.7	2249.7	2249.7	2249.7	2248.2	2248.2	2248.2	2249.7	2249.7	2249.7	2252.7
22.5°	2257.2	2257.2	2258.6	2260.1	2260.1	2263.1	2264.6	2266.1	2266.1	2267.6	2270.5
25°	2276.5	2276.5	2278.0	2279.4	2283.9	2286.9	2292.8	2295.8	2297.3	2297.3	2298.8
27.5°	2312.1	2313.6	2316.6	2319.6	2325.5	2330.0	2335.9	2341.8	2343.3	2344.8	2346.3
30°	2356.7	2358.2	2364.1	2367.1	2374.5	2383.5	2390.9	2396.8	2401.3	2404.3	2402.8
32.5°	2420.6	2423.6	2431.0	2435.5	2445.9	2454.8	2465.2	2474.1	2478.6	2483.0	2481.5
35°	2509.8	2517.2	2524.6	2529.1	2539.5	2546.9	2560.3	2569.2	2578.1	2575.1	2576.6
37.5°	2642.0	2648.0	2649.4	2652.4	2662.8	2668.8	2683.6	2695.5	2700.0	2702.9	2704.4
40°	2820.3	2820.3	2827.8	2821.8	2835.2	2836.7	2854.5	2870.8	2875.3	2887.2	2878.3
42.5°	3028.4	3026.9	3031.3	3026.9	3026.9	3041.7	3056.6	3086.3	3089.3	3104.1	3095.2
45°	3254.2	3254.2	3249.8	3251.2	3254.2	3270.6	3288.4	3321.1	3335.9	3344.9	3338.9
47.5°	3499.4	3493.5	3492.0	3490.5	3499.4	3517.2	3544.0	3575.2	3612.3	3615.3	3612.3
50°	3747.6	3746.1	3735.7	3744.6	3750.5	3759.4	3810.0	3851.6	3890.2	3914.0	3906.5
52.5°	4009.1	3995.7	3995.7	3995.7	4010.6	4038.8	4083.4	4139.8	4191.9	4217.1	4212.7
55°	4273.6	4269.1	4255.7	4249.8	4269.1	4309.2	4373.1	4441.5	4509.8	4548.5	4533.6
57.5°	4515.8	4508.4	4509.8	4511.3	4533.6	4587.1	4661.4	4752.1	4826.3	4868.0	4857.6
60°	4706.0	4697.1	4713.4	4717.9	4758.0	4847.2	4966.0	5080.4	5178.5	5220.1	5203.8
62.5°	4921.4	4915.5	4925.9	4924.4	4967.5	5067.1	5226.1	5408.8	5557.4	5610.9	5587.2
65°	5269.2	5251.3	5246.9	5230.5	5258.8	5336.0	5495.0	5707.5	5945.3	6082.0	6049.3
67.5°	5685.2	5680.8	5665.9	5657.0	5667.4	5764.0	5917.0	6122.1	6364.3	6553.0	6594.6
70°	5960.1	5966.1	5980.9	6003.2	6089.4	6276.6	6556.0	6866.6	7199.4	7340.6	7315.3
72.5°	5908.1	5917.0	5928.9	5957.2	6070.1	6294.5	6663.0	7126.6	7544.1	7731.4	7570.9
75°	5654.0	5661.4	5688.2	5731.3	5869.5	6141.4	6538.2	7030.0	7460.9	7648.2	7480.2
76°	5419.2	5443.0	5492.1	5542.6	5709.0	6004.7	6428.2	6952.7	7408.9	7599.1	7437.2
77.5°	4887.3	4908.1	4948.2	5035.9	5224.6	5603.5	6098.3	6613.9	7089.4	7260.3	7123.6
80°	3677.7	3695.5	3732.7	3838.2	4001.6	4236.4	4619.8	5123.5	5645.1	5869.5	5780.3
82.5°	1552.8	1573.6	1720.7	1873.8	2053.6	2307.7	2557.3	3003.1	3386.5	3642.1	3505.3
85°	170.9	211.0	260.0	353.7	433.9	578.0	719.2	989.6	1251.2	1410.2	1246.7
87.5°	29.7	34.2	49.0	62.4	69.8	80.2	96.6	135.2	184.3	159.0	162.0
90°	4.5	4.5	4.5	4.5	4.5	4.5	4.5	3.0	3.0	3.0	3.0
92.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.5
95°	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5	1.5
97.5°	0.0	0.0	0.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
100°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	3.0	3.0	3.0
102.5°	1.5	1.5	1.5	1.5	1.5	3.0	3.0	3.0	3.0	3.0	3.0
105°	1.5	1.5	1.5	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
107.5°	1.5	1.5	1.5	1.5	3.0	3.0	1.5	1.5	1.5	3.0	1.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
110°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
112.5°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
115°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
117.5°	3.0	3.0	3.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
120°	3.0	3.0	3.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
122.5°	3.0	3.0	3.0	3.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
125°	3.0	3.0	3.0	3.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
127.5°	3.0	3.0	3.0	3.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
130°	3.0	3.0	3.0	3.0	3.0	1.5	1.5	1.5	1.5	1.5	1.5
132.5°	3.0	3.0	3.0	3.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
135°	3.0	3.0	3.0	3.0	3.0	1.5	1.5	1.5	1.5	1.5	1.5
137.5°	3.0	3.0	3.0	3.0	3.0	1.5	1.5	1.5	1.5	1.5	1.5
140°	3.0	3.0	3.0	3.0	3.0	1.5	1.5	1.5	1.5	1.5	1.5
142.5°	3.0	3.0	3.0	3.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
145°	3.0	3.0	3.0	3.0	3.0	1.5	1.5	1.5	1.5	0.0	1.5
147.5°	3.0	3.0	3.0	3.0	3.0	1.5	1.5	1.5	1.5	1.5	1.5
150°	3.0	3.0	3.0	3.0	3.0	1.5	1.5	1.5	0.0	0.0	0.0
152.5°	3.0	3.0	3.0	3.0	3.0	1.5	1.5	1.5	1.5	0.0	0.0
155°	3.0	3.0	3.0	3.0	3.0	1.5	1.5	1.5	1.5	0.0	1.5
157.5°	3.0	3.0	3.0	3.0	1.5	1.5	1.5	1.5	0.0	0.0	0.0
160°	3.0	3.0	3.0	3.0	1.5	1.5	1.5	1.5	0.0	0.0	0.0
162.5°	3.0	3.0	3.0	3.0	1.5	1.5	1.5	1.5	0.0	0.0	0.0
165°	3.0	3.0	3.0	3.0	1.5	1.5	1.5	1.5	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	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):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	2261.6	2261.6	2261.6	2261.6	2261.6	2261.6	2261.6	2261.6
2.5°	2261.6	2261.6	2264.6	2263.1	2263.1	2264.6	2267.6	2266.1
5°	2263.1	2264.6	2261.6	2263.1	2264.6	2264.6	2266.1	2264.6
7.5°	2260.1	2260.1	2260.1	2261.6	2263.1	2261.6	2263.1	2263.1
10°	2254.2	2255.7	2254.2	2257.2	2258.6	2258.6	2260.1	2260.1
12.5°	2249.7	2249.7	2249.7	2252.7	2254.2	2254.2	2255.7	2254.2
15°	2245.3	2245.3	2243.8	2246.7	2249.7	2249.7	2251.2	2251.2
17.5°	2243.8	2243.8	2242.3	2245.3	2248.2	2248.2	2249.7	2249.7
20°	2248.2	2249.7	2246.7	2249.7	2252.7	2254.2	2254.2	2254.2
22.5°	2266.1	2264.6	2260.1	2261.6	2263.1	2263.1	2263.1	2263.1
25°	2292.8	2289.8	2285.4	2283.9	2282.4	2280.9	2280.9	2280.9
27.5°	2338.9	2334.4	2327.0	2325.5	2324.0	2321.0	2321.0	2321.0
30°	2393.9	2387.9	2379.0	2376.0	2371.6	2368.6	2367.1	2365.6
32.5°	2472.6	2460.7	2450.3	2442.9	2438.4	2429.5	2428.0	2425.1
35°	2563.3	2554.3	2539.5	2535.0	2527.6	2523.1	2521.6	2514.2
37.5°	2688.1	2677.7	2664.3	2661.3	2659.8	2655.4	2655.4	2653.9
40°	2861.9	2851.5	2839.6	2827.8	2830.7	2832.2	2832.2	2826.3
42.5°	3074.4	3058.1	3034.3	3041.7	3037.3	3031.3	3043.2	3035.8
45°	3316.6	3294.3	3276.5	3269.1	3269.1	3261.6	3273.5	3273.5
47.5°	3585.6	3549.9	3517.2	3518.7	3506.8	3509.8	3517.2	3527.6
50°	3869.4	3821.9	3790.6	3775.8	3763.9	3768.4	3781.7	3784.7
52.5°	4163.6	4105.7	4064.1	4041.8	4026.9	4032.9	4043.3	4052.2
55°	4469.7	4405.8	4343.4	4319.6	4301.8	4313.7	4315.2	4327.1
57.5°	4789.2	4701.5	4628.7	4593.1	4575.2	4587.1	4596.0	4607.9
60°	5111.7	5010.6	4924.4	4882.8	4857.6	4873.9	4894.7	4900.6
62.5°	5486.1	5346.4	5249.8	5190.4	5178.5	5194.9	5200.8	5218.6
65°	5928.9	5761.0	5627.3	5554.5	5551.5	5560.4	5573.8	5578.2
67.5°	6434.1	6246.9	6067.1	5994.3	5966.1	5992.8	6006.2	6024.0
70°	7147.4	6890.3	6630.3	6468.3	6400.0	6379.2	6385.1	6404.4
72.5°	7227.6	6951.3	6648.1	6428.2	6307.8	6252.9	6251.4	6254.3
75°	7052.3	6611.0	6397.0	6144.4	5973.5	5884.3	5872.5	5871.0
76°	6964.6	6443.1	6134.0	5933.4	5728.3	5637.7	5624.3	5616.9
77.5°	6594.6	6034.4	5569.3	5447.5	5251.3	5136.9	5160.7	5141.4
80°	5287.0	4731.2	4292.9	3949.6	3960.0	3876.8	3842.7	3832.3
82.5°	3116.0	2659.8	2175.4	1891.6	1621.2	1549.8	1334.4	1285.3
85°	995.6	705.8	428.0	310.6	211.0	176.8	138.2	126.3
87.5°	132.2	104.0	84.7	81.7	74.3	63.9	41.6	29.7
90°	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0
92.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95°	1.5	1.5	1.5	1.5	0.0	0.0	0.0	0.0
97.5°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
100°	3.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
102.5°	3.0	3.0	3.0	3.0	1.5	1.5	1.5	1.5
105°	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
107.5°	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0



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CATALOG NUMBER: VST-F09-LED-E-U-5XQ

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
110°	1.5	1.5	1.5	1.5	1.5	3.0	3.0	3.0
112.5°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	3.0
115°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	3.0
117.5°	1.5	1.5	1.5	1.5	1.5	3.0	3.0	3.0
120°	1.5	1.5	1.5	1.5	1.5	3.0	3.0	3.0
122.5°	1.5	1.5	1.5	1.5	3.0	3.0	3.0	3.0
125°	1.5	1.5	1.5	1.5	3.0	3.0	3.0	3.0
127.5°	1.5	1.5	1.5	1.5	3.0	3.0	3.0	3.0
130°	1.5	1.5	1.5	3.0	3.0	3.0	3.0	3.0
132.5°	1.5	1.5	1.5	3.0	3.0	3.0	3.0	3.0
135°	1.5	1.5	1.5	3.0	3.0	3.0	3.0	3.0
137.5°	1.5	1.5	1.5	3.0	3.0	3.0	3.0	3.0
140°	1.5	1.5	1.5	3.0	3.0	3.0	3.0	3.0
142.5°	1.5	1.5	1.5	3.0	3.0	3.0	3.0	3.0
145°	1.5	1.5	1.5	1.5	3.0	3.0	3.0	3.0
147.5°	1.5	1.5	1.5	3.0	3.0	3.0	3.0	3.0
150°	1.5	1.5	1.5	1.5	3.0	3.0	3.0	3.0
152.5°	1.5	1.5	1.5	1.5	3.0	3.0	3.0	3.0
155°	1.5	1.5	1.5	3.0	3.0	3.0	3.0	3.0
157.5°	1.5	1.5	1.5	1.5	3.0	3.0	3.0	3.0
160°	1.5	1.5	1.5	1.5	3.0	3.0	3.0	3.0
162.5°	1.5	1.5	1.5	3.0	3.0	3.0	3.0	3.0
165°	1.5	1.5	1.5	3.0	3.0	3.0	3.0	3.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)