

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: P159608

Luminaire Tested: **VST-E11-LED-E-U-T3-8030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P159608
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33706)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: VST-E11-LED-E-U-T3-8030
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(11) LIGHTBARS WITH AccuLED OPTICS - TYPE 3 AREA
Light Source: (231) 3000K CCT, 80 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 28393.5 lumens
Efficiency: N/A
Efficacy: 105.3 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): 269.7
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



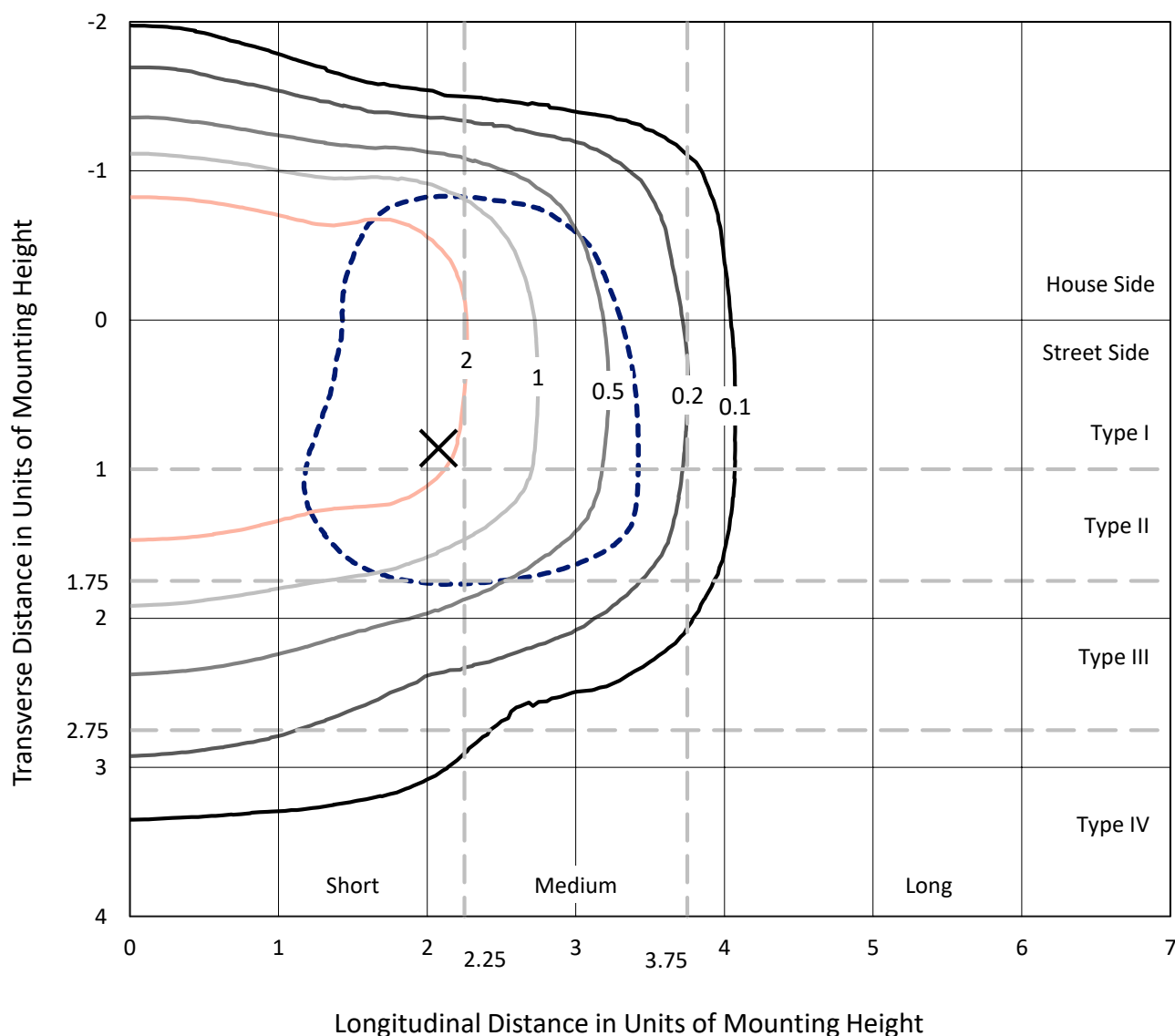
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Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

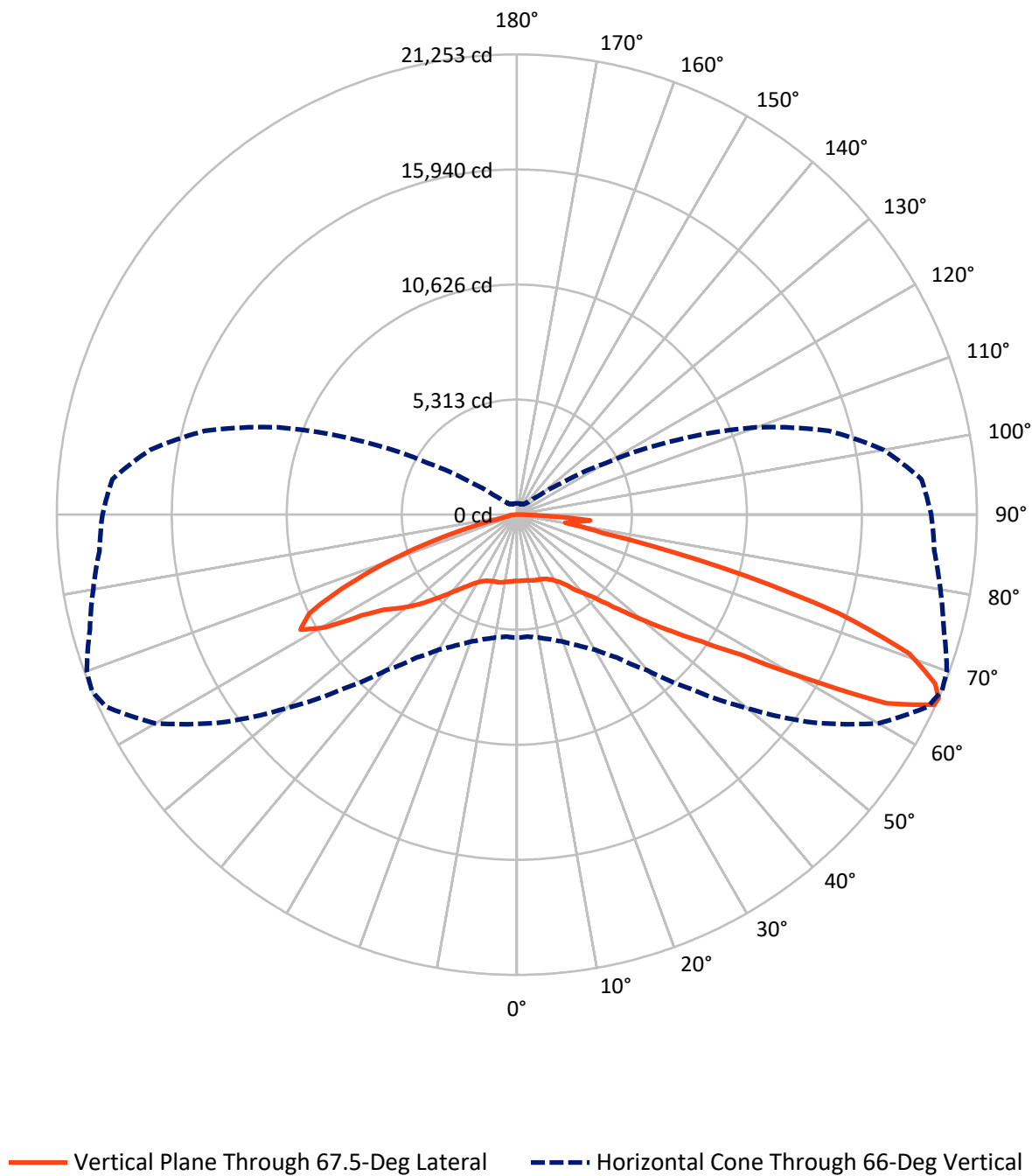


Based on 25 foot mounting height. Maximum calculated value = 4.9 fc
 Type II - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



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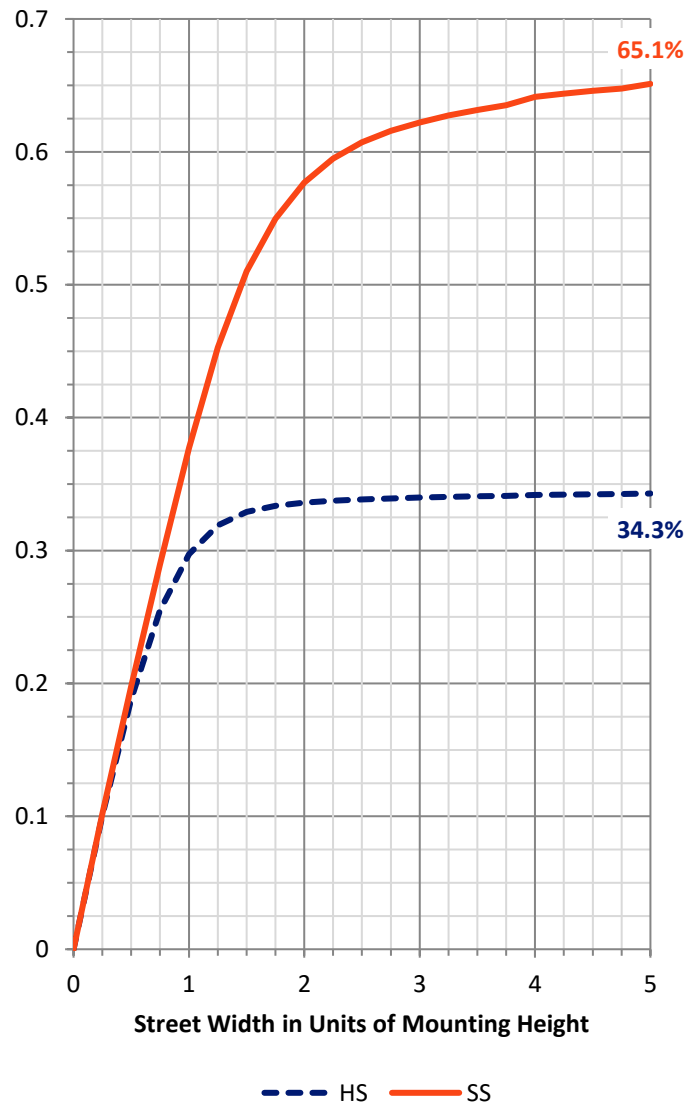
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	9825.4	0.0	9825.4
	% Fixture	34.6	0.0	34.6
Street Side	Lumens	18568.1	0.0	18568.1
	% Fixture	65.4	0.0	65.4
Total	Lumens	28393.5	0.0	28393.5
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	294.0	1.0
10°-20°	870.6	3.1
20°-30°	1496.5	5.3
30°-40°	2418.6	8.5
40°-50°	4008.2	14.1
50°-60°	6290.4	22.2
60°-70°	8600.3	30.3
70°-80°	3782.0	13.3
80°-90°	633.0	2.2
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°	28393.5	100.0
0°-180°	28393.5	100.0

Coefficient of Utilization



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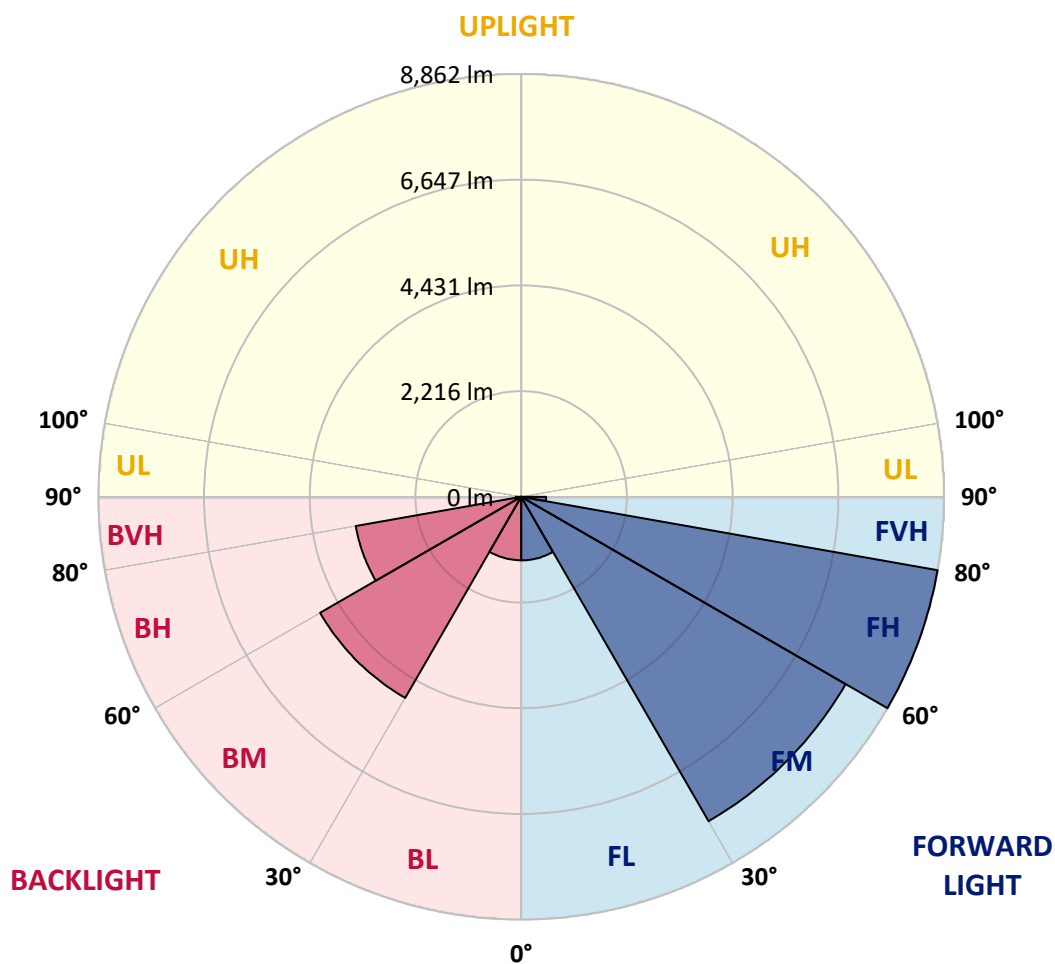
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1331.9	4.7			
FM	(30°-60°)	7851.7	27.7			
FH	(60°-80°)	8862.3	31.2			G4/12000
FVH	(80°-90°)	522.3	1.8			G4/750
BL	(0°-30°)	1329.1	4.7	B3/2500		
BM	(30°-60°)	4865.5	17.1	B3/5000		
BH	(60°-80°)	3520.0	12.4	B4/5000		G4/5000
BVH	(80°-90°)	110.8	0.4			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°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	3063.7	3063.7	3063.7	3063.7	3063.7	3063.7	3063.7	3063.7	3063.7	3063.7	3063.7
2.5°	3058.1	3058.1	3060.0	3058.1	3058.1	3056.3	3063.7	3063.7	3063.7	3061.8	3067.4
5°	3050.7	3050.7	3052.5	3052.5	3054.4	3052.5	3058.1	3060.0	3060.0	3060.0	3065.5
7.5°	3032.1	3037.7	3034.0	3035.8	3037.7	3043.3	3050.7	3054.4	3058.1	3063.7	3065.5
10°	2993.1	3002.4	3000.6	3006.1	3008.0	3024.7	3030.3	3037.7	3050.7	3058.1	3063.7
12.5°	2939.3	2944.9	2946.7	2954.1	2961.6	2982.0	2996.8	3009.8	3028.4	3047.0	3065.5
15°	2896.6	2900.3	2900.3	2907.7	2918.9	2937.4	2956.0	2978.3	3006.1	3037.7	3067.4
17.5°	2909.6	2918.9	2911.4	2909.6	2913.3	2924.4	2941.1	2959.7	2993.1	3028.4	3063.7
20°	2995.0	2996.8	2993.1	2983.8	2976.4	2978.3	2978.3	2982.0	3002.4	3030.3	3058.1
22.5°	3065.5	3073.0	3071.1	3073.0	3071.1	3078.5	3074.8	3067.4	3060.0	3061.8	3074.8
25°	3126.8	3134.2	3134.2	3139.8	3149.1	3164.0	3175.1	3173.2	3162.1	3147.2	3141.7
27.5°	3227.1	3227.1	3227.1	3232.7	3245.7	3264.2	3282.8	3293.9	3303.2	3288.4	3256.8
30°	3384.9	3386.8	3381.2	3383.1	3392.3	3416.5	3438.8	3455.5	3474.0	3472.2	3431.3
32.5°	3557.6	3565.0	3563.2	3570.6	3583.6	3605.9	3630.0	3656.0	3680.1	3695.0	3669.0
35°	3780.4	3787.8	3789.7	3800.8	3815.7	3849.1	3882.5	3915.9	3941.9	3953.1	3947.5
37.5°	4146.2	4148.0	4140.6	4123.9	4129.5	4155.5	4194.5	4248.3	4265.0	4276.2	4302.2
40°	4693.9	4688.4	4658.7	4643.8	4634.5	4645.7	4638.2	4680.9	4719.9	4721.8	4719.9
42.5°	5358.7	5342.0	5314.1	5310.4	5306.7	5303.0	5282.5	5284.4	5319.7	5329.0	5317.8
45°	6019.7	5999.3	5978.8	5997.4	5975.1	6032.7	6049.4	6094.0	6099.5	6118.1	6090.2
47.5°	6561.9	6563.7	6563.7	6589.7	6634.3	6743.8	6842.2	6927.6	6959.2	7003.8	7009.3
50°	6972.2	6983.3	7018.6	7102.2	7196.9	7380.7	7546.0	7700.1	7839.3	7891.3	8028.7
52.5°	7211.7	7241.4	7315.7	7455.0	7623.9	7861.6	8121.6	8383.4	8624.7	8829.0	8992.4
55°	7169.0	7191.3	7321.3	7538.5	7802.2	8121.6	8485.5	8864.3	9241.2	9586.6	9853.9
57.5°	6894.2	6909.1	7039.1	7284.1	7612.8	8041.7	8556.0	9118.6	9647.8	10204.9	10661.6
60°	6534.0	6556.3	6677.0	6870.1	7213.6	7670.4	8266.4	9029.5	9874.4	10750.8	11604.9
62.5°	6303.8	6298.2	6404.0	6576.7	6834.8	7248.9	7822.6	8726.9	9896.6	11378.3	13066.2
65°	5921.3	5904.6	6014.1	6210.9	6491.3	6892.4	7436.4	8305.4	9662.7	11616.0	14009.4
66°	5683.6	5650.2	5759.7	5958.4	6238.8	6665.8	7187.6	8045.4	9378.6	11383.9	13909.1
67.5°	5267.7	5251.0	5303.0	5458.9	5666.9	6068.0	6612.0	7475.4	8706.4	10685.8	13173.9
70°	4281.7	4244.6	4285.4	4356.0	4435.8	4534.3	4868.5	5553.6	6595.3	8513.3	10613.4
72.5°	2917.0	2898.4	2974.6	3082.3	3295.8	3396.1	3527.9	3639.3	4006.9	5366.1	7403.0
75°	2218.9	2230.0	2326.5	2504.8	2779.6	3076.7	3366.3	3472.2	3349.6	3243.8	4201.9
77.5°	1244.0	1309.0	1426.0	1652.5	1944.0	2363.7	2868.7	3425.8	3704.3	3635.6	3399.8
80°	512.5	503.2	560.7	685.2	785.4	1128.9	1726.8	2425.0	3208.5	3704.3	3626.3
82.5°	143.0	146.7	189.4	243.2	313.8	399.2	623.9	1002.7	1634.0	2541.9	3327.3
85°	44.6	44.6	61.3	91.0	107.7	124.4	157.8	259.9	443.8	885.7	1795.5
87.5°	9.3	9.3	13.0	26.0	27.9	27.9	35.3	48.3	42.7	39.0	174.5
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-E11-LED-E-U-T3-8030

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°	100°
0°	3063.7	3063.7	3063.7	3063.7	3063.7	3063.7	3063.7	3063.7	3063.7	3063.7	3063.7
2.5°	3061.8	3058.1	3060.0	3061.8	3060.0	3060.0	3058.1	3056.3	3058.1	3058.1	3063.7
5°	3060.0	3058.1	3060.0	3060.0	3060.0	3061.8	3061.8	3061.8	3067.4	3067.4	3076.7
7.5°	3063.7	3063.7	3067.4	3067.4	3067.4	3067.4	3069.3	3073.0	3082.3	3080.4	3097.1
10°	3071.1	3074.8	3084.1	3086.0	3086.0	3091.5	3095.3	3102.7	3112.0	3115.7	3130.5
12.5°	3080.4	3099.0	3115.7	3119.4	3125.0	3134.2	3139.8	3143.5	3160.2	3165.8	3184.4
15°	3091.5	3117.5	3138.0	3145.4	3152.8	3164.0	3171.4	3177.0	3191.8	3199.2	3221.5
17.5°	3093.4	3123.1	3147.2	3158.4	3167.7	3180.7	3191.8	3202.9	3219.7	3230.8	3253.1
20°	3091.5	3130.5	3167.7	3182.5	3191.8	3215.9	3232.7	3247.5	3267.9	3279.1	3301.4
22.5°	3112.0	3156.5	3206.7	3225.2	3240.1	3273.5	3295.8	3319.9	3345.9	3353.3	3370.1
25°	3160.2	3206.7	3269.8	3295.8	3321.8	3366.3	3397.9	3433.2	3459.2	3462.9	3468.5
27.5°	3241.9	3284.6	3360.8	3399.8	3442.5	3505.6	3552.0	3587.3	3624.4	3624.4	3620.7
30°	3407.2	3416.5	3496.3	3546.4	3609.6	3702.4	3771.1	3810.1	3838.0	3838.0	3806.4
32.5°	3620.7	3609.6	3682.0	3735.8	3823.1	3953.1	4045.9	4075.6	4105.3	4096.1	4042.2
35°	3928.9	3897.4	3938.2	4019.9	4118.3	4296.6	4393.1	4460.0	4478.6	4452.6	4367.1
37.5°	4317.0	4313.3	4333.7	4424.7	4534.3	4764.5	4862.9	4905.6	4890.8	4844.3	4693.9
40°	4727.4	4716.2	4703.2	4764.5	4887.0	5163.7	5338.2	5360.5	5340.1	5271.4	5082.0
42.5°	5275.1	5275.1	5213.8	5230.5	5332.7	5642.8	5848.9	5919.4	5921.3	5821.0	5568.5
45°	6029.0	6021.5	5913.8	5887.8	5965.8	6270.3	6535.9	6574.9	6574.9	6443.0	6166.4
47.5°	6935.1	6925.8	6820.0	6729.0	6743.8	7072.5	7293.4	7352.8	7300.9	7202.4	6873.8
50°	7956.3	7939.6	7831.9	7746.5	7709.4	8041.7	8229.2	8257.1	8181.0	8064.0	7707.5
52.5°	8992.4	9042.5	8979.4	8933.0	8946.0	9161.4	9354.5	9222.6	9183.6	9057.4	8699.0
55°	10071.2	10225.3	10364.5	10323.7	10372.0	10581.8	10618.9	10444.4	10373.8	10282.8	9883.6
57.5°	11157.4	11606.7	12063.5	12191.6	12310.5	12611.3	12568.5	12282.6	12336.4	12472.0	12022.7
60°	12674.4	13972.3	15130.9	15344.4	15713.9	15970.2	16027.7	15972.0	16222.7	16152.1	15754.8
62.5°	15004.6	17167.8	18779.5	19180.5	19551.9	19538.9	19343.9	19143.4	19390.4	19390.4	18352.4
65°	16668.3	19123.0	20847.9	21180.3	21165.4	20718.0	20257.5	19856.4	19821.1	19546.3	18029.3
66°	16746.3	19273.4	20963.0	21252.7	21141.3	20420.9	19869.4	19360.6	19143.4	18760.9	17206.8
67.5°	16044.4	18848.2	20588.0	20840.5	20547.1	19514.8	18755.3	18073.9	17758.2	17113.9	15650.8
70°	13160.9	16198.5	18729.3	19245.5	18913.2	17606.0	16566.2	15645.2	15041.8	14111.5	13056.9
72.5°	9607.0	11959.5	14700.1	15539.4	15487.4	14284.2	13446.8	12603.8	11811.0	10964.3	10193.7
75°	6244.4	7779.9	9308.0	9798.2	9562.4	8866.1	8266.4	7774.3	7022.3	6433.7	6290.8
77.5°	3565.0	4356.0	4120.2	4058.9	3763.7	3037.7	2020.2	1416.7	1279.3	1596.8	1750.9
80°	3392.3	3074.8	2517.8	2270.8	2087.0	1422.3	746.4	525.5	460.5	471.6	506.9
82.5°	3825.0	3986.5	3260.5	2723.9	2371.1	1730.5	945.1	440.1	321.2	380.6	427.1
85°	2866.9	4036.6	4001.4	3390.5	2781.5	1994.2	1117.8	336.1	193.1	267.4	349.1
87.5°	581.2	956.2	921.0	809.6	688.9	480.9	187.5	105.8	96.6	131.8	200.5
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°	3063.7	3063.7	3063.7	3063.7	3063.7	3063.7	3063.7	3063.7	3063.7	3063.7	3063.7
2.5°	3067.4	3067.4	3071.1	3076.7	3078.5	3078.5	3082.3	3078.5	3086.0	3087.8	3089.7
5°	3084.1	3089.7	3093.4	3102.7	3108.2	3112.0	3117.5	3113.8	3121.2	3123.1	3126.8
7.5°	3102.7	3112.0	3119.4	3123.1	3130.5	3130.5	3132.4	3128.7	3126.8	3121.2	3119.4
10°	3136.1	3141.7	3151.0	3147.2	3143.5	3130.5	3119.4	3102.7	3093.4	3076.7	3067.4
12.5°	3189.9	3193.7	3193.7	3177.0	3152.8	3123.1	3095.3	3067.4	3045.1	3026.6	3015.4
15°	3227.1	3234.5	3225.2	3201.1	3165.8	3125.0	3087.8	3050.7	3021.0	2996.8	2982.0
17.5°	3254.9	3253.1	3236.4	3202.9	3169.5	3134.2	3100.8	3061.8	3024.7	2989.4	2967.1
20°	3297.6	3279.1	3249.4	3214.1	3178.8	3149.1	3123.1	3086.0	3047.0	2998.7	2965.3
22.5°	3355.2	3321.8	3279.1	3241.9	3208.5	3180.7	3151.0	3119.4	3078.5	3024.7	2978.3
25°	3436.9	3379.3	3331.1	3293.9	3264.2	3232.7	3199.2	3158.4	3117.5	3061.8	3006.1
27.5°	3561.3	3475.9	3414.6	3381.2	3353.3	3310.6	3267.9	3219.7	3167.7	3110.1	3047.0
30°	3711.7	3609.6	3539.0	3509.3	3475.9	3427.6	3381.2	3314.4	3241.9	3173.2	3095.3
32.5°	3888.1	3784.1	3713.6	3691.3	3637.4	3581.7	3516.7	3427.6	3332.9	3230.8	3138.0
35°	4155.5	4023.6	3958.7	3906.7	3832.4	3765.5	3656.0	3539.0	3403.5	3267.9	3152.8
37.5°	4430.3	4296.6	4229.7	4157.3	4060.8	3938.2	3791.5	3624.4	3444.3	3277.2	3136.1
40°	4797.9	4653.1	4567.7	4456.3	4300.3	4109.1	3891.8	3663.4	3444.3	3236.4	3065.5
42.5°	5226.8	5093.1	4961.3	4777.5	4526.8	4248.3	3943.8	3650.4	3384.9	3145.4	2965.3
45°	5821.0	5592.6	5382.8	5087.6	4721.8	4330.0	3949.4	3589.2	3282.8	3017.3	2816.7
47.5°	6489.4	6194.2	5822.9	5360.5	4861.1	4361.6	3895.5	3474.0	3121.2	2833.4	2614.3
50°	7260.0	6807.0	6236.9	5577.8	4931.6	4318.9	3767.4	3280.9	2898.4	2567.9	2334.0
52.5°	8142.0	7451.3	6612.0	5731.9	4920.5	4188.9	3555.7	3026.6	2599.5	2248.6	2018.3
55°	9120.5	8153.1	6970.4	5830.3	4820.2	3936.4	3223.4	2668.2	2228.1	1882.8	1680.4
57.5°	10845.5	9384.2	7653.6	5962.1	4610.4	3553.9	2801.9	2215.1	1817.8	1524.4	1331.3
60°	14050.3	11536.2	8947.8	6272.2	4294.7	3074.8	2270.8	1737.9	1405.6	1192.1	1049.1
62.5°	16033.3	13051.3	9579.1	6227.6	3782.3	2419.4	1686.0	1288.6	1026.8	885.7	796.6
65°	15563.5	12457.1	8808.6	5349.4	2943.0	1715.7	1115.9	843.0	705.6	633.2	590.5
66°	14924.8	11792.4	8156.8	4790.5	2564.2	1433.4	921.0	707.4	607.2	553.3	531.0
67.5°	13586.1	10578.1	7035.3	3836.1	1921.8	1067.6	679.6	555.2	493.9	466.1	451.2
70°	11370.9	8522.6	4976.2	2265.3	1041.7	579.3	434.5	386.2	371.4	362.1	356.5
72.5°	8791.9	6170.1	2907.7	1114.1	525.5	375.1	330.5	310.1	304.5	304.5	306.4
75°	5538.8	3546.4	1301.6	536.6	356.5	302.7	282.2	272.9	274.8	276.7	274.8
77.5°	1840.1	1223.6	542.2	380.6	310.1	274.8	258.1	254.4	258.1	259.9	259.9
80°	529.2	462.3	391.8	336.1	284.1	256.2	241.4	239.5	248.8	250.7	247.0
82.5°	406.6	380.6	354.6	324.9	272.9	241.4	235.8	237.7	243.2	239.5	222.8
85°	373.2	369.5	265.5	263.7	237.7	230.2	224.7	226.5	221.0	200.5	182.0
87.5°	209.8	195.0	150.4	152.3	176.4	182.0	150.4	159.7	148.5	130.0	118.8
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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CANDELA DISTRIBUTION (continued):

	160°	165°	170°	175°	180°
0°	3063.7	3063.7	3063.7	3063.7	3063.7
2.5°	3093.4	3091.5	3091.5	3097.1	3089.7
5°	3128.7	3126.8	3126.8	3132.4	3126.8
7.5°	3112.0	3106.4	3102.7	3100.8	3100.8
10°	3056.3	3050.7	3039.5	3035.8	3032.1
12.5°	2998.7	2993.1	2980.1	2980.1	2976.4
15°	2963.4	2956.0	2946.7	2941.1	2937.4
17.5°	2944.9	2933.7	2922.6	2917.0	2913.3
20°	2937.4	2922.6	2909.6	2900.3	2900.3
22.5°	2939.3	2920.7	2905.9	2894.7	2891.0
25°	2957.9	2930.0	2911.4	2900.3	2896.6
27.5°	2983.8	2950.4	2926.3	2911.4	2905.9
30°	3019.1	2972.7	2939.3	2920.7	2913.3
32.5°	3043.3	2978.3	2935.6	2909.6	2900.3
35°	3041.4	2957.9	2905.9	2872.4	2861.3
37.5°	3008.0	2909.6	2840.9	2800.0	2781.5
40°	2933.7	2820.4	2748.0	2709.0	2686.8
42.5°	2826.0	2703.5	2638.5	2595.8	2571.6
45°	2657.1	2536.4	2456.5	2423.1	2391.5
47.5°	2423.1	2300.6	2231.8	2183.6	2163.1
50°	2148.3	2025.7	1953.3	1914.3	1895.8
52.5°	1847.5	1730.5	1678.5	1641.4	1615.4
55°	1535.6	1427.9	1405.6	1364.7	1340.6
57.5°	1242.2	1179.1	1158.6	1117.8	1097.4
60°	971.1	950.7	928.4	902.4	891.3
62.5°	752.0	733.4	727.9	711.1	709.3
65°	573.7	575.6	571.9	568.2	564.5
66°	521.8	519.9	521.8	518.0	516.2
67.5°	443.8	451.2	456.8	454.9	454.9
70°	360.2	365.8	373.2	371.4	371.4
72.5°	308.2	317.5	321.2	319.4	319.4
75°	278.5	287.8	287.8	284.1	282.2
77.5°	259.9	263.7	259.9	256.2	252.5
80°	241.4	237.7	232.1	226.5	222.8
82.5°	209.8	200.5	195.0	185.7	185.7
85°	169.0	161.5	148.5	139.3	130.0
87.5°	109.6	105.8	96.6	72.4	57.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)