

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: P159368

Luminaire Tested: **VST-E09-LED-E-U-T2-8030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P159368
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-E09-LED-E-U-T2-8030
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(9) LIGHTBARS WITH AccuLED OPTICS - TYPE 2 AREA
Light Source: (189) 3000K CCT, 80 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 23446.4 lumens
Efficiency: N/A
Efficacy: 103.9 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')
IES Classification: Type II - Short - Semi-Cutoff
BUG Rating: B4 - U0 - G4

Input Watts (W): 225.7
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



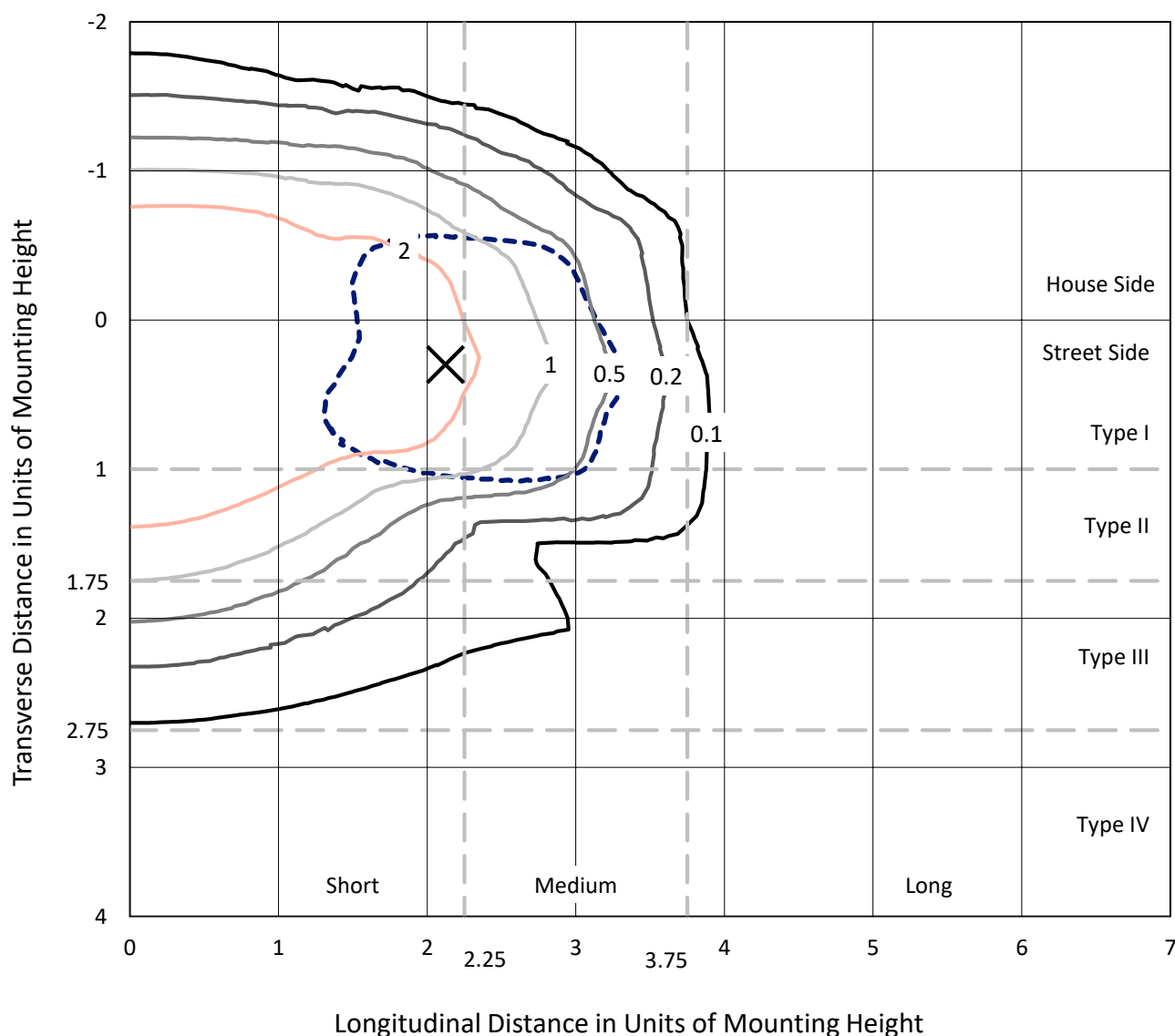
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Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

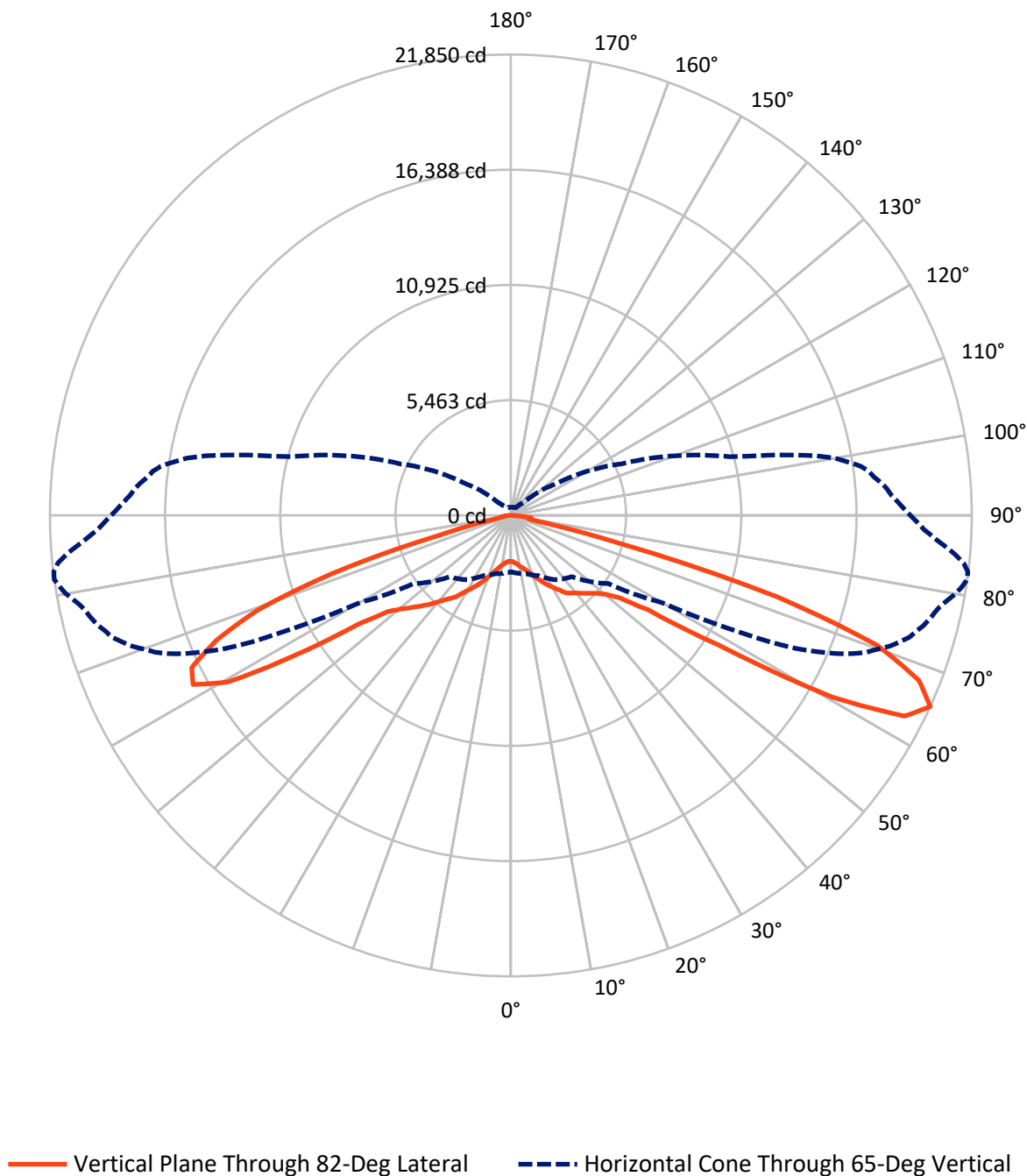


Based on 25 foot mounting height. Maximum calculated value = 4.4 fc
 Type II - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



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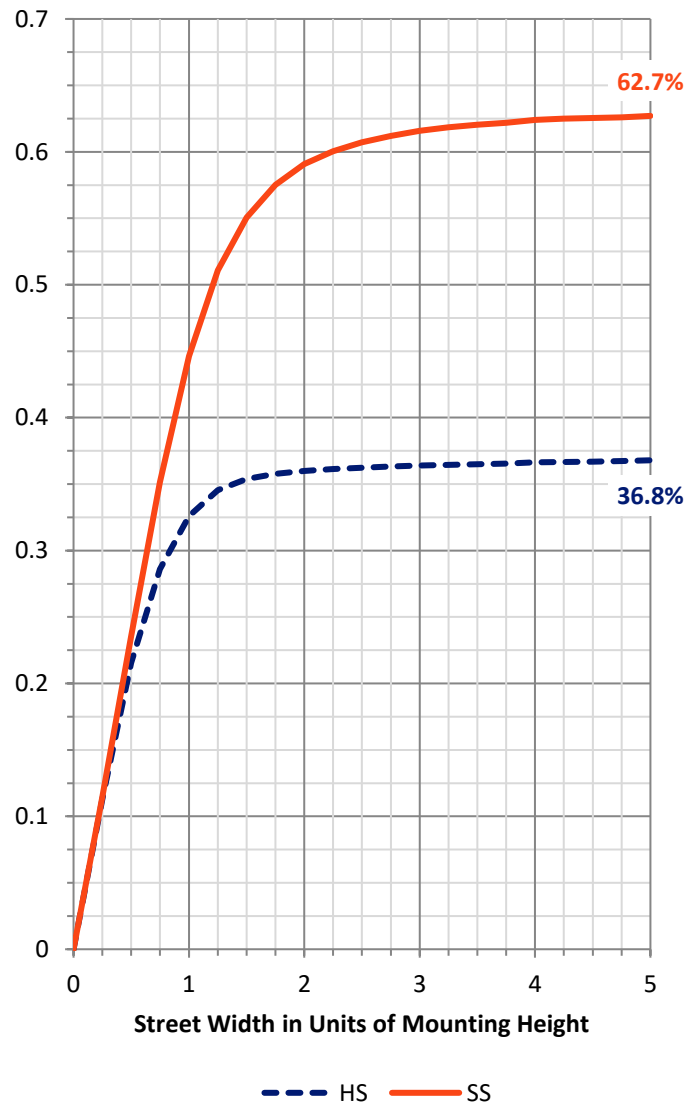
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	8729.9	0.0	8729.9
	% Fixture	37.2	0.0	37.2
Street Side	Lumens	14716.6	0.0	14716.6
	% Fixture	62.8	0.0	62.8
Total	Lumens	23446.4	0.0	23446.4
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	220.9	0.9
10°-20°	776.0	3.3
20°-30°	1537.6	6.6
30°-40°	2635.8	11.2
40°-50°	3959.7	16.9
50°-60°	5501.3	23.5
60°-70°	6276.2	26.8
70°-80°	2162.1	9.2
80°-90°	376.8	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°	23446.4	100.0
0°-180°	23446.4	100.0

Coefficient of Utilization



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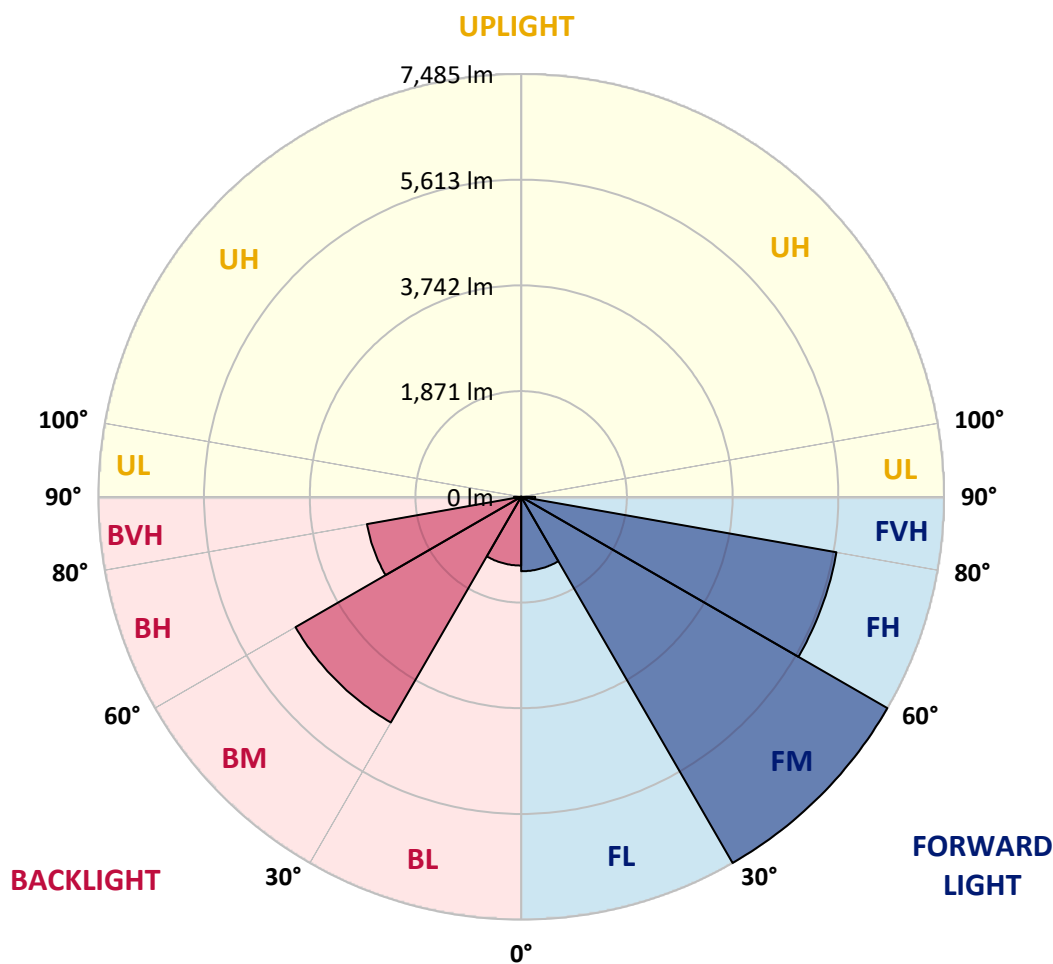
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1317.2	5.6			
FM	(30°-60°)	7484.6	31.9			
FH	(60°-80°)	5666.7	24.2			G3/7500
FVH	(80°-90°)	248.1	1.1			G3/500
BL	(0°-30°)	1217.3	5.2	B3/2500		
BM	(30°-60°)	4612.3	19.7	B3/5000		
BH	(60°-80°)	2771.5	11.8	B4/5000		G4/5000
BVH	(80°-90°)	128.8	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°	2181.5	2181.5	2181.5	2181.5	2181.5	2181.5	2181.5	2181.5	2181.5	2181.5	2181.5
2.5°	2300.0	2301.6	2300.0	2295.5	2294.0	2280.3	2265.1	2257.5	2256.0	2249.9	2251.4
5°	2442.8	2438.3	2432.2	2424.6	2417.0	2394.2	2368.4	2354.7	2350.2	2345.6	2339.5
7.5°	2570.5	2573.5	2570.5	2559.8	2540.1	2511.2	2477.8	2456.5	2455.0	2450.4	2445.9
10°	2734.5	2742.1	2723.9	2705.7	2678.3	2634.3	2596.3	2568.9	2564.4	2558.3	2555.3
12.5°	2912.3	2913.8	2907.7	2866.7	2821.1	2760.4	2705.7	2678.3	2672.2	2664.6	2661.6
15°	3102.2	3103.7	3070.3	3030.8	2960.9	2888.0	2812.0	2781.6	2774.0	2775.5	2763.4
17.5°	3252.6	3255.6	3223.7	3173.6	3090.0	3003.4	2921.4	2897.1	2892.5	2894.0	2888.0
20°	3317.9	3322.5	3302.7	3264.7	3185.7	3109.8	3050.5	3035.3	3033.8	3030.8	3042.9
22.5°	3314.9	3316.4	3308.8	3293.6	3246.5	3202.4	3194.8	3204.0	3202.4	3205.5	3216.1
25°	3287.5	3292.1	3290.6	3296.6	3289.0	3305.7	3340.7	3372.6	3377.1	3383.2	3403.0
27.5°	3357.4	3366.5	3355.9	3362.0	3374.1	3430.3	3501.7	3550.3	3559.4	3576.2	3592.9
30°	3630.8	3618.7	3605.0	3589.8	3597.4	3632.4	3712.9	3755.4	3760.0	3772.1	3794.9
32.5°	4036.5	4022.8	4010.6	3986.3	3980.3	3965.1	3992.4	4003.0	4001.5	4013.7	4019.8
35°	4493.7	4495.3	4492.2	4510.5	4525.6	4448.2	4352.5	4326.6	4337.3	4323.6	4326.6
37.5°	4884.2	4888.7	4969.2	5069.5	5098.4	5049.8	4840.1	4736.8	4701.9	4697.3	4662.4
40°	5317.1	5317.1	5438.7	5561.7	5642.2	5703.0	5453.9	5271.6	5197.1	5175.9	5089.3
42.5°	5792.6	5768.3	5879.2	6014.4	6163.3	6301.6	6172.4	5967.4	5861.0	5823.0	5671.1
45°	6183.1	6167.9	6222.6	6348.7	6590.2	6860.6	6878.9	6774.0	6710.2	6631.2	6491.5
47.5°	6423.1	6415.5	6447.4	6584.1	6886.5	7324.0	7568.6	7621.7	7583.8	7523.0	7387.8
50°	6517.3	6506.7	6529.5	6681.4	7020.1	7597.4	8138.3	8388.9	8407.2	8420.8	8378.3
52.5°	6483.9	6470.2	6517.3	6644.9	6997.4	7693.1	8583.4	9065.0	9145.5	9213.8	9353.6
55°	6163.3	6142.1	6269.7	6509.7	6898.6	7658.2	8908.5	9715.2	9885.3	10067.6	10377.5
57.5°	5672.6	5654.4	5838.2	6167.9	6723.9	7562.5	9127.3	10537.1	10919.9	11248.0	12127.6
60°	5200.2	5185.0	5292.8	5611.9	6157.3	7096.1	8856.8	10813.5	11456.2	12164.1	13769.9
62.5°	4355.5	4314.5	4458.8	4727.7	5072.6	5870.1	7676.4	10198.3	11188.8	12229.4	14406.4
65°	2676.8	2736.0	2860.6	3158.4	3723.5	4103.3	5637.7	8250.7	9557.2	10862.2	13686.3
67.5°	1700.0	1716.7	1809.3	2016.0	2453.5	2834.8	3416.6	5177.4	6184.6	7468.3	10745.2
70°	1456.9	1467.5	1546.5	1762.3	2064.6	2534.0	2585.7	2704.1	3065.7	3883.0	6316.8
72.5°	1148.5	1166.7	1229.0	1415.9	1780.5	2284.9	3191.8	2137.5	2064.6	2132.9	3082.4
75°	683.6	704.9	756.6	858.3	1143.9	1747.1	3343.7	2486.9	2318.3	2186.1	2126.9
77.5°	361.6	346.4	381.3	440.6	587.9	931.3	2512.7	3047.5	2929.0	2771.0	2435.3
80°	179.3	185.3	196.0	208.1	262.8	378.3	1256.4	3152.3	3494.1	3646.0	3348.3
82.5°	71.4	80.5	113.9	121.5	144.3	161.0	404.1	1747.1	2502.1	3393.9	4431.5
85°	36.5	34.9	60.8	72.9	85.1	76.0	142.8	651.7	1172.8	1827.6	2960.9
87.5°	4.6	6.1	13.7	18.2	25.8	24.3	41.0	141.3	224.8	319.0	448.2
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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CATALOG NUMBER: VST-E09-LED-E-U-T2-8030

CANDELA DISTRIBUTION (continued):

	65°	66°	67°	68°	69°	70°	71°	72°	73°	74°	75°
0°	2181.5	2181.5	2181.5	2181.5	2181.5	2181.5	2181.5	2181.5	2181.5	2181.5	2181.5
2.5°	2243.8	2242.3	2242.3	2236.2	2236.2	2237.8	2233.2	2230.2	2230.2	2231.7	2225.6
5°	2335.0	2330.4	2330.4	2324.4	2316.8	2316.8	2310.7	2309.2	2306.1	2300.0	2295.5
7.5°	2441.3	2436.8	2429.2	2424.6	2421.6	2417.0	2409.4	2406.4	2400.3	2394.2	2388.2
10°	2550.7	2544.6	2541.6	2534.0	2531.0	2521.8	2517.3	2518.8	2506.7	2502.1	2503.6
12.5°	2660.1	2654.0	2643.4	2640.3	2638.8	2629.7	2625.1	2622.1	2613.0	2611.5	2606.9
15°	2757.3	2760.4	2755.8	2748.2	2742.1	2740.6	2736.0	2733.0	2726.9	2720.9	2714.8
17.5°	2883.4	2888.0	2881.9	2871.3	2871.3	2869.7	2871.3	2869.7	2859.1	2863.7	2860.6
20°	3044.4	3047.5	3032.3	3036.8	3039.9	3038.4	3042.9	3047.5	3044.4	3044.4	3049.0
22.5°	3229.8	3234.3	3225.2	3231.3	3240.4	3232.8	3246.5	3245.0	3248.0	3252.6	3254.1
25°	3419.7	3428.8	3421.2	3437.9	3431.8	3437.9	3454.6	3450.1	3457.7	3469.8	3474.4
27.5°	3609.6	3615.7	3617.2	3627.8	3638.4	3647.6	3668.8	3668.8	3674.9	3696.2	3696.2
30°	3808.6	3814.7	3820.7	3835.9	3842.0	3858.7	3880.0	3886.1	3883.0	3913.4	3922.5
32.5°	4038.0	4044.1	4054.7	4072.9	4080.5	4097.2	4097.2	4113.9	4126.1	4151.9	4153.4
35°	4343.3	4347.9	4343.3	4341.8	4352.5	4375.2	4376.8	4401.1	4411.7	4437.5	4445.1
37.5°	4648.7	4647.2	4627.4	4606.2	4607.7	4598.6	4592.5	4603.1	4607.7	4609.2	4625.9
40°	5060.4	5020.9	4990.5	4937.3	4913.0	4875.1	4852.3	4850.8	4826.4	4823.4	4828.0
42.5°	5599.7	5554.1	5482.7	5393.1	5324.7	5254.9	5203.2	5172.8	5119.6	5092.3	5069.5
45°	6353.2	6240.8	6155.7	6049.4	5917.2	5795.7	5668.1	5610.3	5508.6	5446.3	5376.4
47.5°	7273.9	7163.0	7032.3	6922.9	6749.7	6581.1	6406.4	6253.0	6075.2	5933.9	5818.5
50°	8273.5	8208.1	8114.0	8012.2	7788.9	7678.0	7457.7	7249.5	7058.1	6805.9	6585.7
52.5°	9298.9	9336.9	9315.6	9279.2	9137.9	9095.4	8905.5	8651.8	8458.8	8285.6	7902.8
55°	10562.9	10608.5	10699.6	10752.8	10736.1	10843.9	10796.8	10599.3	10521.9	10441.3	10169.4
57.5°	12496.8	12821.9	13169.8	13475.2	13546.6	13929.4	13847.4	14044.9	14184.6	14084.4	13996.2
60°	14558.3	15214.6	15805.6	16423.9	16926.7	17303.5	17801.8	18137.5	18348.7	18728.5	18758.9
62.5°	15389.3	16281.1	17031.6	17748.6	18345.7	18868.3	19317.9	19781.3	20161.1	20504.4	20752.0
65°	14933.6	15864.8	16774.8	17502.5	18076.8	18526.4	19015.6	19383.3	19757.0	19977.3	20237.0
67.5°	12414.8	13648.3	14768.0	15588.3	16373.8	16831.0	17409.8	17771.4	18167.9	18400.4	18567.5
70°	8094.2	9700.0	11229.8	12474.0	13534.4	14067.6	14766.5	15260.2	15737.2	15749.4	16027.4
72.5°	4367.7	5710.6	6991.3	8262.8	9472.1	10181.6	10871.3	11471.4	11945.3	11743.3	12019.8
75°	2432.2	3061.2	3761.5	4525.6	5262.5	5668.1	6183.1	6186.1	6430.7	6046.4	6143.6
77.5°	2339.5	2310.7	2321.3	2342.6	2379.0	2301.6	2300.0	2252.9	2180.0	2047.9	2070.6
80°	3073.3	2705.7	2441.3	2026.6	1631.6	1330.8	1247.2	1267.0	1326.2	1444.7	1595.1
82.5°	4443.6	4133.7	3690.1	3036.8	2383.6	1838.2	1510.1	1339.9	1332.3	1450.8	1678.7
85°	3235.9	3422.7	3393.9	2833.3	2336.5	1897.5	1380.9	1166.7	966.2	919.1	999.6
87.5°	477.0	395.0	445.1	372.2	270.4	209.6	183.8	147.4	141.3	144.3	158.0
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):

	76°	77°	78°	79°	80°	81°	82°	83°	84°	85°	86°
0°	2181.5	2181.5	2181.5	2181.5	2181.5	2181.5	2181.5	2181.5	2181.5	2181.5	2181.5
2.5°	2227.1	2221.0	2215.0	2219.5	2215.0	2213.5	2208.9	2205.9	2204.3	2204.3	2204.3
5°	2295.5	2287.9	2283.3	2281.8	2277.3	2272.7	2271.2	2263.6	2262.1	2262.1	2257.5
7.5°	2388.2	2382.1	2374.5	2369.9	2366.9	2359.3	2351.7	2350.2	2348.7	2342.6	2338.0
10°	2496.0	2486.9	2477.8	2477.8	2471.7	2470.2	2462.6	2452.0	2450.4	2441.3	2438.3
12.5°	2597.8	2594.8	2584.1	2581.1	2576.5	2572.0	2567.4	2562.9	2558.3	2550.7	2553.7
15°	2719.3	2711.7	2702.6	2704.1	2702.6	2696.6	2690.5	2685.9	2682.9	2679.8	2679.8
17.5°	2865.2	2862.1	2860.6	2853.0	2847.0	2851.5	2851.5	2851.5	2843.9	2845.4	2847.0
20°	3050.5	3053.6	3050.5	3044.4	3042.9	3047.5	3036.8	3053.6	3044.4	3038.4	3041.4
22.5°	3255.6	3266.2	3254.1	3255.6	3263.2	3266.2	3255.6	3269.3	3264.7	3255.6	3263.2
25°	3478.9	3486.5	3480.4	3478.9	3483.5	3494.1	3492.6	3491.1	3501.7	3492.6	3497.2
27.5°	3708.3	3712.9	3715.9	3720.5	3723.5	3722.0	3728.1	3728.1	3734.2	3723.5	3728.1
30°	3936.2	3936.2	3942.3	3948.4	3948.4	3948.4	3960.5	3962.0	3952.9	3956.0	3945.3
32.5°	4179.3	4180.8	4186.9	4186.9	4199.0	4200.5	4214.2	4196.0	4214.2	4199.0	4202.1
35°	4464.9	4484.6	4487.7	4502.9	4515.0	4519.6	4519.6	4521.1	4537.8	4525.6	4530.2
37.5°	4632.0	4636.5	4648.7	4656.3	4656.3	4662.4	4666.9	4662.4	4666.9	4665.4	4670.0
40°	4829.5	4824.9	4838.6	4841.6	4835.6	4843.2	4841.6	4837.1	4849.2	4840.1	4846.2
42.5°	5069.5	5043.7	5042.2	5054.3	5042.2	5048.2	5046.7	5036.1	5051.3	5055.8	5051.3
45°	5326.3	5312.6	5285.2	5285.2	5273.1	5268.5	5270.0	5268.5	5270.0	5288.3	5294.4
47.5°	5744.0	5660.5	5613.4	5569.3	5532.9	5531.3	5514.6	5523.8	5535.9	5566.3	5593.6
50°	6444.4	6251.4	6132.9	6023.6	5944.6	5917.2	5885.3	5882.3	5892.9	5927.9	5974.9
52.5°	7693.1	7425.8	7173.6	6939.6	6736.1	6579.6	6502.1	6461.1	6445.9	6480.8	6526.4
55°	9978.0	9473.6	9118.1	8881.1	8375.3	8161.1	7886.1	7760.0	7636.9	7649.1	7726.6
57.5°	13882.3	13610.4	13312.6	12897.9	12588.0	12214.2	11527.6	11144.7	11161.4	11251.1	10971.5
60°	18998.9	18723.9	18600.9	18224.1	18008.4	17858.0	17493.4	16858.4	16633.5	16591.0	16077.5
62.5°	20941.9	21007.3	21104.5	21210.8	21204.8	21270.1	20951.1	20744.5	20484.7	20147.4	19640.0
65°	20434.5	20600.1	20797.6	21083.2	21408.3	21648.4	21850.4	21826.1	21583.0	21133.4	20597.1
67.5°	18716.3	18880.4	19024.7	19407.6	19940.8	20428.5	20859.9	21153.1	20990.6	20618.4	19992.5
70°	16133.7	16252.2	16343.4	16676.1	17261.0	17856.5	18420.1	18912.3	18862.2	18411.0	17911.2
72.5°	11690.1	11977.2	12132.2	12109.4	12471.0	13137.9	13216.9	13637.7	13754.7	13268.6	12472.5
75°	5695.4	5700.0	5520.7	5461.5	5479.7	5595.2	5374.9	5388.5	5312.6	4967.7	4683.6
77.5°	1990.1	1935.4	1804.8	1649.8	1428.0	1219.9	1008.7	917.6	887.2	797.6	735.3
80°	1715.2	1795.7	1769.8	1642.2	1408.3	1122.7	838.6	621.3	530.2	498.3	467.9
82.5°	1947.6	2257.5	2455.0	2444.4	2123.8	1595.1	995.1	571.2	407.1	357.0	328.1
85°	1086.2	1168.3	1191.0	1084.7	900.9	615.3	343.3	241.6	205.1	186.9	168.6
87.5°	173.2	158.0	155.0	135.2	127.6	117.0	103.3	97.2	89.6	85.1	85.1
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: P159368

CATALOG NUMBER: VST-E09-LED-E-U-T2-8030

CANDELA DISTRIBUTION (continued):

	87°	88°	89°	90°	91°	92°	93°	94°	95°	96°	97°
0°	2181.5	2181.5	2181.5	2181.5	2181.5	2181.5	2181.5	2181.5	2181.5	2181.5	2181.5
2.5°	2202.8	2201.3	2196.7	2192.2	2189.1	2187.6	2186.1	2183.1	2181.5	2180.0	2177.0
5°	2254.5	2251.4	2243.8	2236.2	2233.2	2228.6	2224.1	2221.0	2218.0	2216.5	2210.4
7.5°	2335.0	2331.9	2322.8	2316.8	2315.2	2303.1	2301.6	2297.0	2289.4	2287.9	2278.8
10°	2432.2	2430.7	2423.1	2418.5	2415.5	2409.4	2400.3	2392.7	2385.1	2385.1	2379.0
12.5°	2544.6	2538.6	2543.1	2532.5	2529.4	2523.4	2518.8	2517.3	2508.2	2500.6	2499.1
15°	2676.8	2669.2	2669.2	2666.2	2663.1	2657.1	2655.5	2657.1	2647.9	2651.0	2641.9
17.5°	2840.9	2843.9	2842.4	2842.4	2834.8	2834.8	2822.6	2837.8	2827.2	2834.8	2831.8
20°	3046.0	3047.5	3044.4	3049.0	3052.0	3050.5	3049.0	3047.5	3052.0	3058.1	3053.6
22.5°	3264.7	3264.7	3263.2	3279.9	3261.7	3275.4	3279.9	3270.8	3295.1	3292.1	3296.6
25°	3501.7	3501.7	3513.9	3527.5	3530.6	3519.9	3526.0	3518.4	3533.6	3545.8	3548.8
27.5°	3722.0	3741.7	3750.9	3741.7	3749.3	3766.1	3764.5	3764.5	3775.2	3772.1	3801.0
30°	3948.4	3960.5	3972.7	3966.6	3969.6	3990.9	3992.4	3993.9	4007.6	4027.4	4048.6
32.5°	4206.6	4218.8	4212.7	4232.4	4230.9	4256.8	4261.3	4265.9	4308.4	4300.8	4344.9
35°	4524.1	4536.3	4530.2	4551.5	4548.4	4557.6	4574.3	4592.5	4600.1	4644.1	4679.1
37.5°	4673.0	4673.0	4686.7	4711.0	4720.1	4735.3	4761.1	4783.9	4821.9	4869.0	4923.7
40°	4852.3	4856.8	4875.1	4900.9	4917.6	4952.5	4999.6	5031.5	5089.3	5140.9	5204.7
42.5°	5069.5	5089.3	5110.5	5145.5	5181.9	5236.6	5303.5	5344.5	5420.4	5487.3	5566.3
45°	5323.2	5343.0	5393.1	5456.9	5510.1	5570.8	5625.5	5722.8	5791.1	5861.0	5929.4
47.5°	5630.1	5687.8	5728.8	5804.8	5870.1	5950.6	6019.0	6110.2	6184.6	6269.7	6327.4
50°	6023.6	6095.0	6148.1	6246.9	6310.7	6400.3	6486.9	6555.3	6631.2	6714.8	6761.9
52.5°	6588.7	6661.6	6728.5	6851.5	6930.5	6991.3	7106.7	7191.8	7261.7	7322.5	7374.1
55°	7813.2	7791.9	7977.2	8215.7	8243.1	8463.4	8504.4	8575.8	8704.9	8723.2	8867.5
57.5°	11311.8	11202.5	11471.4	11820.8	11760.0	11649.1	12112.5	12141.3	12076.0	12250.7	12053.2
60°	16153.5	15962.1	16035.0	16130.7	15992.4	15927.1	15949.9	16015.2	15951.4	15881.5	15690.1
62.5°	19386.3	19091.6	18880.4	18702.7	18477.8	18315.3	18133.0	17908.1	17847.4	17592.1	17377.9
65°	20076.0	19617.2	19283.0	18947.3	18637.3	18350.2	18075.2	17882.3	17627.1	17324.8	17101.5
67.5°	19317.9	18749.8	18260.6	17772.9	17422.0	16999.7	16793.1	16478.6	16164.1	15817.7	15612.7
70°	17115.1	16522.6	15907.4	15430.3	14953.3	14430.7	14328.9	13956.7	13776.0	13303.5	13221.5
72.5°	11813.2	11418.2	11143.2	10553.8	10263.6	9996.2	9911.2	9566.3	9602.8	9084.7	9273.1
75°	4200.5	4144.3	4063.8	3731.1	3671.9	3568.6	3541.2	3516.9	3763.0	3421.2	3668.8
77.5°	721.6	717.1	676.0	656.3	694.3	670.0	676.0	663.9	735.3	745.9	729.2
80°	448.2	436.0	422.3	413.2	414.7	405.6	407.1	410.2	414.7	413.2	417.8
82.5°	306.9	296.2	290.2	284.1	293.2	296.2	303.8	311.4	323.6	331.2	340.3
85°	167.1	153.4	153.4	151.9	164.1	173.2	185.3	200.5	221.8	240.0	259.8
87.5°	85.1	82.0	83.6	86.6	97.2	104.8	120.0	133.7	151.9	171.7	189.9
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: P159368

CATALOG NUMBER: VST-E09-LED-E-U-T2-8030

CANDELA DISTRIBUTION (continued):

	98°	99°	100°	101°	102°	103°	104°	105°	115°	125°	135°
0°	2181.5	2181.5	2181.5	2181.5	2181.5	2181.5	2181.5	2181.5	2181.5	2181.5	2181.5
2.5°	2175.5	2175.5	2174.0	2174.0	2172.4	2170.9	2169.4	2164.8	2148.1	2132.9	2122.3
5°	2208.9	2204.3	2202.8	2198.3	2196.7	2193.7	2189.1	2184.6	2154.2	2126.9	2107.1
7.5°	2277.3	2271.2	2268.1	2263.6	2259.0	2252.9	2246.9	2242.3	2205.9	2174.0	2149.6
10°	2366.9	2363.8	2362.3	2356.3	2356.3	2347.1	2345.6	2335.0	2295.5	2266.6	2245.4
12.5°	2491.5	2485.4	2483.9	2476.3	2479.3	2476.3	2473.2	2467.2	2438.3	2404.9	2376.0
15°	2646.4	2646.4	2638.8	2632.7	2634.3	2631.2	2637.3	2629.7	2611.5	2581.1	2534.0
17.5°	2833.3	2830.2	2833.3	2828.7	2831.8	2834.8	2827.2	2828.7	2819.6	2781.6	2711.7
20°	3050.5	3046.0	3064.2	3056.6	3073.3	3058.1	3061.2	3065.7	3065.7	3015.6	2921.4
22.5°	3299.7	3296.6	3296.6	3311.8	3317.9	3319.4	3325.5	3330.1	3342.2	3278.4	3128.0
25°	3548.8	3559.4	3561.0	3580.7	3589.8	3589.8	3594.4	3611.1	3647.6	3559.4	3365.0
27.5°	3802.5	3828.3	3834.4	3848.1	3861.8	3875.4	3886.1	3898.2	3957.5	3861.8	3608.1
30°	4056.2	4085.1	4106.4	4121.5	4138.3	4171.7	4177.8	4202.1	4300.8	4183.8	3839.0
32.5°	4354.0	4395.0	4422.3	4442.1	4467.9	4499.8	4518.1	4548.4	4644.1	4452.7	4007.6
35°	4709.5	4733.8	4773.3	4806.7	4821.9	4876.6	4905.4	4913.0	4986.0	4685.2	4132.2
37.5°	4955.6	4996.6	5065.0	5112.1	5139.4	5169.8	5218.4	5250.3	5320.2	4896.3	4194.5
40°	5268.5	5330.8	5385.5	5455.4	5499.4	5522.2	5570.8	5596.7	5605.8	5077.1	4174.7
42.5°	5649.8	5706.1	5779.0	5835.2	5868.6	5894.4	5933.9	5944.6	5826.1	5162.2	4068.4
45°	6008.4	6095.0	6157.3	6198.3	6222.6	6236.2	6260.6	6262.1	6008.4	5119.6	3886.1
47.5°	6394.2	6456.5	6514.3	6543.1	6540.1	6543.1	6534.0	6527.9	6099.5	4972.3	3652.1
50°	6821.1	6862.2	6886.5	6900.1	6907.7	6878.9	6837.8	6810.5	6107.1	4762.6	3415.1
52.5°	7393.9	7445.5	7441.0	7439.4	7378.7	7351.3	7241.9	7185.7	6063.1	4516.5	3147.7
55°	8844.7	8794.6	8695.8	8744.4	8496.8	8367.7	8197.5	8039.5	6120.8	4282.6	2837.8
57.5°	12132.2	12152.0	11870.9	11720.5	11302.7	10780.1	10359.3	9950.7	6640.4	4139.8	2433.7
60°	15562.5	15304.3	14947.2	14403.4	13865.6	13089.3	12340.3	11632.4	7158.4	3990.9	1955.2
62.5°	17060.4	16692.8	16153.5	15450.1	14605.4	13655.9	12723.2	11860.3	6907.7	3509.3	1422.0
65°	16756.6	16194.5	15599.0	14775.6	13748.6	12708.0	11618.7	10737.6	5779.0	2617.6	876.6
67.5°	15167.5	14690.5	14061.6	13084.7	11986.4	10903.2	9905.1	8917.6	4293.2	1631.6	490.7
70°	12802.2	12335.8	11697.7	10698.1	9601.2	8565.2	7507.8	6702.6	2736.0	786.9	354.0
72.5°	8881.1	8502.9	8051.7	7339.2	6377.5	5435.6	4720.1	4101.8	1516.1	417.8	323.6
75°	3606.5	3608.1	3526.0	3225.2	2725.4	2350.2	2003.8	1700.0	633.5	355.5	319.0
77.5°	817.3	831.0	908.5	861.4	776.3	726.2	650.2	574.3	385.9	366.1	322.1
80°	413.2	414.7	410.2	411.7	407.1	408.7	402.6	398.0	361.6	376.8	322.1
82.5°	344.9	352.5	350.9	350.9	352.5	352.5	352.5	350.9	375.2	396.5	311.4
85°	273.5	288.6	300.8	313.0	326.6	335.7	340.3	344.9	364.6	390.4	282.6
87.5°	206.6	224.8	240.0	252.2	273.5	273.5	288.6	299.3	299.3	305.4	148.9
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: P159368

CATALOG NUMBER: VST-E09-LED-E-U-T2-8030

CANDELA DISTRIBUTION (continued):

	145°	155°	165°	175°	180°
0°	2181.5	2181.5	2181.5	2181.5	2181.5
2.5°	2107.1	2101.0	2095.0	2091.9	2085.8
5°	2091.9	2079.8	2072.2	2072.2	2066.1
7.5°	2136.0	2131.4	2120.8	2114.7	2120.8
10°	2230.2	2222.6	2210.4	2201.3	2205.9
12.5°	2356.3	2325.9	2301.6	2290.9	2283.3
15°	2486.9	2426.1	2377.5	2350.2	2342.6
17.5°	2626.7	2520.3	2447.4	2406.4	2398.8
20°	2769.5	2637.3	2534.0	2480.8	2479.3
22.5°	2941.1	2764.9	2632.7	2562.9	2558.3
25°	3121.9	2878.9	2704.1	2614.5	2605.4
27.5°	3278.4	2970.0	2748.2	2641.9	2632.7
30°	3409.0	3038.4	2784.7	2661.6	2649.5
32.5°	3503.2	3077.9	2799.9	2667.7	2654.0
35°	3533.6	3062.7	2757.3	2613.0	2597.8
37.5°	3492.6	2963.9	2638.8	2479.3	2461.1
40°	3369.5	2790.7	2445.9	2281.8	2259.0
42.5°	3181.2	2578.1	2213.5	2057.0	2028.1
45°	2948.7	2338.0	1982.5	1807.8	1794.2
47.5°	2705.7	2085.8	1722.8	1564.8	1548.0
50°	2442.8	1794.2	1469.1	1297.4	1297.4
52.5°	2129.9	1510.1	1174.3	1045.2	1034.6
55°	1769.8	1189.5	935.8	837.1	823.4
57.5°	1382.5	914.5	747.4	689.7	674.5
60°	1016.3	686.7	601.6	569.7	563.6
62.5°	689.7	522.6	484.6	470.9	469.4
65°	466.4	407.1	396.5	391.9	393.5
67.5°	358.5	338.8	334.2	332.7	332.7
70°	311.4	299.3	294.7	296.2	294.7
72.5°	293.2	276.5	278.0	281.0	279.5
75°	287.1	265.9	271.9	273.5	267.4
77.5°	282.6	253.7	268.9	273.5	256.7
80°	273.5	243.1	279.5	281.0	252.2
82.5°	250.7	215.7	279.5	258.3	227.9
85°	212.7	164.1	316.0	224.8	168.6
87.5°	135.2	97.2	214.2	153.4	101.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)