

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: P157830

Luminaire Tested: **VST-E09-LED-E-U-5XQ**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P157830
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-E09-LED-E-U-5XQ
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(9) LIGHTBARS WITH AccuLED OPTICS - TYPE 5 SQUARE EXTRA WIDE
Light Source: (189) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 28463.2 lumens
Efficiency: N/A
Efficacy: 126.1 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 - G5

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

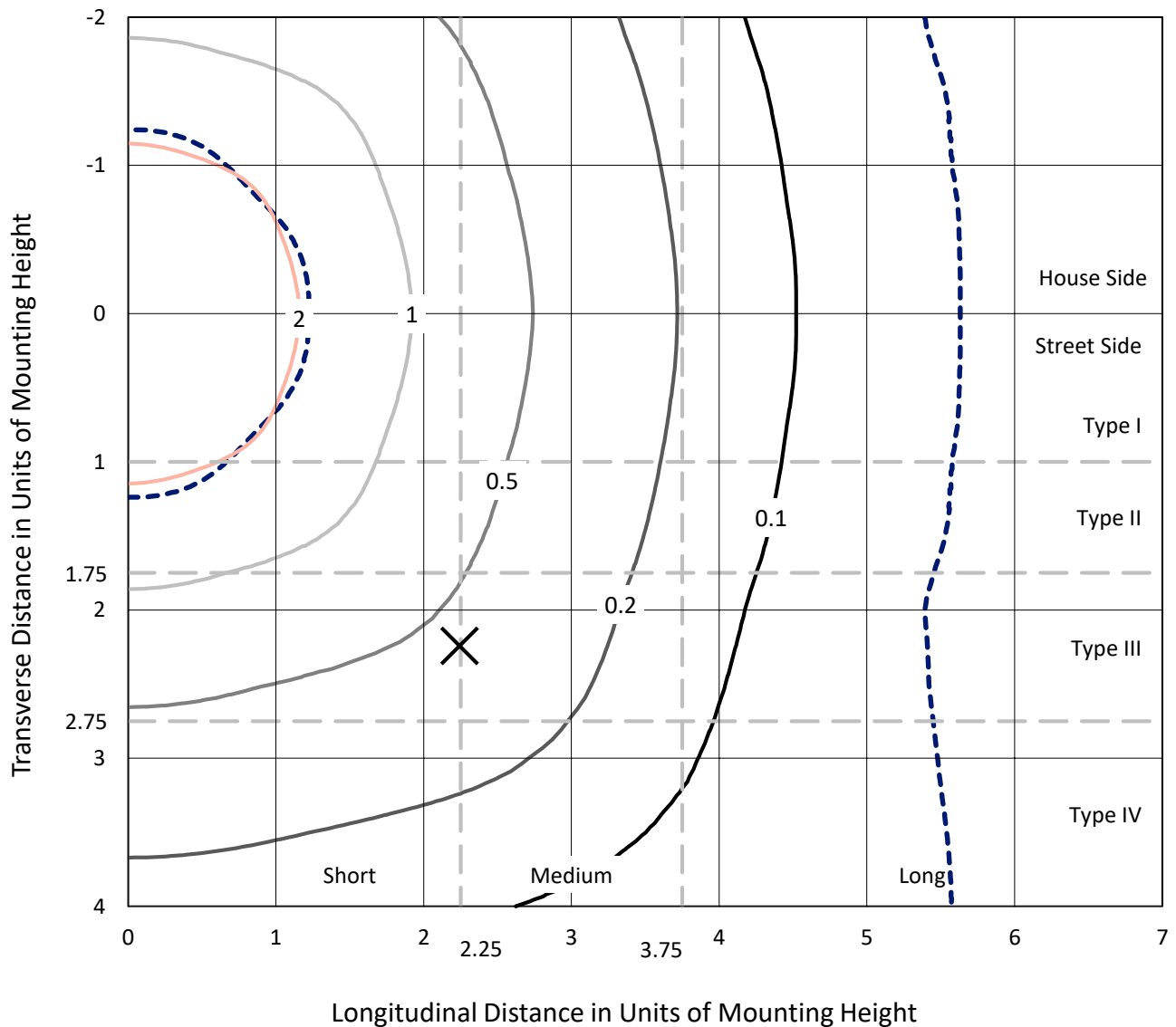


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

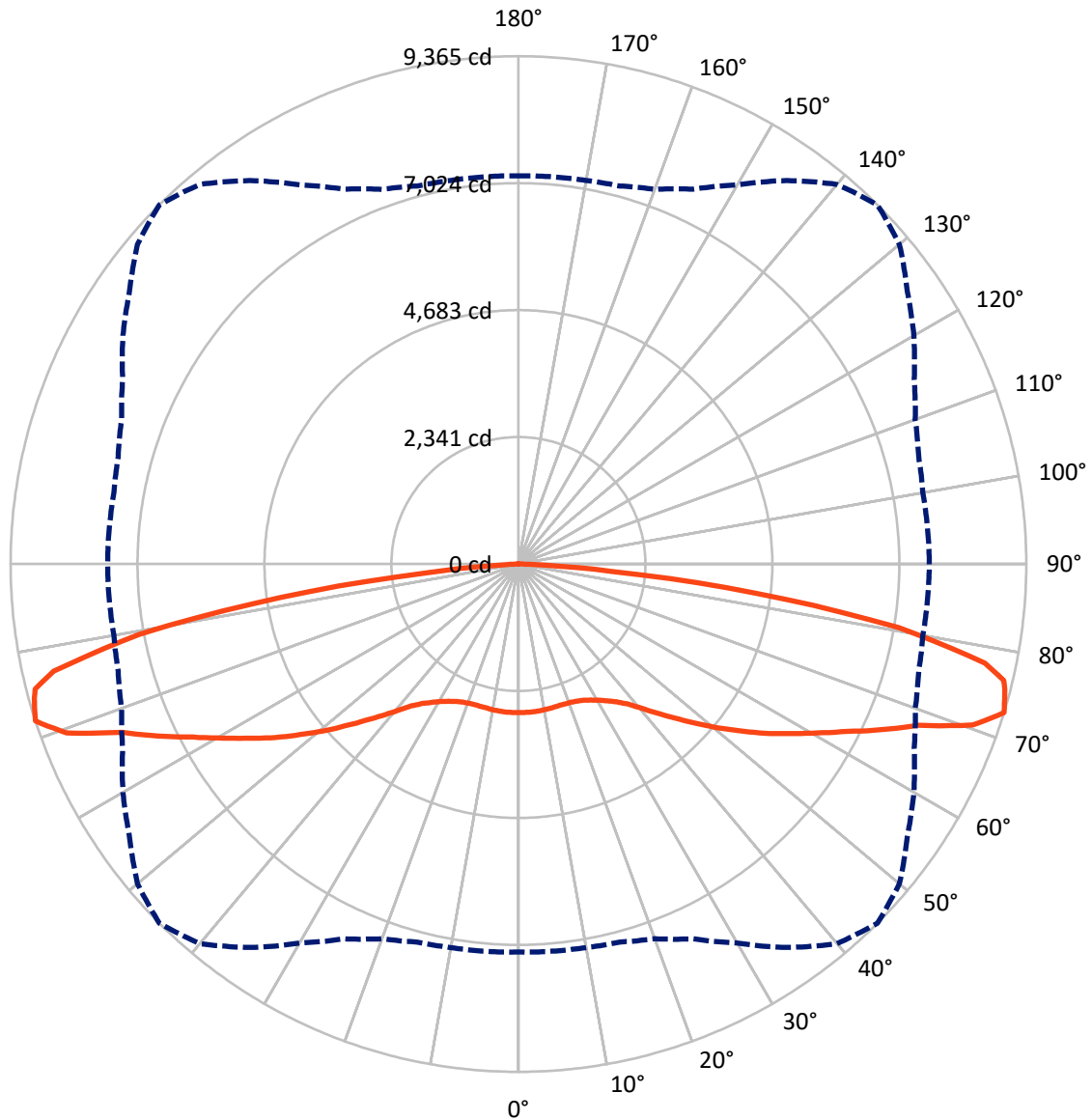


Based on 25 foot mounting height. Maximum calculated value = 4.4 fc
 Type V - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical



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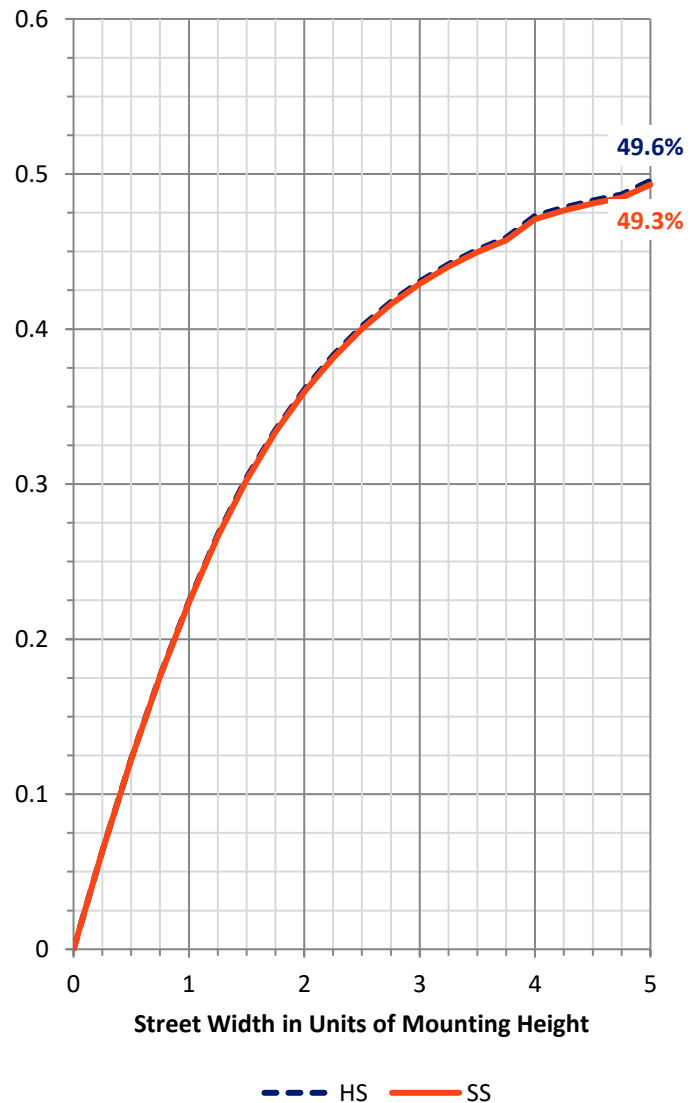
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	14224.7	6.9	14231.6
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	14224.7	6.9	14231.6
	% Fixture	50.0	0.0	50.0
Total	Lumens	28449.4	13.9	28463.2
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	261.4	0.9
10°-20°	772.0	2.7
20°-30°	1291.0	4.5
30°-40°	1962.2	6.9
40°-50°	3107.7	10.9
50°-60°	4753.7	16.7
60°-70°	6803.4	23.9
70°-80°	7784.6	27.3
80°-90°	1713.3	6.0
90°-100°	1.4	0.0
100°-110°	2.9	0.0
110°-120°	2.0	0.0
120°-130°	2.2	0.0
130°-140°	2.1	0.0
140°-150°	1.6	0.0
150°-160°	1.1	0.0
160°-170°	0.4	0.0
170°-180°	0.0	0.0
0°-90°	28449.4	100.0
0°-180°	28463.2	100.0



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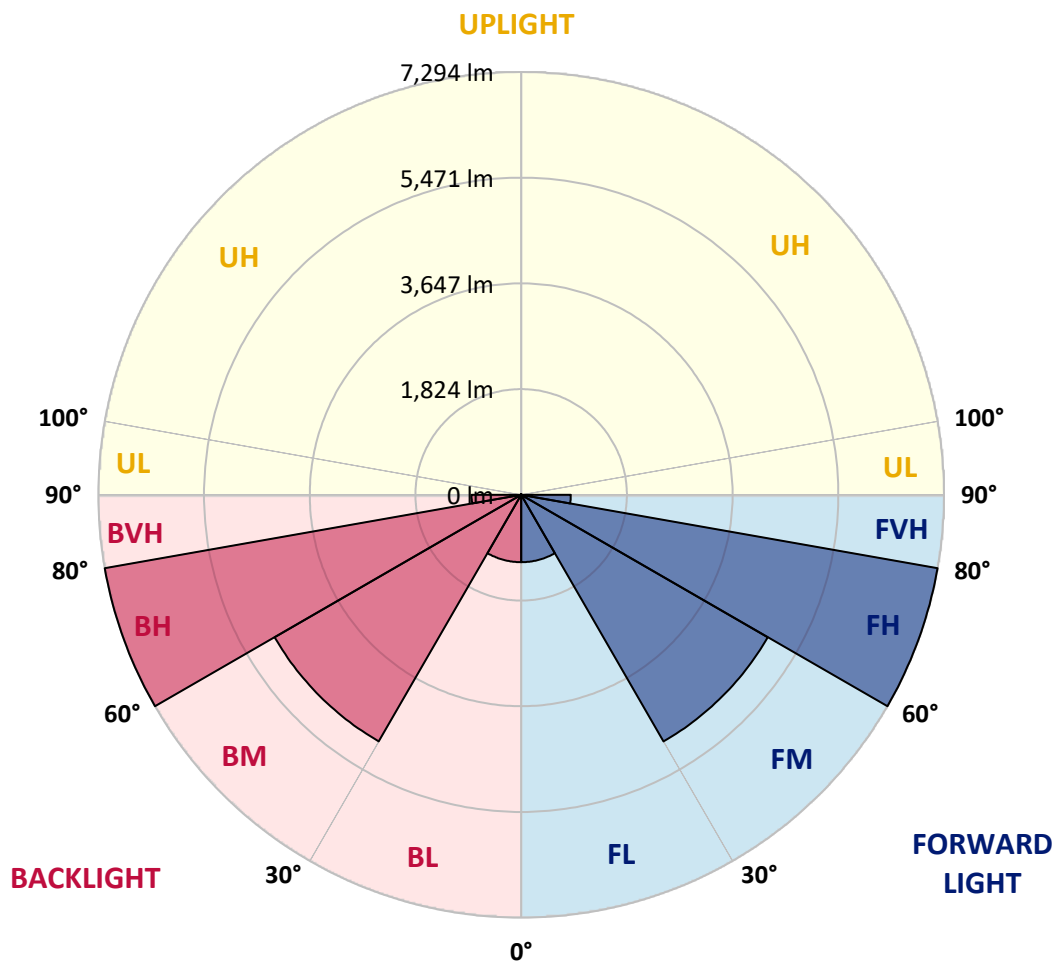
CATALOG NUMBER: VST-E09-LED-E-U-5XQ

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1162.2	4.1			
FM	(30°-60°)	4911.8	17.3			
FH	(60°-80°)	7294.0	25.6			G3/7500
FVH	(80°-90°)	856.7	3.0			G5
BL	(0°-30°)	1162.2	4.1	B3/2500		
BM	(30°-60°)	4911.8	17.3	B3/5000		
BH	(60°-80°)	7294.0	25.6	B5		G3/7500
BVH	(80°-90°)	856.7	3.0			G5
UL	(90°-100°)	1.4	0.0		U1/10	
UH	(100°-180°)	6.9	0.0		U1/10	

BUG Rating: B5-U2-G5

Type V Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2739.6	2739.6	2739.6	2739.6	2739.6	2739.6	2739.6	2739.6	2739.6	2739.6	2739.6
2.5°	2741.4	2737.8	2739.6	2743.2	2741.4	2741.4	2739.6	2739.6	2743.2	2739.6	2741.4
5°	2743.2	2739.6	2741.4	2743.2	2741.4	2743.2	2741.4	2741.4	2741.4	2739.6	2743.2
7.5°	2736.0	2736.0	2737.8	2737.8	2736.0	2737.8	2737.8	2737.8	2736.0	2736.0	2739.6
10°	2732.4	2730.6	2730.6	2732.4	2730.6	2730.6	2732.4	2732.4	2728.8	2728.8	2732.4
12.5°	2727.0	2725.2	2725.2	2725.2	2723.4	2723.4	2725.2	2725.2	2723.4	2721.6	2727.0
15°	2723.4	2721.6	2721.6	2721.6	2718.0	2719.8	2719.8	2719.8	2718.0	2716.2	2721.6
17.5°	2721.6	2719.8	2719.8	2719.8	2718.0	2718.0	2718.0	2718.0	2716.2	2716.2	2719.8
20°	2725.2	2725.2	2725.2	2725.2	2723.4	2723.4	2723.4	2725.2	2725.2	2725.2	2728.8
22.5°	2734.2	2734.2	2736.0	2737.8	2737.8	2741.4	2743.2	2745.0	2745.0	2746.8	2750.4
25°	2757.6	2757.6	2759.4	2761.2	2766.6	2770.2	2777.4	2781.0	2782.8	2782.8	2784.6
27.5°	2800.8	2802.6	2806.2	2809.8	2817.0	2822.4	2829.6	2836.8	2838.6	2840.4	2842.2
30°	2854.8	2856.6	2863.8	2867.4	2876.4	2887.2	2896.2	2903.4	2908.8	2912.4	2910.6
32.5°	2932.2	2935.8	2944.8	2950.2	2962.8	2973.6	2986.2	2997.0	3002.4	3007.8	3006.0
35°	3040.2	3049.2	3058.2	3063.6	3076.2	3085.2	3101.4	3112.2	3123.0	3119.4	3121.2
37.5°	3200.4	3207.6	3209.4	3213.0	3225.6	3232.8	3250.8	3265.2	3270.6	3274.2	3276.0
40°	3416.4	3416.4	3425.4	3418.2	3434.4	3436.2	3457.8	3477.6	3483.0	3497.4	3486.6
42.5°	3668.4	3666.6	3672.0	3666.6	3666.6	3684.6	3702.6	3738.6	3742.2	3760.2	3749.4
45°	3942.0	3942.0	3936.6	3938.4	3942.0	3961.8	3983.4	4023.0	4041.0	4051.8	4044.6
47.5°	4239.0	4231.8	4230.0	4228.2	4239.0	4260.6	4293.0	4330.8	4375.8	4379.4	4375.8
50°	4539.6	4537.8	4525.2	4536.0	4543.2	4554.0	4615.2	4665.6	4712.4	4741.2	4732.2
52.5°	4856.4	4840.2	4840.2	4840.2	4858.2	4892.4	4946.4	5014.8	5077.8	5108.4	5103.0
55°	5176.8	5171.4	5155.2	5148.0	5171.4	5220.0	5297.4	5380.2	5463.0	5509.8	5491.8
57.5°	5470.2	5461.2	5463.0	5464.8	5491.8	5556.6	5646.6	5756.4	5846.4	5896.8	5884.2
60°	5700.6	5689.8	5709.6	5715.0	5763.6	5871.6	6015.6	6154.2	6273.0	6323.4	6303.6
62.5°	5961.6	5954.4	5967.0	5965.2	6017.4	6138.0	6330.6	6552.0	6732.0	6796.8	6768.0
65°	6382.8	6361.2	6355.8	6336.0	6370.2	6463.8	6656.4	6913.8	7201.8	7367.4	7327.8
67.5°	6886.8	6881.4	6863.4	6852.6	6865.2	6982.2	7167.6	7416.0	7709.4	7938.0	7988.4
70°	7219.8	7227.0	7245.0	7272.0	7376.4	7603.2	7941.6	8317.8	8721.0	8892.0	8861.4
72.5°	7156.8	7167.6	7182.0	7216.2	7353.0	7624.8	8071.2	8632.8	9138.6	9365.4	9171.0
75°	6849.0	6858.0	6890.4	6942.6	7110.0	7439.4	7920.0	8515.8	9037.8	9264.6	9061.2
76°	6564.6	6593.4	6652.8	6714.0	6915.6	7273.8	7786.8	8422.2	8974.8	9205.2	9009.0
77.5°	5920.2	5945.4	5994.0	6100.2	6328.8	6787.8	7387.2	8011.8	8587.8	8794.8	8629.2
80°	4455.0	4476.6	4521.6	4649.4	4847.4	5131.8	5596.2	6206.4	6838.2	7110.0	7002.0
82.5°	1881.0	1906.2	2084.4	2269.8	2487.6	2795.4	3097.8	3637.8	4102.2	4411.8	4246.2
85°	207.0	255.6	315.0	428.4	525.6	700.2	871.2	1198.8	1515.6	1708.2	1510.2
87.5°	36.0	41.4	59.4	75.6	84.6	97.2	117.0	163.8	223.2	192.6	196.2
90°	5.4	5.4	5.4	5.4	5.4	5.4	5.4	3.6	3.6	3.6	3.6
92.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	1.8
95°	0.0	0.0	0.0	0.0	0.0	0.0	1.8	1.8	1.8	1.8	1.8
97.5°	0.0	0.0	0.0	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
100°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	3.6	3.6	3.6
102.5°	1.8	1.8	1.8	1.8	1.8	3.6	3.6	3.6	3.6	3.6	3.6
105°	1.8	1.8	1.8	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
107.5°	1.8	1.8	1.8	1.8	3.6	3.6	1.8	1.8	1.8	3.6	1.8



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CATALOG NUMBER: VST-E09-LED-E-U-5XQ

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
110°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
112.5°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
115°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
117.5°	3.6	3.6	3.6	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
120°	3.6	3.6	3.6	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
122.5°	3.6	3.6	3.6	3.6	1.8	1.8	1.8	1.8	1.8	1.8	1.8
125°	3.6	3.6	3.6	3.6	1.8	1.8	1.8	1.8	1.8	1.8	1.8
127.5°	3.6	3.6	3.6	3.6	1.8	1.8	1.8	1.8	1.8	1.8	1.8
130°	3.6	3.6	3.6	3.6	3.6	1.8	1.8	1.8	1.8	1.8	1.8
132.5°	3.6	3.6	3.6	3.6	1.8	1.8	1.8	1.8	1.8	1.8	1.8
135°	3.6	3.6	3.6	3.6	3.6	1.8	1.8	1.8	1.8	1.8	1.8
137.5°	3.6	3.6	3.6	3.6	3.6	1.8	1.8	1.8	1.8	1.8	1.8
140°	3.6	3.6	3.6	3.6	3.6	1.8	1.8	1.8	1.8	1.8	1.8
142.5°	3.6	3.6	3.6	3.6	1.8	1.8	1.8	1.8	1.8	1.8	1.8
145°	3.6	3.6	3.6	3.6	3.6	1.8	1.8	1.8	1.8	0.0	1.8
147.5°	3.6	3.6	3.6	3.6	3.6	1.8	1.8	1.8	1.8	1.8	1.8
150°	3.6	3.6	3.6	3.6	3.6	1.8	1.8	1.8	0.0	0.0	0.0
152.5°	3.6	3.6	3.6	3.6	3.6	1.8	1.8	1.8	1.8	0.0	0.0
155°	3.6	3.6	3.6	3.6	3.6	1.8	1.8	1.8	1.8	0.0	1.8
157.5°	3.6	3.6	3.6	3.6	1.8	1.8	1.8	1.8	0.0	0.0	0.0
160°	3.6	3.6	3.6	3.6	1.8	1.8	1.8	1.8	0.0	0.0	0.0
162.5°	3.6	3.6	3.6	3.6	1.8	1.8	1.8	1.8	0.0	0.0	0.0
165°	3.6	3.6	3.6	3.6	1.8	1.8	1.8	1.8	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°	2739.6	2739.6	2739.6	2739.6	2739.6	2739.6	2739.6	2739.6
2.5°	2739.6	2739.6	2743.2	2741.4	2741.4	2743.2	2746.8	2745.0
5°	2741.4	2743.2	2739.6	2741.4	2743.2	2743.2	2745.0	2743.2
7.5°	2737.8	2737.8	2737.8	2739.6	2741.4	2739.6	2741.4	2741.4
10°	2730.6	2732.4	2730.6	2734.2	2736.0	2736.0	2737.8	2737.8
12.5°	2725.2	2725.2	2725.2	2728.8	2730.6	2730.6	2732.4	2730.6
15°	2719.8	2719.8	2718.0	2721.6	2725.2	2725.2	2727.0	2727.0
17.5°	2718.0	2718.0	2716.2	2719.8	2723.4	2723.4	2725.2	2725.2
20°	2723.4	2725.2	2721.6	2725.2	2728.8	2730.6	2730.6	2730.6
22.5°	2745.0	2743.2	2737.8	2739.6	2741.4	2741.4	2741.4	2741.4
25°	2777.4	2773.8	2768.4	2766.6	2764.8	2763.0	2763.0	2763.0
27.5°	2833.2	2827.8	2818.8	2817.0	2815.2	2811.6	2811.6	2811.6
30°	2899.8	2892.6	2881.8	2878.2	2872.8	2869.2	2867.4	2865.6
32.5°	2995.2	2980.8	2968.2	2959.2	2953.8	2943.0	2941.2	2937.6
35°	3105.0	3094.2	3076.2	3070.8	3061.8	3056.4	3054.6	3045.6
37.5°	3256.2	3243.6	3227.4	3223.8	3222.0	3216.6	3216.6	3214.8
40°	3466.8	3454.2	3439.8	3425.4	3429.0	3430.8	3430.8	3423.6
42.5°	3724.2	3704.4	3675.6	3684.6	3679.2	3672.0	3686.4	3677.4
45°	4017.6	3990.6	3969.0	3960.0	3960.0	3951.0	3965.4	3965.4
47.5°	4343.4	4300.2	4260.6	4262.4	4248.0	4251.6	4260.6	4273.2
50°	4687.2	4629.6	4591.8	4573.8	4559.4	4564.8	4581.0	4584.6
52.5°	5043.6	4973.4	4923.0	4896.0	4878.0	4885.2	4897.8	4908.6
55°	5414.4	5337.0	5261.4	5232.6	5211.0	5225.4	5227.2	5241.6
57.5°	5801.4	5695.2	5607.0	5563.8	5542.2	5556.6	5567.4	5581.8
60°	6192.0	6069.6	5965.2	5914.8	5884.2	5904.0	5929.2	5936.4
62.5°	6645.6	6476.4	6359.4	6287.4	6273.0	6292.8	6300.0	6321.6
65°	7182.0	6978.6	6816.6	6728.4	6724.8	6735.6	6751.8	6757.2
67.5°	7794.0	7567.2	7349.4	7261.2	7227.0	7259.4	7275.6	7297.2
70°	8658.0	8346.6	8031.6	7835.4	7752.6	7727.4	7734.6	7758.0
72.5°	8755.2	8420.4	8053.2	7786.8	7641.0	7574.4	7572.6	7576.2
75°	8542.8	8008.2	7749.0	7443.0	7236.0	7128.0	7113.6	7111.8
76°	8436.6	7804.8	7430.4	7187.4	6939.0	6829.2	6813.0	6804.0
77.5°	7988.4	7309.8	6746.4	6598.8	6361.2	6222.6	6251.4	6228.0
80°	6404.4	5731.2	5200.2	4784.4	4797.0	4696.2	4654.8	4642.2
82.5°	3774.6	3222.0	2635.2	2291.4	1963.8	1877.4	1616.4	1557.0
85°	1206.0	855.0	518.4	376.2	255.6	214.2	167.4	153.0
87.5°	160.2	126.0	102.6	99.0	90.0	77.4	50.4	36.0
90°	1.8	1.8	1.8	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°	1.8	1.8	1.8	1.8	0.0	0.0	0.0	0.0
97.5°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
100°	3.6	1.8	1.8	1.8	1.8	1.8	1.8	1.8
102.5°	3.6	3.6	3.6	3.6	1.8	1.8	1.8	1.8
105°	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
107.5°	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6



REPORT NUMBER: P157830

CATALOG NUMBER: VST-E09-LED-E-U-5XQ

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
110°	1.8	1.8	1.8	1.8	1.8	3.6	3.6	3.6
112.5°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	3.6
115°	1.8	1.8	1.8	1.8	1.8	1.8	1.8	3.6
117.5°	1.8	1.8	1.8	1.8	1.8	3.6	3.6	3.6
120°	1.8	1.8	1.8	1.8	1.8	3.6	3.6	3.6
122.5°	1.8	1.8	1.8	1.8	3.6	3.6	3.6	3.6
125°	1.8	1.8	1.8	1.8	3.6	3.6	3.6	3.6
127.5°	1.8	1.8	1.8	1.8	3.6	3.6	3.6	3.6
130°	1.8	1.8	1.8	3.6	3.6	3.6	3.6	3.6
132.5°	1.8	1.8	1.8	3.6	3.6	3.6	3.6	3.6
135°	1.8	1.8	1.8	3.6	3.6	3.6	3.6	3.6
137.5°	1.8	1.8	1.8	3.6	3.6	3.6	3.6	3.6
140°	1.8	1.8	1.8	3.6	3.6	3.6	3.6	3.6
142.5°	1.8	1.8	1.8	3.6	3.6	3.6	3.6	3.6
145°	1.8	1.8	1.8	1.8	3.6	3.6	3.6	3.6
147.5°	1.8	1.8	1.8	3.6	3.6	3.6	3.6	3.6
150°	1.8	1.8	1.8	1.8	3.6	3.6	3.6	3.6
152.5°	1.8	1.8	1.8	1.8	3.6	3.6	3.6	3.6
155°	1.8	1.8	1.8	3.6	3.6	3.6	3.6	3.6
157.5°	1.8	1.8	1.8	1.8	3.6	3.6	3.6	3.6
160°	1.8	1.8	1.8	1.8	3.6	3.6	3.6	3.6
162.5°	1.8	1.8	1.8	3.6	3.6	3.6	3.6	3.6
165°	1.8	1.8	1.8	3.6	3.6	3.6	3.6	3.6
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)