

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: P159790

Luminaire Tested: **VST-E07-LED-E-U-T4**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P159790  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33707)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: STREETWORKS  
Catalog Number: VST-E07-LED-E-U-T4  
Description: VENTUS LED SITE/ROADWAY LUMINAIRE  
(7) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 SHORT  
Light Source: (147) 4000K CCT, 70 CRI LEDs  
Ballast/Driver: -

**Summary**

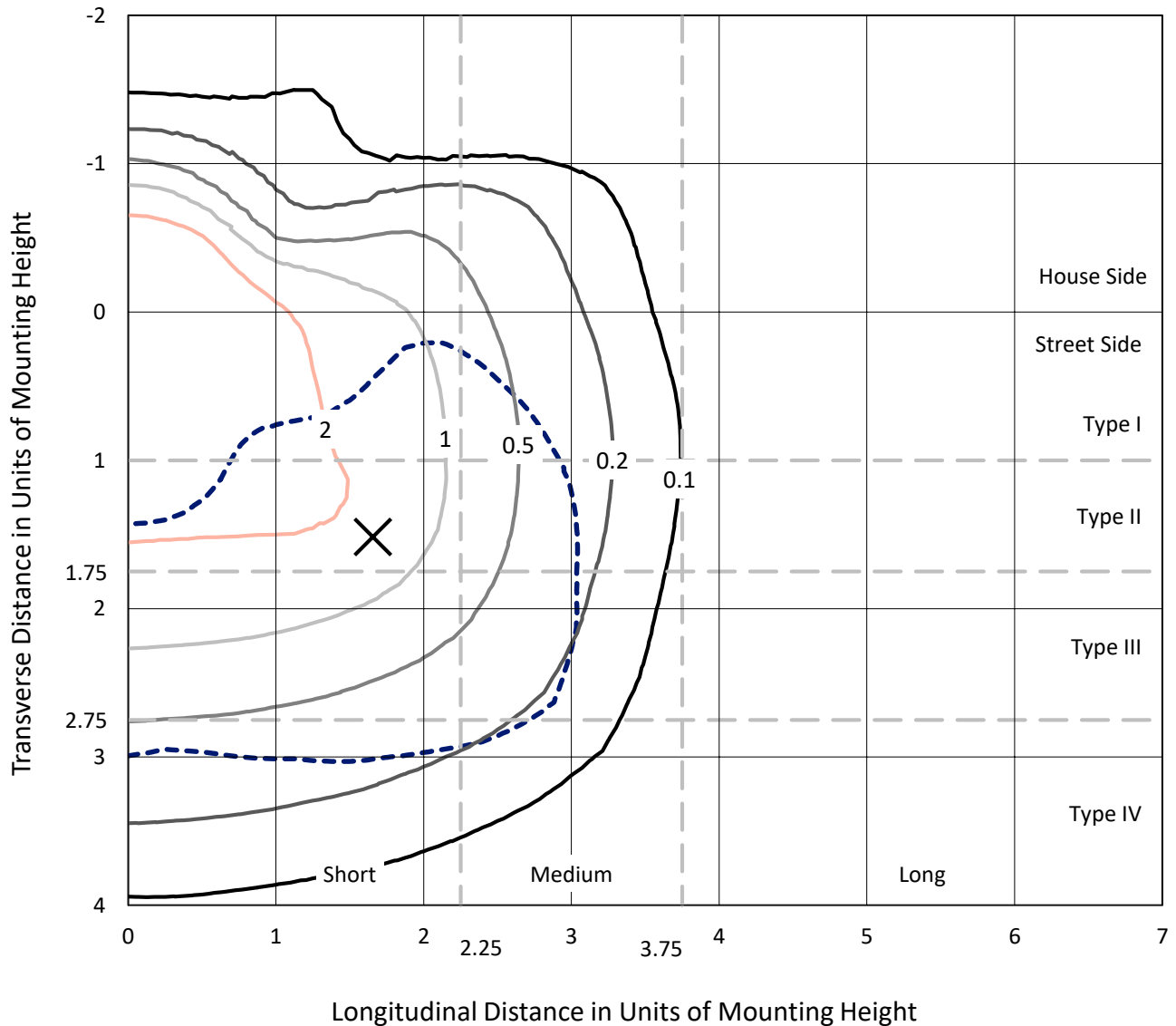
Lumens per Lamp: N/A  
Luminaire Lumens: 20834.5 lumens  
Efficiency: N/A  
Efficacy: 120.8 lumens/watt  
Luminous Opening: Rectangular (W 1.17' x L: 1' x H: 0')  
IES Classification: Type IV - Short - Semi-Cutoff  
BUG Rating: B3 - U0 - G4  
  
Input Watts (W): 172.5  
Input Voltage (V): NR  
Input 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

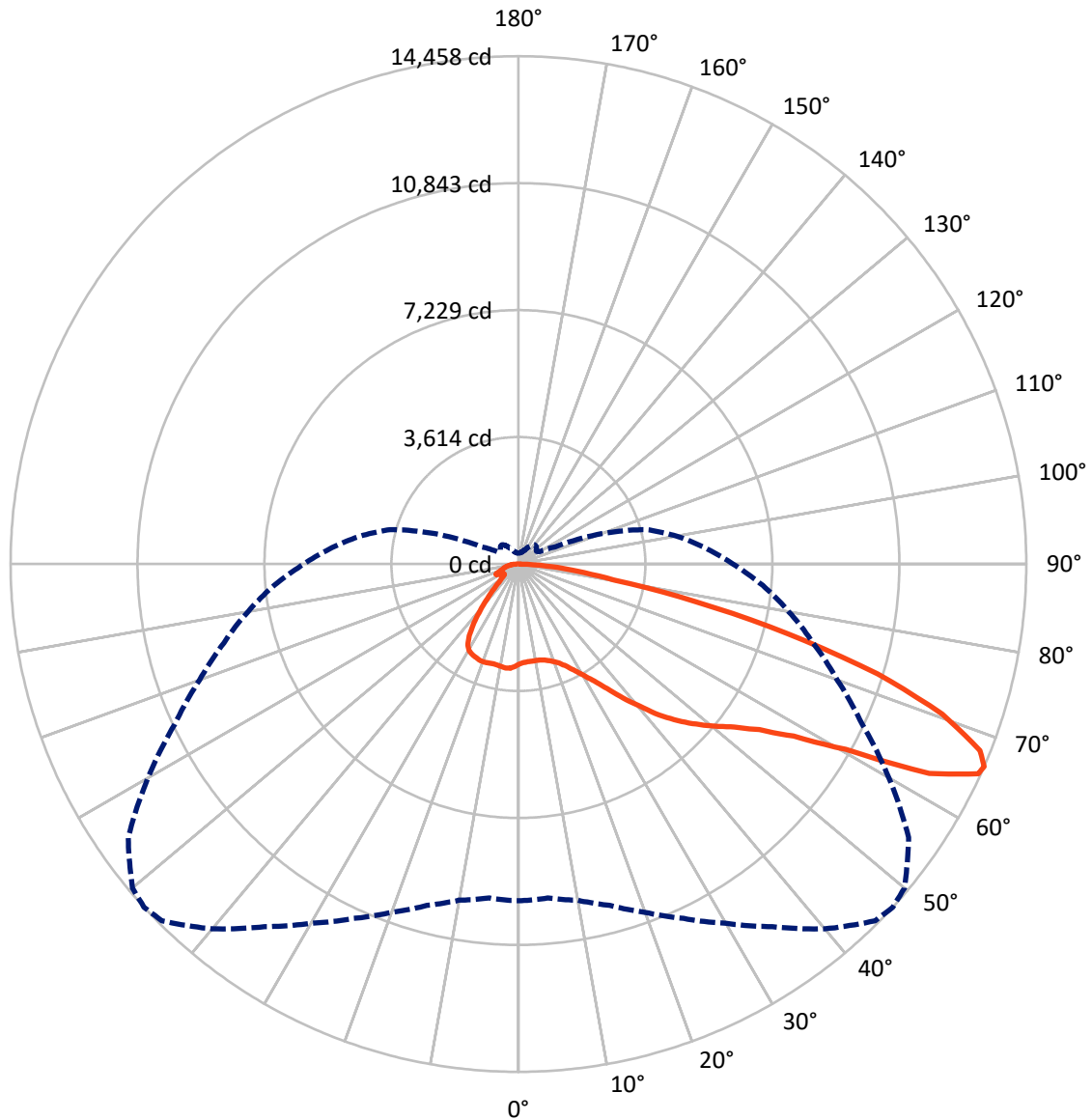
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.7 fc  
 Type IV - Short - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 47.5-Deg Lateral    - - - Horizontal Cone Through 66-Deg Vertical

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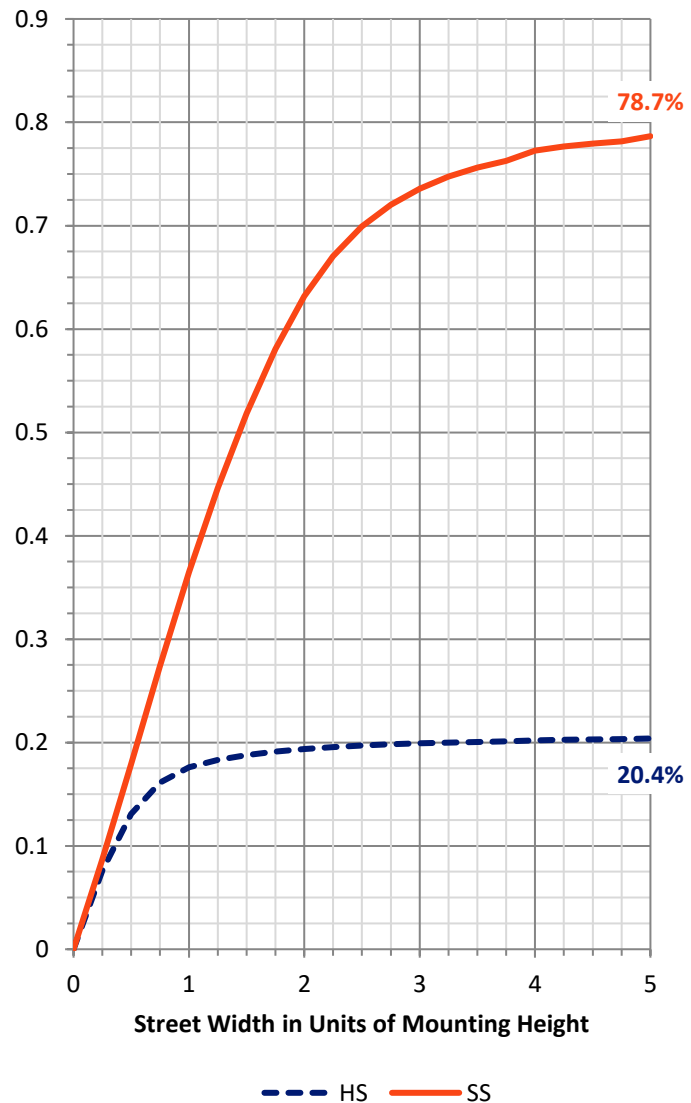
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	4313.7	0.0	4313.7
	% Fixture	20.7	0.0	20.7
<b>Street Side</b>	Lumens	16520.8	0.0	16520.8
	% Fixture	79.3	0.0	79.3
<b>Total</b>	Lumens	20834.5	0.0	20834.5
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	274.7	1.3
10°-20°	823.9	4.0
20°-30°	1405.7	6.7
30°-40°	2121.7	10.2
40°-50°	2757.7	13.2
50°-60°	3783.3	18.2
60°-70°	5819.9	27.9
70°-80°	3364.3	16.1
80°-90°	483.3	2.3
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°	20834.5	100.0
0°-180°	20834.5	100.0

**Coefficient of Utilization**



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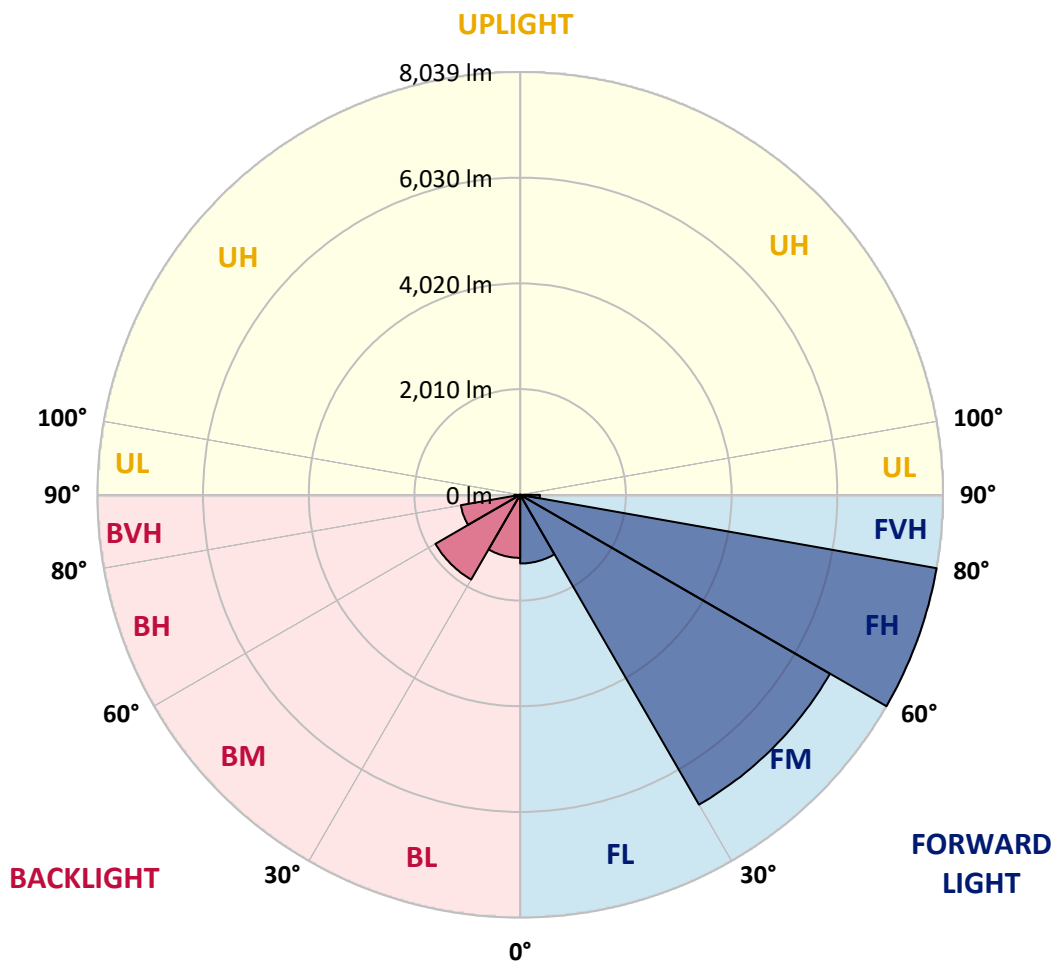
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1305.9	6.3			
FM	(30°-60°)	6801.6	32.6			
FH	(60°-80°)	8039.3	38.6			G4/12000
FVH	(80°-90°)	374.0	1.8			G3/500
BL	(0°-30°)	1198.4	5.8	B3/2500		
BM	(30°-60°)	1861.1	8.9	B2/2500		
BH	(60°-80°)	1144.9	5.5	B3/2500		G3/2500
BVH	(80°-90°)	109.3	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





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	47.5°
0°	2850.4	2850.4	2850.4	2850.4	2850.4	2850.4	2850.4	2850.4	2850.4	2850.4	2850.4
2.5°	2777.6	2779.0	2780.4	2780.4	2784.6	2784.6	2791.6	2795.8	2797.2	2805.6	2811.2
5°	2725.8	2724.4	2725.8	2728.6	2735.6	2741.2	2755.2	2765.0	2773.4	2787.4	2794.4
7.5°	2703.4	2706.2	2709.0	2710.4	2716.0	2730.0	2742.6	2752.4	2769.2	2786.0	2793.0
10°	2732.8	2737.0	2732.8	2735.6	2735.6	2748.2	2753.8	2760.8	2773.4	2788.8	2793.0
12.5°	2801.4	2809.8	2801.4	2794.4	2788.8	2800.0	2797.2	2791.6	2798.6	2802.8	2802.8
15°	2914.8	2914.8	2909.2	2899.4	2885.4	2886.8	2874.2	2861.6	2856.0	2846.2	2839.2
17.5°	3025.4	3022.6	3010.0	2997.4	2987.6	2983.4	2965.2	2948.4	2928.8	2913.4	2896.6
20°	3133.2	3144.4	3129.0	3110.8	3095.4	3085.6	3071.6	3038.0	3014.2	2989.0	2972.2
22.5°	3319.4	3309.6	3292.8	3266.2	3250.8	3234.0	3204.6	3168.2	3131.8	3101.0	3080.0
25°	3511.2	3501.4	3477.6	3458.0	3435.6	3421.6	3389.4	3344.6	3309.6	3262.0	3234.0
27.5°	3717.0	3708.6	3680.6	3665.2	3649.8	3633.0	3605.0	3558.8	3526.6	3472.0	3442.6
30°	3949.4	3948.0	3910.2	3907.4	3885.0	3866.8	3847.2	3808.0	3775.8	3721.2	3686.2
32.5°	4197.2	4191.6	4165.0	4156.6	4172.0	4159.4	4131.4	4090.8	4048.8	4016.6	3977.4
35°	4550.0	4540.2	4524.8	4531.8	4541.6	4576.6	4533.2	4498.2	4447.8	4405.8	4351.2
37.5°	4807.6	4793.6	4811.8	4851.0	4907.0	4933.6	4971.4	4972.8	4949.0	4893.0	4845.4
40°	5044.2	5038.6	5080.6	5135.2	5238.8	5314.4	5385.8	5420.8	5429.2	5392.8	5321.4
42.5°	5244.4	5261.2	5317.2	5401.2	5546.8	5661.6	5794.6	5877.2	5929.0	5909.4	5877.2
45°	5482.4	5490.8	5559.4	5665.8	5804.4	5994.8	6169.8	6309.8	6400.8	6399.4	6363.0
47.5°	5780.6	5782.0	5840.8	5965.4	6113.8	6307.0	6528.2	6714.4	6834.8	6840.4	6812.4
50°	6134.8	6132.0	6196.4	6314.0	6472.2	6658.4	6893.6	7126.0	7294.0	7294.0	7253.4
52.5°	6591.2	6585.6	6620.6	6724.2	6876.8	7072.8	7306.6	7575.4	7757.4	7796.6	7708.4
55°	7200.2	7208.6	7217.0	7308.0	7438.2	7593.6	7862.4	8110.2	8353.8	8376.2	8324.4
57.5°	7904.4	7876.4	7936.6	8085.0	8233.4	8428.0	8618.4	8911.0	9199.4	9248.4	9241.4
60°	9004.8	8968.4	9030.0	9219.0	9382.8	9689.4	10015.6	10393.6	10735.2	10836.0	10714.2
62.5°	10017.0	10061.8	10145.8	10365.6	10603.6	11012.4	11502.4	12150.6	12798.8	13151.6	13126.4
65°	9926.0	9884.0	10045.0	10344.6	10775.8	11296.6	11905.6	12686.8	13620.6	14329.0	14392.0
66°	9588.6	9545.2	9718.8	10061.8	10554.6	11134.2	11810.4	12605.6	13560.4	14361.2	14457.8
67.5°	9031.4	8988.0	9184.0	9496.2	10004.4	10733.8	11464.6	12334.0	13326.6	14093.8	14172.2
70°	7956.2	7897.4	8050.0	8402.8	8814.4	9520.0	10215.8	11137.0	12156.2	12769.4	12798.8
72.5°	6739.6	6602.4	6764.8	7036.4	7330.4	7914.2	8520.4	9150.4	9962.4	10529.4	10691.8
75°	4890.2	4961.6	5009.2	5188.4	5383.0	5866.0	6221.6	6749.4	7378.0	7788.2	7918.4
77.5°	2594.2	2702.0	2769.2	2948.4	3270.4	3638.6	4023.6	4349.8	4762.8	4992.4	5152.0
80°	1456.0	1531.6	1640.8	1782.2	1939.0	2221.8	2450.0	2618.0	2676.8	2717.4	2753.8
82.5°	800.8	992.6	1155.0	1253.0	1345.4	1458.8	1594.6	1734.6	1779.4	1712.2	1677.2
85°	124.6	183.4	558.6	681.8	742.0	828.8	926.8	1030.4	1031.8	887.6	968.8
87.5°	35.0	39.2	79.8	120.4	117.6	95.2	117.6	214.2	126.0	63.0	72.8
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-E07-LED-E-U-T4

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°
0°	2850.4	2850.4	2850.4	2850.4	2850.4	2850.4	2850.4	2850.4	2850.4	2850.4	2850.4
2.5°	2814.0	2816.8	2823.8	2830.8	2837.8	2844.8	2849.0	2856.0	2861.6	2870.0	2879.8
5°	2802.8	2809.8	2822.4	2837.8	2851.8	2864.4	2874.2	2888.2	2900.8	2912.0	2928.8
7.5°	2802.8	2816.8	2837.8	2854.6	2867.2	2882.6	2898.0	2912.0	2926.0	2937.2	2948.4
10°	2804.2	2818.2	2839.2	2858.8	2872.8	2889.6	2902.2	2914.8	2930.2	2937.2	2951.2
12.5°	2809.8	2815.4	2830.8	2850.4	2867.2	2884.0	2896.6	2909.2	2926.0	2928.8	2938.6
15°	2837.8	2829.4	2833.6	2847.6	2865.8	2879.8	2893.8	2903.6	2914.8	2912.0	2920.4
17.5°	2889.6	2868.6	2860.2	2861.6	2870.0	2879.8	2885.4	2886.8	2888.2	2875.6	2877.0
20°	2959.6	2930.2	2910.6	2900.8	2889.6	2879.8	2864.4	2846.2	2829.4	2804.2	2801.4
22.5°	3064.6	3021.2	3000.2	2973.6	2940.0	2898.0	2860.2	2815.4	2779.0	2741.2	2727.2
25°	3217.2	3172.4	3150.0	3108.0	3047.8	2987.6	2933.0	2872.8	2819.6	2774.8	2753.8
27.5°	3421.6	3376.8	3353.0	3309.6	3235.4	3175.2	3099.6	3035.2	2970.8	2905.0	2878.4
30°	3669.4	3630.2	3603.6	3568.6	3504.2	3438.4	3350.2	3250.8	3148.6	3043.6	2991.8
32.5°	3962.0	3918.6	3899.0	3858.4	3791.2	3722.6	3624.6	3497.2	3326.4	3161.2	3057.6
35°	4327.4	4278.4	4256.0	4202.8	4124.4	4023.6	3918.6	3747.8	3516.8	3287.2	3117.8
37.5°	4816.0	4706.8	4632.6	4510.8	4384.8	4243.4	4093.6	3918.6	3645.6	3361.4	3126.2
40°	5248.6	5138.0	4995.2	4820.2	4624.2	4429.6	4258.8	4060.0	3763.2	3414.6	3099.6
42.5°	5786.2	5590.2	5362.0	5125.4	4865.0	4625.6	4422.6	4188.8	3843.0	3428.6	3025.4
45°	6277.6	6043.8	5738.6	5423.6	5100.2	4799.2	4571.0	4310.6	3911.6	3428.6	2935.8
47.5°	6725.6	6445.6	6080.2	5688.2	5311.6	4982.6	4723.6	4435.2	4008.2	3472.0	2909.2
50°	7140.0	6818.0	6402.2	5947.2	5524.4	5173.0	4894.4	4594.8	4155.2	3584.0	2973.6
52.5°	7576.8	7235.2	6728.4	6245.4	5779.2	5402.6	5105.8	4792.2	4345.6	3760.4	3087.0
55°	8149.4	7749.0	7173.6	6641.6	6129.2	5713.4	5376.0	5028.8	4554.2	3959.2	3225.6
57.5°	9052.4	8471.4	7896.0	7204.4	6721.4	6174.0	5804.4	5405.4	4893.0	4218.2	3434.2
60°	10633.0	9919.0	9227.4	8432.2	7835.8	7263.2	6704.6	6183.8	5566.4	4803.4	3892.0
62.5°	12889.8	12164.6	11078.2	10105.2	9205.0	8446.2	7718.2	7056.0	6263.6	5429.2	4456.2
65°	14238.0	13407.8	12112.8	10805.2	9711.8	8771.0	7938.0	7127.4	6272.0	5458.6	4627.0
66°	14345.8	13560.4	12177.2	10795.4	9660.0	8684.2	7817.6	6979.0	6102.6	5324.2	4571.0
67.5°	14145.6	13469.4	12045.6	10605.0	9444.4	8390.2	7499.8	6620.6	5740.0	5019.0	4384.8
70°	12733.0	12244.4	11023.6	9674.0	8516.2	7586.6	6647.2	5801.6	4967.2	4361.0	3890.6
72.5°	10438.4	9819.6	8965.6	8058.4	7147.0	6322.4	5468.4	4748.8	4048.8	3607.8	3274.6
75°	7667.8	7110.6	6169.8	5604.2	5002.2	4484.2	3908.8	3227.0	2730.0	2508.8	2427.6
77.5°	4860.8	4256.0	3462.2	2837.8	2440.2	2097.2	1653.4	1314.6	1052.8	1096.2	1213.8
80°	2455.6	2115.4	1583.4	1250.2	1080.8	898.8	711.2	539.0	393.4	449.4	508.2
82.5°	1576.4	1316.0	1048.6	826.0	697.2	614.6	491.4	357.0	266.0	299.6	366.8
85°	949.2	802.2	639.8	523.6	455.0	379.4	278.6	197.4	196.0	210.0	259.0
87.5°	144.2	205.8	119.0	127.4	134.4	144.2	127.4	107.8	93.8	121.8	154.0
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°	2850.4	2850.4	2850.4	2850.4	2850.4	2850.4	2850.4	2850.4	2850.4	2850.4	2850.4
2.5°	2889.6	2892.4	2898.0	2905.0	2903.6	2913.4	2919.0	2913.4	2926.0	2926.0	2933.0
5°	2942.8	2947.0	2956.8	2963.8	2966.6	2975.0	2977.8	2976.4	2979.2	2980.6	2983.4
7.5°	2958.2	2969.4	2973.6	2977.8	2979.2	2982.0	2982.0	2979.2	2979.2	2977.8	2980.6
10°	2954.0	2958.2	2961.0	2959.6	2959.6	2956.8	2955.4	2954.0	2954.0	2951.2	2955.4
12.5°	2940.0	2940.0	2940.0	2937.2	2937.2	2935.8	2935.8	2935.8	2938.6	2940.0	2947.0
15°	2912.0	2912.0	2914.8	2913.4	2917.6	2924.6	2933.0	2938.6	2945.6	2947.0	2951.2
17.5°	2868.6	2870.0	2878.4	2896.6	2914.8	2935.8	2951.2	2955.4	2949.8	2935.8	2926.0
20°	2793.0	2811.2	2844.8	2888.2	2928.8	2955.4	2962.4	2945.6	2919.0	2882.6	2863.0
22.5°	2725.8	2762.2	2822.4	2893.8	2944.2	2962.4	2941.4	2902.2	2854.6	2812.6	2783.2
25°	2752.4	2794.4	2857.4	2919.0	2951.2	2941.4	2899.4	2843.4	2793.0	2744.0	2696.4
27.5°	2864.4	2906.4	2951.2	2969.4	2958.2	2921.8	2863.0	2802.8	2735.6	2665.6	2606.8
30°	2970.8	2994.6	2997.4	2979.2	2938.6	2879.8	2811.2	2741.2	2655.8	2571.8	2497.6
32.5°	3004.4	2976.4	2926.0	2874.2	2818.2	2758.0	2678.2	2585.8	2494.8	2399.6	2317.0
35°	2994.6	2881.2	2756.6	2646.0	2578.8	2510.2	2437.4	2314.2	2212.0	2130.8	2077.6
37.5°	2906.4	2699.2	2507.4	2346.4	2241.4	2160.2	2052.4	1950.2	1862.0	1825.6	1782.2
40°	2783.2	2466.8	2200.8	1975.4	1866.2	1762.6	1642.2	1563.8	1538.6	1505.0	1506.4
42.5°	2606.8	2195.2	1852.2	1593.2	1474.2	1360.8	1275.4	1229.2	1230.6	1202.6	1208.2
45°	2420.6	1922.2	1491.0	1233.4	1115.8	1019.2	971.6	957.6	959.0	960.4	952.0
47.5°	2307.2	1709.4	1195.6	935.2	831.6	777.0	751.8	744.8	746.2	747.6	737.8
50°	2290.4	1598.8	998.2	715.4	648.2	617.4	604.8	597.8	597.8	592.2	583.8
52.5°	2338.0	1570.8	901.6	620.2	555.8	527.8	518.0	512.4	504.0	492.8	477.4
55°	2413.6	1596.0	872.2	588.0	525.0	497.0	484.4	481.6	467.6	446.6	421.4
57.5°	2553.6	1687.0	891.8	596.4	530.6	505.4	497.0	494.2	474.6	442.4	410.2
60°	2955.4	1951.6	989.8	644.0	571.2	550.2	550.2	546.0	519.4	473.2	427.0
62.5°	3509.8	2339.4	1122.8	709.8	627.2	624.4	648.2	649.6	602.0	527.8	455.0
65°	3777.2	2521.4	1169.0	723.8	642.6	674.8	722.4	722.4	655.2	553.0	459.2
66°	3778.6	2517.2	1155.0	707.0	625.8	667.8	716.8	716.8	646.8	546.0	452.2
67.5°	3682.0	2438.8	1108.8	676.2	588.0	627.2	670.6	669.2	606.2	518.0	432.6
70°	3302.6	2157.4	977.2	625.8	543.2	544.6	560.0	550.2	508.2	448.0	393.4
72.5°	2847.6	1804.6	847.0	593.6	508.2	481.6	469.0	460.6	434.0	397.6	364.0
75°	2184.0	1401.4	737.8	564.2	477.4	431.2	414.4	407.4	389.2	368.2	341.6
77.5°	1338.4	960.4	625.8	516.6	442.4	400.4	382.2	368.2	350.0	330.4	312.2
80°	576.8	579.6	501.2	438.2	385.0	336.0	312.2	295.4	285.6	278.6	268.8
82.5°	403.2	415.8	382.2	340.2	294.0	259.0	238.0	233.8	235.2	235.2	232.4
85°	302.4	296.8	267.4	243.6	222.6	200.2	183.4	182.0	187.6	187.6	183.4
87.5°	175.0	176.4	151.2	141.4	147.0	126.0	114.8	116.2	130.2	128.8	126.0
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):**

	160°	165°	170°	175°	180°
0°	2850.4	2850.4	2850.4	2850.4	2850.4
2.5°	2933.0	2937.2	2935.8	2940.0	2935.8
5°	2987.6	2986.2	2984.8	2990.4	2983.4
7.5°	2979.2	2980.6	2980.6	2980.6	2979.2
10°	2958.2	2963.8	2966.6	2972.2	2970.8
12.5°	2951.2	2959.6	2968.0	2976.4	2977.8
15°	2952.6	2958.2	2962.4	2966.6	2968.0
17.5°	2916.2	2914.8	2910.6	2907.8	2905.0
20°	2842.0	2835.0	2828.0	2816.8	2822.4
22.5°	2749.6	2730.0	2707.6	2689.4	2688.0
25°	2641.8	2605.4	2569.0	2545.2	2536.8
27.5°	2546.6	2503.2	2465.4	2444.4	2438.8
30°	2433.2	2394.0	2360.4	2342.2	2331.0
32.5°	2265.2	2234.4	2192.4	2178.4	2177.0
35°	2031.4	2007.6	1978.2	1972.6	1965.6
37.5°	1766.8	1758.4	1744.4	1727.6	1724.8
40°	1484.0	1489.6	1485.4	1475.6	1460.2
42.5°	1211.0	1220.8	1222.2	1229.2	1236.2
45°	964.6	973.0	973.0	980.0	988.4
47.5°	740.6	735.0	739.2	746.2	750.4
50°	560.0	555.8	548.8	543.2	537.6
52.5°	450.8	442.4	422.8	417.2	411.6
55°	397.6	382.2	368.2	362.6	362.6
57.5°	382.2	362.6	347.2	340.2	337.4
60°	385.0	357.0	337.4	326.2	322.0
62.5°	397.6	358.4	331.8	319.2	315.0
65°	396.2	355.6	330.4	316.4	312.2
66°	389.2	351.4	327.6	315.0	312.2
67.5°	378.0	345.8	324.8	313.6	309.4
70°	355.6	334.6	319.2	309.4	305.2
72.5°	337.4	323.4	309.4	298.2	295.4
75°	320.6	306.6	294.0	288.4	284.2
77.5°	295.4	282.8	275.8	270.2	267.4
80°	261.8	253.4	245.0	239.4	235.2
82.5°	228.2	217.0	208.6	204.4	201.6
85°	186.2	179.2	166.6	158.2	156.8
87.5°	124.6	117.6	113.4	106.4	99.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)