

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: P159393

Luminaire Tested: **VST-F11-LED-E-U-T2-8030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P159393
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33705)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: VST-F11-LED-E-U-T2-8030
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(11) LIGHTBARS WITH AccuLED OPTICS - TYPE 2 AREA
Light Source: (77) 3000K CCT, 80 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 23656.8 lumens
Efficiency: N/A
Efficacy: 83.7 lumens/watt
Luminous Opening: Rectangular (W 1.83' x L: 1' x H: 0')
IES Classification: Type II - Short - Semi-Cutoff
BUG Rating: B4 - U0 - G4

Input Watts (W): 282.7
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



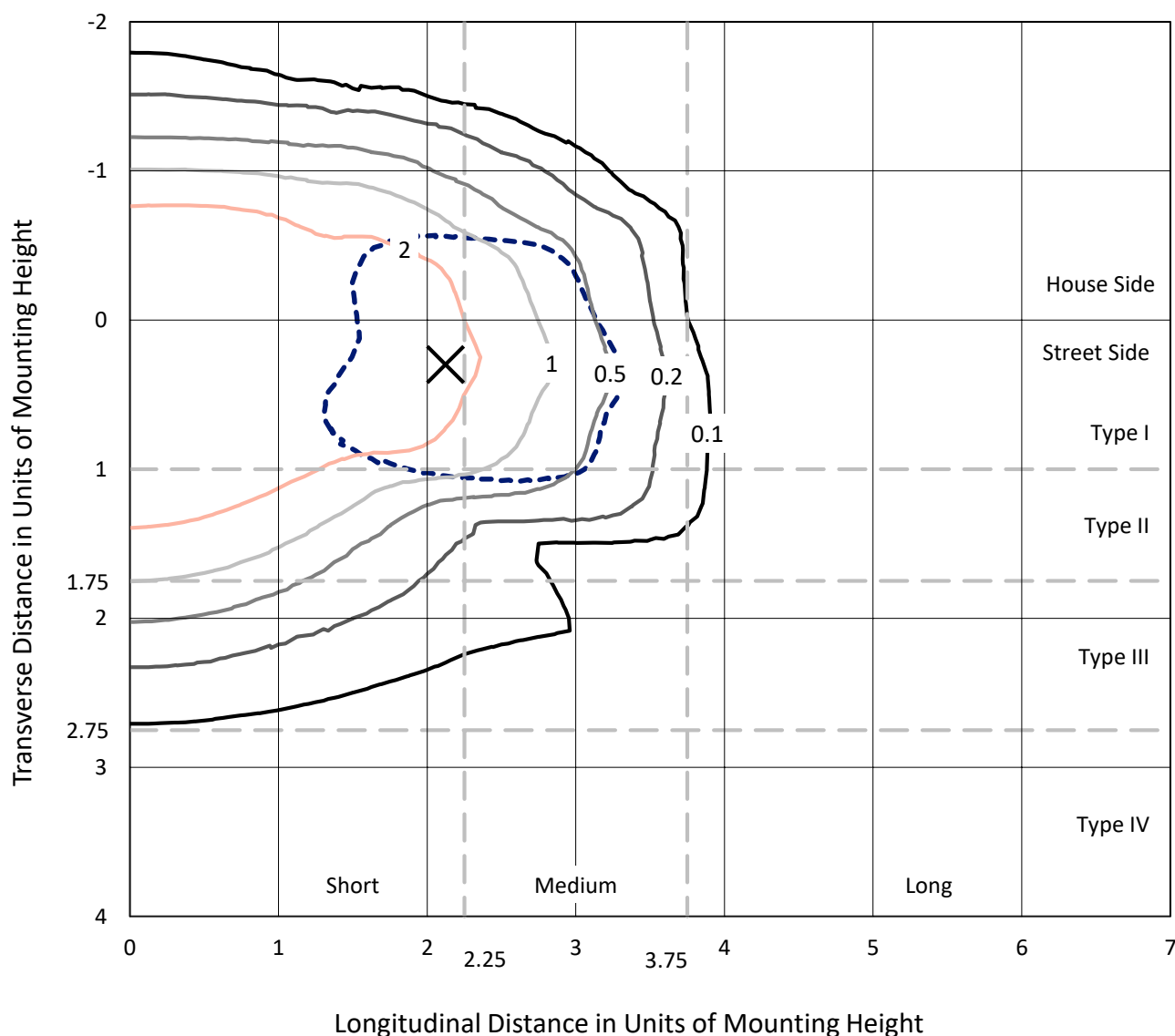
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Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

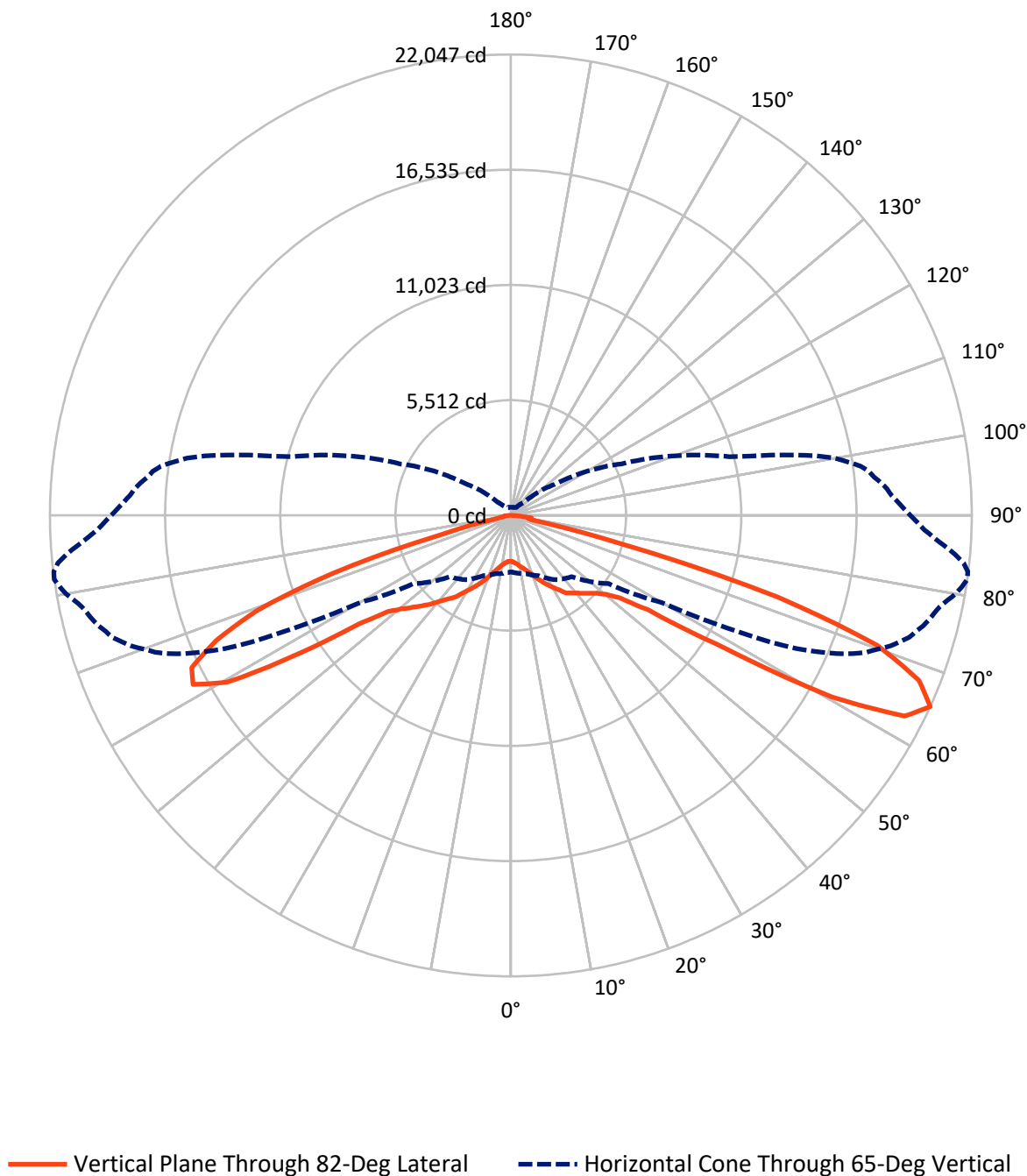


Based on 25 foot mounting height. Maximum calculated value = 4.5 fc
 Type II - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



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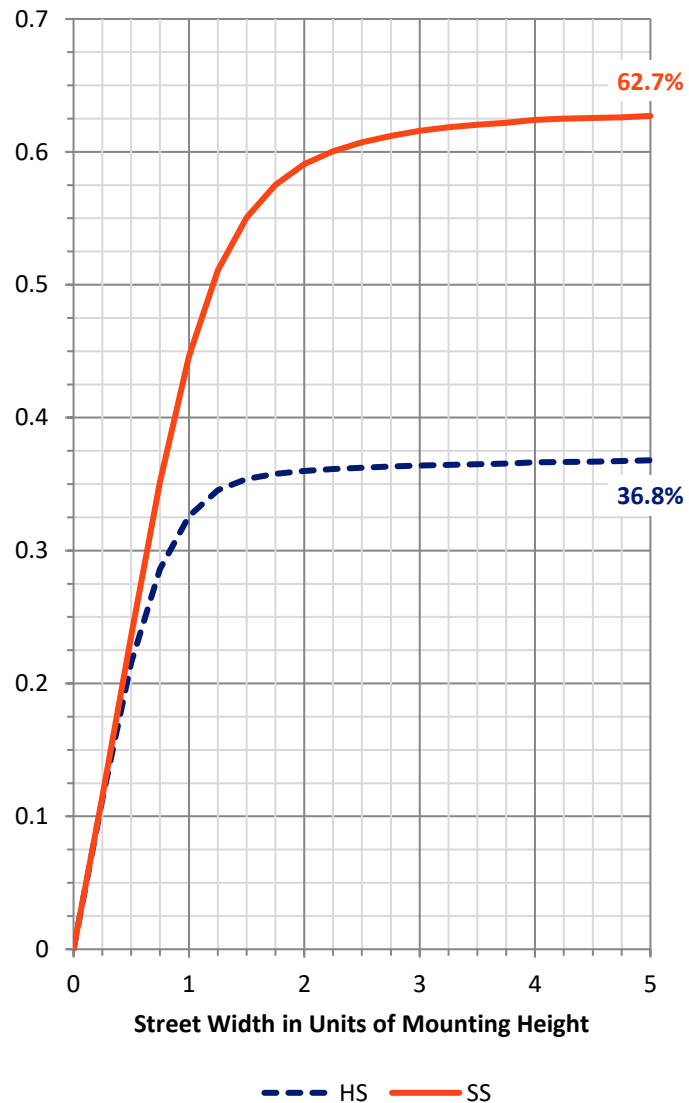
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	8808.2	0.0	8808.2
	% Fixture	37.2	0.0	37.2
Street Side	Lumens	14848.6	0.0	14848.6
	% Fixture	62.8	0.0	62.8
Total	Lumens	23656.8	0.0	23656.8
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	222.8	0.9
10°-20°	783.0	3.3
20°-30°	1551.4	6.6
30°-40°	2659.5	11.2
40°-50°	3995.2	16.9
50°-60°	5550.7	23.5
60°-70°	6332.5	26.8
70°-80°	2181.5	9.2
80°-90°	380.2	1.6
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°	23656.8	100.0
0°-180°	23656.8	100.0

Coefficient of Utilization



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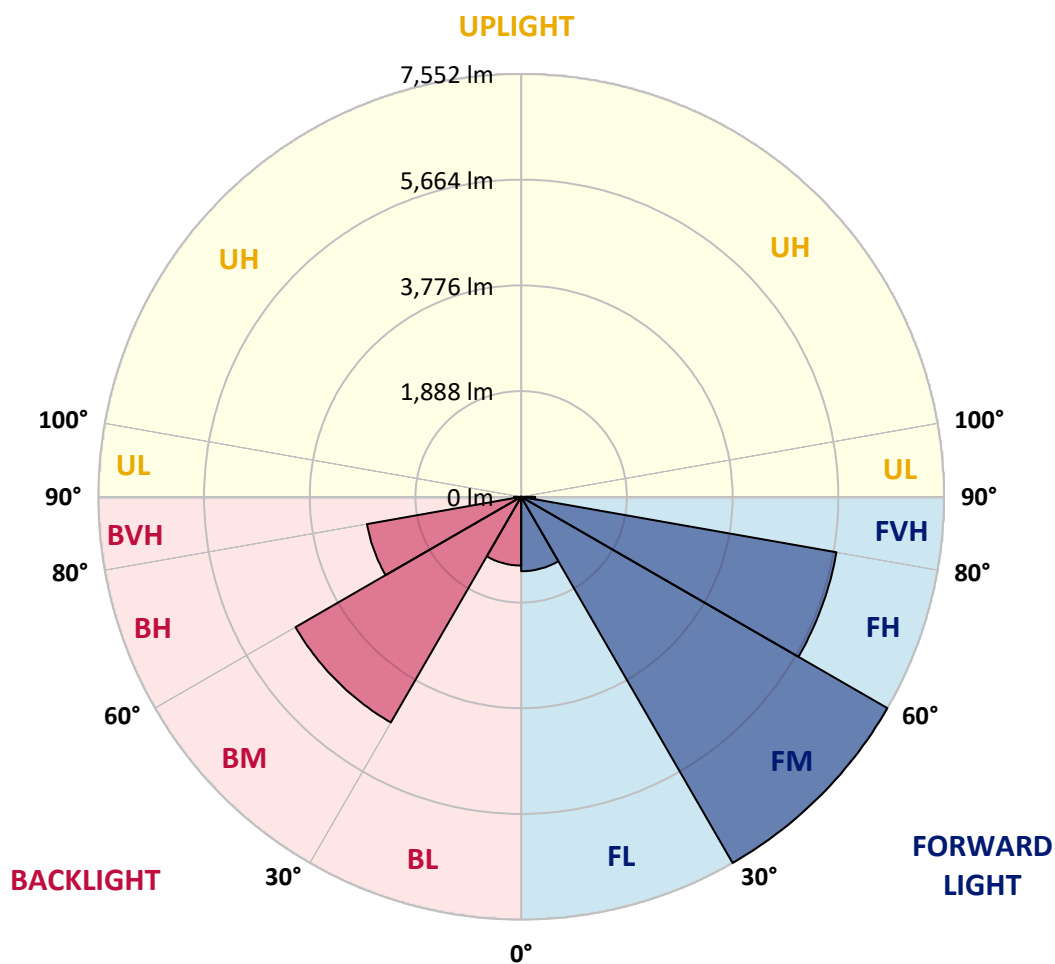
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1329.0	5.6			
FM	(30°-60°)	7551.7	31.9			
FH	(60°-80°)	5717.6	24.2			G3/7500
FVH	(80°-90°)	250.3	1.1			G3/500
BL	(0°-30°)	1228.3	5.2	B3/2500		
BM	(30°-60°)	4653.7	19.7	B3/5000		
BH	(60°-80°)	2796.4	11.8	B4/5000		G4/5000
BVH	(80°-90°)	129.9	0.5			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B4-U0-G4

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	60°	61°	62°	64°
0°	2201.1	2201.1	2201.1	2201.1	2201.1	2201.1	2201.1	2201.1	2201.1	2201.1	2201.1
2.5°	2320.7	2322.2	2320.7	2316.1	2314.6	2300.8	2285.4	2277.8	2276.2	2270.1	2271.6
5°	2464.8	2460.2	2454.0	2446.4	2438.7	2415.7	2389.7	2375.9	2371.3	2366.7	2360.5
7.5°	2593.5	2596.6	2593.5	2582.8	2562.9	2533.7	2500.0	2478.6	2477.0	2472.4	2467.8
10°	2759.1	2766.7	2748.3	2729.9	2702.4	2657.9	2619.6	2592.0	2587.4	2581.3	2578.2
12.5°	2938.4	2939.9	2933.8	2892.4	2846.4	2785.1	2729.9	2702.4	2696.2	2688.6	2685.5
15°	3130.0	3131.5	3097.8	3058.0	2987.5	2913.9	2837.2	2806.6	2798.9	2800.5	2788.2
17.5°	3281.8	3284.8	3252.6	3202.1	3117.8	3030.4	2947.6	2923.1	2918.5	2920.0	2913.9
20°	3347.7	3352.3	3332.3	3294.0	3214.3	3137.7	3077.9	3062.6	3061.0	3058.0	3070.2
22.5°	3344.6	3346.1	3338.5	3323.1	3275.6	3231.2	3223.5	3232.7	3231.2	3234.2	3245.0
25°	3317.0	3321.6	3320.1	3326.2	3318.6	3335.4	3370.7	3402.9	3407.5	3413.6	3433.5
27.5°	3387.5	3396.7	3386.0	3392.1	3404.4	3461.1	3533.1	3582.2	3591.4	3608.3	3625.1
30°	3663.4	3651.2	3637.4	3622.0	3629.7	3665.0	3746.2	3789.1	3793.7	3806.0	3829.0
32.5°	4072.7	4058.9	4046.6	4022.1	4016.0	4000.7	4028.2	4039.0	4037.4	4049.7	4055.8
35°	4534.1	4535.6	4532.5	4550.9	4566.3	4488.1	4391.5	4365.5	4376.2	4362.4	4365.5
37.5°	4928.0	4932.6	5013.8	5115.0	5144.1	5095.1	4883.6	4779.3	4744.1	4739.5	4704.2
40°	5364.9	5364.9	5487.5	5611.6	5692.9	5754.2	5502.8	5318.9	5243.8	5222.3	5134.9
42.5°	5844.6	5820.1	5932.0	6068.4	6218.6	6358.1	6227.8	6020.9	5913.6	5875.3	5722.0
45°	6238.6	6223.2	6278.4	6405.6	6649.4	6922.2	6940.6	6834.8	6770.5	6690.8	6549.7
47.5°	6480.8	6473.1	6505.3	6643.2	6948.3	7389.7	7636.5	7690.1	7651.8	7590.5	7454.1
50°	6575.8	6565.1	6588.1	6741.3	7083.2	7665.6	8211.3	8464.2	8482.6	8496.4	8453.5
52.5°	6542.1	6528.3	6575.8	6704.5	7060.2	7762.2	8660.4	9146.3	9227.6	9296.5	9437.6
55°	6218.6	6197.2	6325.9	6568.1	6960.5	7726.9	8988.4	9802.4	9974.0	10158.0	10470.7
57.5°	5723.5	5705.1	5890.6	6223.2	6784.3	7630.4	9209.2	10631.6	11017.9	11349.0	12236.5
60°	5246.8	5231.5	5340.3	5662.2	6212.5	7159.8	8936.3	10910.6	11559.0	12273.3	13893.5
62.5°	4394.6	4353.2	4498.8	4770.1	5118.1	5922.8	7745.3	10289.8	11289.2	12339.2	14535.7
65°	2700.8	2760.6	2886.3	3186.7	3756.9	4140.1	5688.3	8324.7	9643.0	10959.7	13809.2
67.5°	1715.2	1732.1	1825.6	2034.0	2475.5	2860.2	3447.3	5223.8	6240.1	7535.3	10841.6
70°	1470.0	1480.7	1560.4	1778.1	2083.1	2556.7	2608.9	2728.4	3093.2	3917.9	6373.5
72.5°	1158.8	1177.2	1240.0	1428.6	1796.5	2305.4	3220.5	2156.7	2083.1	2152.1	3110.1
75°	689.8	711.2	763.3	866.0	1154.2	1762.7	3373.7	2509.2	2339.1	2205.7	2145.9
77.5°	364.8	349.5	384.7	444.5	593.2	939.6	2535.3	3074.8	2955.3	2795.9	2457.1
80°	180.9	187.0	197.7	210.0	265.2	381.7	1267.6	3180.6	3525.5	3678.8	3378.3
82.5°	72.0	81.2	115.0	122.6	145.6	162.5	407.7	1762.7	2524.6	3424.3	4471.2
85°	36.8	35.3	61.3	73.6	85.8	76.6	144.1	657.6	1183.3	1844.0	2987.5
87.5°	4.6	6.1	13.8	18.4	26.1	24.5	41.4	142.6	226.9	321.9	452.2
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):

	65°	66°	67°	68°	69°	70°	71°	72°	73°	74°	75°
0°	2201.1	2201.1	2201.1	2201.1	2201.1	2201.1	2201.1	2201.1	2201.1	2201.1	2201.1
2.5°	2264.0	2262.4	2262.4	2256.3	2256.3	2257.8	2253.2	2250.2	2250.2	2251.7	2245.6
5°	2355.9	2351.3	2351.3	2345.2	2337.5	2337.5	2331.4	2329.9	2326.8	2320.7	2316.1
7.5°	2463.2	2458.6	2451.0	2446.4	2443.3	2438.7	2431.0	2428.0	2421.9	2415.7	2409.6
10°	2573.6	2567.5	2564.4	2556.7	2553.7	2544.5	2539.9	2541.4	2529.2	2524.6	2526.1
12.5°	2684.0	2677.8	2667.1	2664.0	2662.5	2653.3	2648.7	2645.6	2636.4	2634.9	2630.3
15°	2782.1	2785.1	2780.5	2772.9	2766.7	2765.2	2760.6	2757.5	2751.4	2745.3	2739.1
17.5°	2909.3	2913.9	2907.8	2897.0	2897.0	2895.5	2897.0	2895.5	2884.8	2889.4	2886.3
20°	3071.8	3074.8	3059.5	3064.1	3067.2	3065.6	3070.2	3074.8	3071.8	3071.8	3076.4
22.5°	3258.8	3263.4	3254.2	3260.3	3269.5	3261.8	3275.6	3274.1	3277.2	3281.8	3283.3
25°	3450.4	3459.6	3451.9	3468.8	3462.6	3468.8	3485.6	3481.0	3488.7	3501.0	3505.6
27.5°	3642.0	3648.1	3649.6	3660.4	3671.1	3680.3	3701.8	3701.8	3707.9	3729.3	3729.3
30°	3842.8	3848.9	3855.0	3870.4	3876.5	3893.4	3914.8	3920.9	3917.9	3948.5	3957.7
32.5°	4074.2	4080.4	4091.1	4109.5	4117.1	4134.0	4134.0	4150.9	4163.1	4189.2	4190.7
35°	4382.3	4386.9	4382.3	4380.8	4391.5	4414.5	4416.0	4440.6	4451.3	4477.4	4485.0
37.5°	4690.4	4688.9	4669.0	4647.5	4649.0	4639.8	4633.7	4644.4	4649.0	4650.6	4667.4
40°	5105.8	5066.0	5035.3	4981.7	4957.1	4918.8	4895.8	4894.3	4869.8	4866.7	4871.3
42.5°	5650.0	5604.0	5531.9	5441.5	5372.5	5302.0	5249.9	5219.2	5165.6	5138.0	5115.0
45°	6410.2	6296.8	6211.0	6103.7	5970.3	5847.7	5718.9	5660.7	5558.0	5495.2	5424.6
47.5°	7339.1	7227.2	7095.4	6985.1	6810.3	6640.2	6463.9	6309.1	6129.7	5987.2	5870.7
50°	8347.7	8281.8	8186.8	8084.1	7858.8	7746.9	7524.6	7314.6	7121.5	6867.0	6644.8
52.5°	9382.4	9420.7	9399.2	9362.5	9219.9	9177.0	8985.4	8729.4	8534.7	8360.0	7973.7
55°	10657.7	10703.7	10795.6	10849.3	10832.4	10941.3	10893.7	10694.5	10616.3	10535.1	10260.7
57.5°	12609.0	12937.0	13288.0	13596.1	13668.1	14054.4	13971.6	14170.9	14311.9	14210.8	14121.9
60°	14689.0	15351.2	15947.4	16571.3	17078.7	17458.8	17961.6	18300.3	18513.4	18896.6	18927.2
62.5°	15527.4	16427.2	17184.4	17907.9	18510.3	19037.6	19491.3	19958.8	20342.0	20688.4	20938.3
65°	15067.6	16007.2	16925.4	17659.6	18239.0	18692.7	19186.3	19557.2	19934.3	20156.6	20418.7
67.5°	12526.2	13770.8	14900.5	15728.2	16520.7	16982.1	17566.1	17930.9	18331.0	18565.5	18734.1
70°	8166.9	9787.0	11330.6	12586.0	13655.9	14193.9	14899.0	15397.2	15878.5	15890.7	16171.2
72.5°	4406.9	5761.9	7054.0	8337.0	9557.1	10272.9	10968.8	11574.3	12052.5	11848.7	12127.7
75°	2454.0	3088.6	3795.3	4566.3	5309.7	5718.9	6238.6	6241.6	6488.4	6100.6	6198.7
77.5°	2360.5	2331.4	2342.1	2363.6	2400.4	2322.2	2320.7	2273.2	2199.6	2066.2	2089.2
80°	3100.9	2729.9	2463.2	2044.8	1646.2	1342.7	1258.4	1278.4	1338.2	1457.7	1609.5
82.5°	4483.5	4170.8	3723.2	3064.1	2405.0	1854.7	1523.6	1351.9	1344.3	1463.8	1693.8
85°	3264.9	3453.4	3424.3	2858.7	2357.5	1914.5	1393.3	1177.2	974.9	927.4	1008.6
87.5°	481.3	398.5	449.1	375.5	272.8	211.5	185.5	148.7	142.6	145.6	159.4
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):

	76°	77°	78°	79°	80°	81°	82°	83°	84°	85°	86°
0°	2201.1	2201.1	2201.1	2201.1	2201.1	2201.1	2201.1	2201.1	2201.1	2201.1	2201.1
2.5°	2247.1	2241.0	2234.8	2239.4	2234.8	2233.3	2228.7	2225.7	2224.1	2224.1	2224.1
5°	2316.1	2308.4	2303.8	2302.3	2297.7	2293.1	2291.6	2283.9	2282.4	2282.4	2277.8
7.5°	2409.6	2403.5	2395.8	2391.2	2388.1	2380.5	2372.8	2371.3	2369.7	2363.6	2359.0
10°	2518.4	2509.2	2500.0	2500.0	2493.9	2492.4	2484.7	2474.0	2472.4	2463.2	2460.2
12.5°	2621.1	2618.1	2607.3	2604.3	2599.7	2595.1	2590.5	2585.9	2581.3	2573.6	2576.7
15°	2743.7	2736.1	2726.9	2728.4	2726.9	2720.8	2714.6	2710.0	2707.0	2703.9	2703.9
17.5°	2890.9	2887.8	2886.3	2878.6	2872.5	2877.1	2877.1	2877.1	2869.4	2871.0	2872.5
20°	3077.9	3081.0	3077.9	3071.8	3070.2	3074.8	3064.1	3081.0	3071.8	3065.6	3068.7
22.5°	3284.8	3295.6	3283.3	3284.8	3292.5	3295.6	3284.8	3298.6	3294.0	3284.8	3292.5
25°	3510.2	3517.8	3511.7	3510.2	3514.8	3525.5	3523.9	3522.4	3533.1	3523.9	3528.5
27.5°	3741.6	3746.2	3749.3	3753.9	3756.9	3755.4	3761.5	3761.5	3767.7	3756.9	3761.5
30°	3971.5	3971.5	3977.7	3983.8	3983.8	3983.8	3996.1	3997.6	3988.4	3991.5	3980.7
32.5°	4216.8	4218.3	4224.4	4224.4	4236.7	4238.2	4252.0	4233.6	4252.0	4236.7	4239.8
35°	4505.0	4524.9	4527.9	4543.3	4555.5	4560.1	4560.1	4561.7	4578.5	4566.3	4570.9
37.5°	4673.6	4678.2	4690.4	4698.1	4698.1	4704.2	4708.8	4704.2	4708.8	4707.3	4711.9
40°	4872.8	4868.2	4882.0	4885.1	4879.0	4886.6	4885.1	4880.5	4892.8	4883.6	4889.7
42.5°	5115.0	5089.0	5087.4	5099.7	5087.4	5093.6	5092.0	5081.3	5096.6	5101.2	5096.6
45°	5374.1	5360.3	5332.7	5332.7	5320.4	5315.8	5317.3	5315.8	5317.3	5335.7	5341.9
47.5°	5795.6	5711.3	5663.8	5619.3	5582.5	5581.0	5564.1	5573.3	5585.6	5616.2	5643.8
50°	6502.2	6307.5	6188.0	6077.6	5997.9	5970.3	5938.1	5935.1	5945.8	5981.1	6028.6
52.5°	7762.2	7492.4	7238.0	7001.9	6796.5	6638.6	6560.5	6519.1	6503.7	6539.0	6585.0
55°	10067.5	9558.7	9200.0	8960.9	8450.4	8234.3	7956.9	7829.6	7705.5	7717.7	7795.9
57.5°	14006.9	13732.5	13432.1	13013.6	12700.9	12323.9	11631.0	11244.8	11261.6	11352.1	11070.0
60°	19169.4	18892.0	18767.8	18387.7	18170.0	18018.3	17650.4	17009.7	16782.8	16739.9	16221.8
62.5°	21129.9	21195.8	21293.9	21401.2	21395.1	21461.0	21139.1	20930.6	20668.5	20328.2	19816.3
65°	20617.9	20785.0	20984.3	21272.5	21600.5	21842.7	22046.5	22022.0	21776.7	21323.0	20781.9
67.5°	18884.3	19049.9	19195.5	19581.8	20119.8	20611.8	21047.1	21343.0	21178.9	20803.4	20171.9
70°	16278.5	16398.1	16490.1	16825.7	17415.9	18016.7	18585.4	19082.1	19031.5	18576.2	18071.9
72.5°	11795.0	12084.7	12241.1	12218.1	12582.9	13255.8	13335.5	13760.1	13878.1	13387.6	12584.4
75°	5746.5	5751.1	5570.3	5510.5	5528.9	5645.4	5423.1	5436.9	5360.3	5012.3	4725.7
77.5°	2008.0	1952.8	1821.0	1664.6	1440.8	1230.9	1017.8	925.8	895.2	804.7	741.9
80°	1730.6	1811.8	1785.7	1657.0	1420.9	1132.8	846.1	626.9	535.0	502.8	472.1
82.5°	1965.1	2277.8	2477.0	2466.3	2142.9	1609.5	1004.0	576.3	410.8	360.2	331.1
85°	1096.0	1178.7	1201.7	1094.4	909.0	620.8	346.4	243.7	206.9	188.5	170.1
87.5°	174.7	159.4	156.3	136.4	128.8	118.0	104.2	98.1	90.4	85.8	85.8
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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CATALOG NUMBER: VST-F11-LED-E-U-T2-8030

CANDELA DISTRIBUTION (continued):

	87°	88°	89°	90°	91°	92°	93°	94°	95°	96°	97°
0°	2201.1	2201.1	2201.1	2201.1	2201.1	2201.1	2201.1	2201.1	2201.1	2201.1	2201.1
2.5°	2222.6	2221.1	2216.5	2211.9	2208.8	2207.3	2205.7	2202.7	2201.1	2199.6	2196.5
5°	2274.7	2271.6	2264.0	2256.3	2253.2	2248.6	2244.0	2241.0	2237.9	2236.4	2230.3
7.5°	2355.9	2352.9	2343.7	2337.5	2336.0	2323.8	2322.2	2317.6	2310.0	2308.4	2299.2
10°	2454.0	2452.5	2444.8	2440.2	2437.2	2431.0	2421.9	2414.2	2406.5	2406.5	2400.4
12.5°	2567.5	2561.3	2565.9	2555.2	2552.1	2546.0	2541.4	2539.9	2530.7	2523.0	2521.5
15°	2700.8	2693.2	2693.2	2690.1	2687.0	2680.9	2679.4	2680.9	2671.7	2674.8	2665.6
17.5°	2866.4	2869.4	2867.9	2867.9	2860.2	2860.2	2848.0	2863.3	2852.6	2860.2	2857.2
20°	3073.3	3074.8	3071.8	3076.4	3079.4	3077.9	3076.4	3074.8	3079.4	3085.6	3081.0
22.5°	3294.0	3294.0	3292.5	3309.4	3291.0	3304.8	3309.4	3300.2	3324.7	3321.6	3326.2
25°	3533.1	3533.1	3545.4	3559.2	3562.3	3551.5	3557.7	3550.0	3565.3	3577.6	3580.7
27.5°	3755.4	3775.3	3784.5	3775.3	3783.0	3799.9	3798.3	3798.3	3809.1	3806.0	3835.1
30°	3983.8	3996.1	4008.3	4002.2	4005.3	4026.7	4028.2	4029.8	4043.6	4063.5	4085.0
32.5°	4244.4	4256.6	4250.5	4270.4	4268.9	4295.0	4299.6	4304.2	4347.1	4339.4	4383.9
35°	4564.7	4577.0	4570.9	4592.3	4589.3	4598.5	4615.3	4633.7	4641.4	4685.8	4721.1
37.5°	4714.9	4714.9	4728.7	4753.3	4762.5	4777.8	4803.9	4826.8	4865.2	4912.7	4967.9
40°	4895.8	4900.4	4918.8	4944.9	4961.7	4997.0	5044.5	5076.7	5134.9	5187.1	5251.4
42.5°	5115.0	5134.9	5156.4	5191.7	5228.4	5283.6	5351.1	5392.5	5469.1	5536.5	5616.2
45°	5371.0	5390.9	5441.5	5505.9	5559.5	5620.8	5676.0	5774.1	5843.1	5913.6	5982.6
47.5°	5680.6	5738.9	5780.3	5856.9	5922.8	6004.0	6073.0	6165.0	6240.1	6325.9	6384.2
50°	6077.6	6149.7	6203.3	6302.9	6367.3	6457.8	6545.1	6614.1	6690.8	6775.1	6822.6
52.5°	6647.8	6721.4	6788.9	6913.0	6992.7	7054.0	7170.5	7256.4	7326.9	7388.2	7440.3
55°	7883.3	7861.8	8048.8	8289.5	8317.1	8539.3	8580.7	8652.8	8783.0	8801.4	8947.1
57.5°	11413.4	11303.0	11574.3	11926.9	11865.5	11753.7	12221.2	12250.3	12184.4	12360.6	12161.4
60°	16298.5	16105.3	16178.9	16275.5	16136.0	16070.1	16093.1	16159.0	16094.6	16024.1	15830.9
62.5°	19560.3	19262.9	19049.9	18870.5	18643.7	18479.7	18295.7	18068.9	18007.5	17750.0	17533.9
65°	20256.2	19793.3	19456.1	19117.3	18804.6	18514.9	18237.5	18042.8	17785.3	17480.3	17254.9
67.5°	19491.3	18918.0	18424.5	17932.4	17578.4	17152.2	16943.8	16626.5	16309.2	15959.7	15752.8
70°	17268.7	16670.9	16050.1	15568.8	15087.5	14560.2	14457.5	14082.0	13899.6	13422.9	13340.1
72.5°	11919.2	11520.7	11243.2	10648.5	10355.7	10085.9	10000.1	9652.2	9688.9	9166.3	9356.3
75°	4238.2	4181.5	4100.3	3764.6	3704.8	3600.6	3573.0	3548.5	3796.8	3451.9	3701.8
77.5°	728.1	723.5	682.1	662.2	700.5	676.0	682.1	669.8	741.9	752.6	735.8
80°	452.2	439.9	426.1	416.9	418.5	409.3	410.8	413.9	418.5	416.9	421.5
82.5°	309.6	298.9	292.8	286.6	295.8	298.9	306.6	314.2	326.5	334.2	343.4
85°	168.6	154.8	154.8	153.3	165.5	174.7	187.0	202.3	223.8	242.2	262.1
87.5°	85.8	82.8	84.3	87.4	98.1	105.8	121.1	134.9	153.3	173.2	191.6
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: P159393

CATALOG NUMBER: VST-F11-LED-E-U-T2-8030

CANDELA DISTRIBUTION (continued):

	98°	99°	100°	101°	102°	103°	104°	105°	115°	125°	135°
0°	2201.1	2201.1	2201.1	2201.1	2201.1	2201.1	2201.1	2201.1	2201.1	2201.1	2201.1
2.5°	2195.0	2195.0	2193.5	2193.5	2191.9	2190.4	2188.9	2184.3	2167.4	2152.1	2141.3
5°	2228.7	2224.1	2222.6	2218.0	2216.5	2213.4	2208.8	2204.2	2173.5	2145.9	2126.0
7.5°	2297.7	2291.6	2288.5	2283.9	2279.3	2273.2	2267.0	2262.4	2225.7	2193.5	2168.9
10°	2388.1	2385.1	2383.5	2377.4	2377.4	2368.2	2366.7	2355.9	2316.1	2287.0	2265.5
12.5°	2513.8	2507.7	2506.2	2498.5	2501.6	2498.5	2495.4	2489.3	2460.2	2426.5	2397.3
15°	2670.2	2670.2	2662.5	2656.4	2657.9	2654.8	2661.0	2653.3	2634.9	2604.3	2556.7
17.5°	2858.7	2855.6	2858.7	2854.1	2857.2	2860.2	2852.6	2854.1	2844.9	2806.6	2736.1
20°	3077.9	3073.3	3091.7	3084.0	3100.9	3085.6	3088.6	3093.2	3093.2	3042.6	2947.6
22.5°	3329.3	3326.2	3326.2	3341.5	3347.7	3349.2	3355.3	3359.9	3372.2	3307.8	3156.1
25°	3580.7	3591.4	3592.9	3612.9	3622.0	3622.0	3626.6	3643.5	3680.3	3591.4	3395.2
27.5°	3836.6	3862.7	3868.8	3882.6	3896.4	3910.2	3920.9	3933.2	3993.0	3896.4	3640.4
30°	4092.6	4121.7	4143.2	4158.5	4175.4	4209.1	4215.3	4239.8	4339.4	4221.4	3873.4
32.5°	4393.1	4434.4	4462.0	4482.0	4508.0	4540.2	4558.6	4589.3	4685.8	4492.7	4043.6
35°	4751.7	4776.3	4816.1	4849.8	4865.2	4920.3	4949.5	4957.1	5030.7	4727.2	4169.3
37.5°	5000.1	5041.4	5110.4	5157.9	5185.5	5216.2	5265.2	5297.4	5367.9	4940.3	4232.1
40°	5315.8	5378.7	5433.8	5504.4	5548.8	5571.8	5620.8	5646.9	5656.1	5122.7	4212.2
42.5°	5700.6	5757.3	5830.8	5887.6	5921.3	5947.3	5987.2	5997.9	5878.4	5208.5	4104.9
45°	6062.3	6149.7	6212.5	6253.9	6278.4	6292.2	6316.7	6318.3	6062.3	5165.6	3920.9
47.5°	6451.6	6514.5	6572.7	6601.8	6598.8	6601.8	6592.7	6586.5	6154.3	5016.9	3684.9
50°	6882.4	6923.7	6948.3	6962.1	6969.7	6940.6	6899.2	6871.6	6161.9	4805.4	3445.8
52.5°	7460.2	7512.3	7507.7	7506.2	7444.9	7417.3	7306.9	7250.2	6117.5	4557.1	3176.0
55°	8924.1	8873.5	8773.9	8822.9	8573.1	8442.8	8271.1	8111.7	6175.7	4321.0	2863.3
57.5°	12241.1	12261.0	11977.4	11825.7	11404.2	10876.9	10452.3	10040.0	6699.9	4176.9	2455.6
60°	15702.2	15441.6	15081.4	14532.6	13990.0	13206.8	12451.1	11736.8	7222.6	4026.7	1972.7
62.5°	17213.5	16842.6	16298.5	15588.8	14736.5	13778.5	12837.4	11966.7	6969.7	3540.8	1434.7
65°	16907.0	16339.8	15739.0	14908.2	13872.0	12822.0	11723.0	10834.0	5830.8	2641.0	884.4
67.5°	15303.7	14822.4	14187.8	13202.2	12093.9	11001.0	9994.0	8997.6	4331.7	1646.2	495.1
70°	12917.1	12446.5	11802.7	10794.1	9687.4	8642.0	7575.2	6762.8	2760.6	794.0	357.1
72.5°	8960.9	8579.2	8123.9	7405.0	6434.8	5484.4	4762.5	4138.6	1529.8	421.5	326.5
75°	3638.9	3640.4	3557.7	3254.2	2749.9	2371.3	2021.8	1715.2	639.2	358.7	321.9
77.5°	824.7	838.5	916.6	869.1	783.3	732.7	656.0	579.4	389.3	369.4	325.0
80°	416.9	418.5	413.9	415.4	410.8	412.3	406.2	401.6	364.8	380.1	325.0
82.5°	347.9	355.6	354.1	354.1	355.6	355.6	355.6	354.1	378.6	400.1	314.2
85°	275.9	291.2	303.5	315.8	329.6	338.8	343.4	347.9	367.9	393.9	285.1
87.5°	208.5	226.9	242.2	254.4	275.9	275.9	291.2	302.0	302.0	308.1	150.2
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: P159393

CATALOG NUMBER: VST-F11-LED-E-U-T2-8030

CANDELA DISTRIBUTION (continued):

	145°	155°	165°	175°	180°
0°	2201.1	2201.1	2201.1	2201.1	2201.1
2.5°	2126.0	2119.9	2113.8	2110.7	2104.6
5°	2110.7	2098.4	2090.8	2090.8	2084.6
7.5°	2155.1	2150.5	2139.8	2133.7	2139.8
10°	2250.2	2242.5	2230.3	2221.1	2225.7
12.5°	2377.4	2346.7	2322.2	2311.5	2303.8
15°	2509.2	2447.9	2398.9	2371.3	2363.6
17.5°	2650.2	2542.9	2469.4	2428.0	2420.3
20°	2794.3	2661.0	2556.7	2503.1	2501.6
22.5°	2967.5	2789.7	2656.4	2585.9	2581.3
25°	3149.9	2904.7	2728.4	2638.0	2628.8
27.5°	3307.8	2996.7	2772.9	2665.6	2656.4
30°	3439.6	3065.6	2809.7	2685.5	2673.2
32.5°	3534.7	3105.5	2825.0	2691.6	2677.8
35°	3565.3	3090.2	2782.1	2636.4	2621.1
37.5°	3523.9	2990.5	2662.5	2501.6	2483.2
40°	3399.8	2815.8	2467.8	2302.3	2279.3
42.5°	3209.7	2601.2	2233.3	2075.4	2046.3
45°	2975.2	2359.0	2000.3	1824.1	1810.3
47.5°	2729.9	2104.6	1738.2	1578.8	1561.9
50°	2464.8	1810.3	1482.2	1309.0	1309.0
52.5°	2149.0	1523.6	1184.9	1054.6	1043.8
55°	1785.7	1200.2	944.2	844.6	830.8
57.5°	1394.9	922.8	754.1	695.9	680.6
60°	1025.5	692.8	607.0	574.8	568.7
62.5°	695.9	527.3	489.0	475.2	473.6
65°	470.6	410.8	400.1	395.5	397.0
67.5°	361.7	341.8	337.2	335.7	335.7
70°	314.2	302.0	297.4	298.9	297.4
72.5°	295.8	279.0	280.5	283.6	282.0
75°	289.7	268.2	274.4	275.9	269.8
77.5°	285.1	256.0	271.3	275.9	259.0
80°	275.9	245.3	282.0	283.6	254.4
82.5°	252.9	217.7	282.0	260.6	229.9
85°	214.6	165.5	318.8	226.9	170.1
87.5°	136.4	98.1	216.1	154.8	102.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)