

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: P159371

Luminaire Tested: **VST-E09-LED-E-U-T2-7050**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P159371
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-T2-7050
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(9) LIGHTBARS WITH AccuLED OPTICS - TYPE 2 AREA
Light Source: (189) 5000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 28505.7 lumens
Efficiency: N/A
Efficacy: 126.3 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



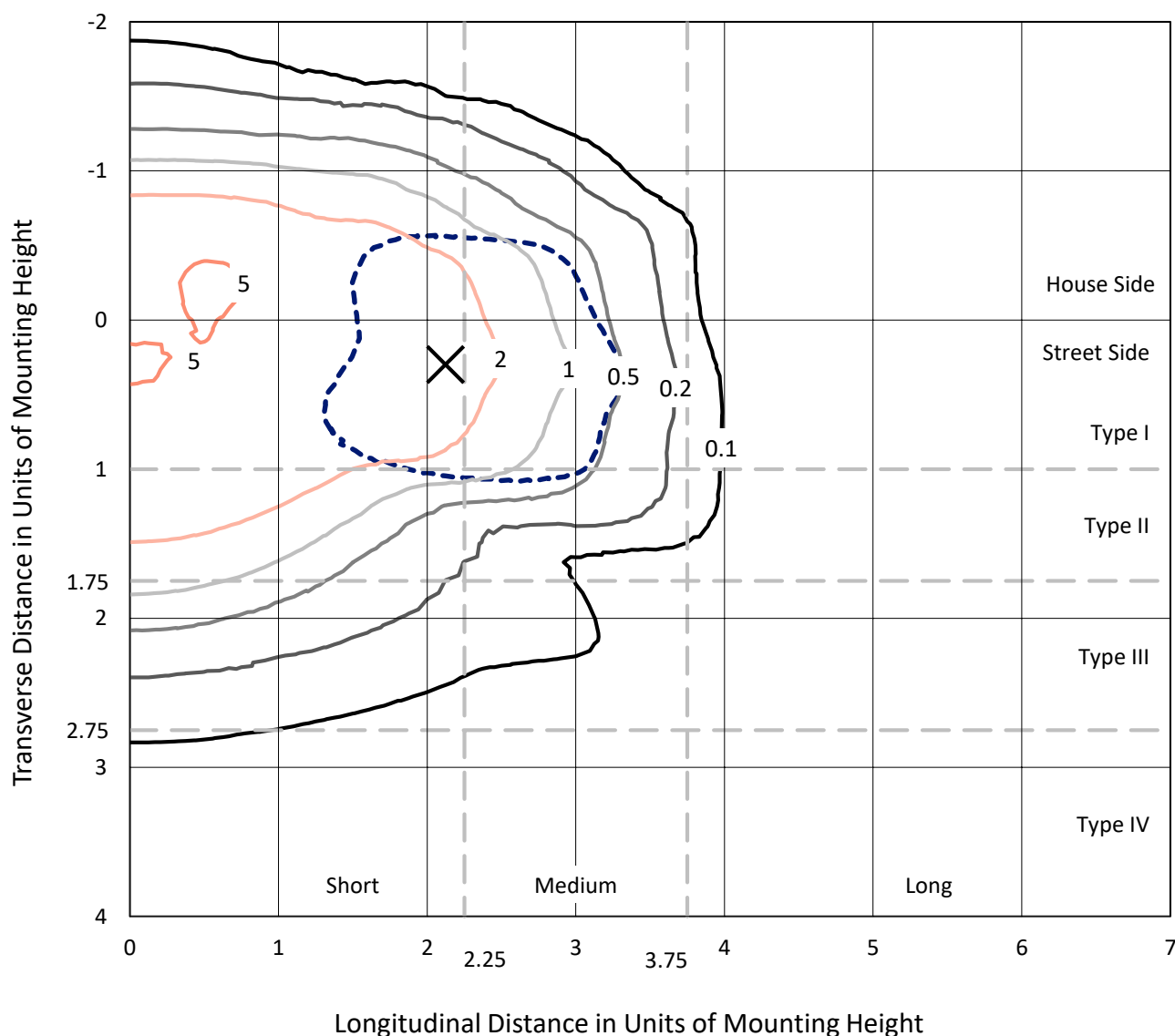
REPORT NUMBER: P159371

CATALOG NUMBER: VST-E09-LED-E-U-T2-7050

Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

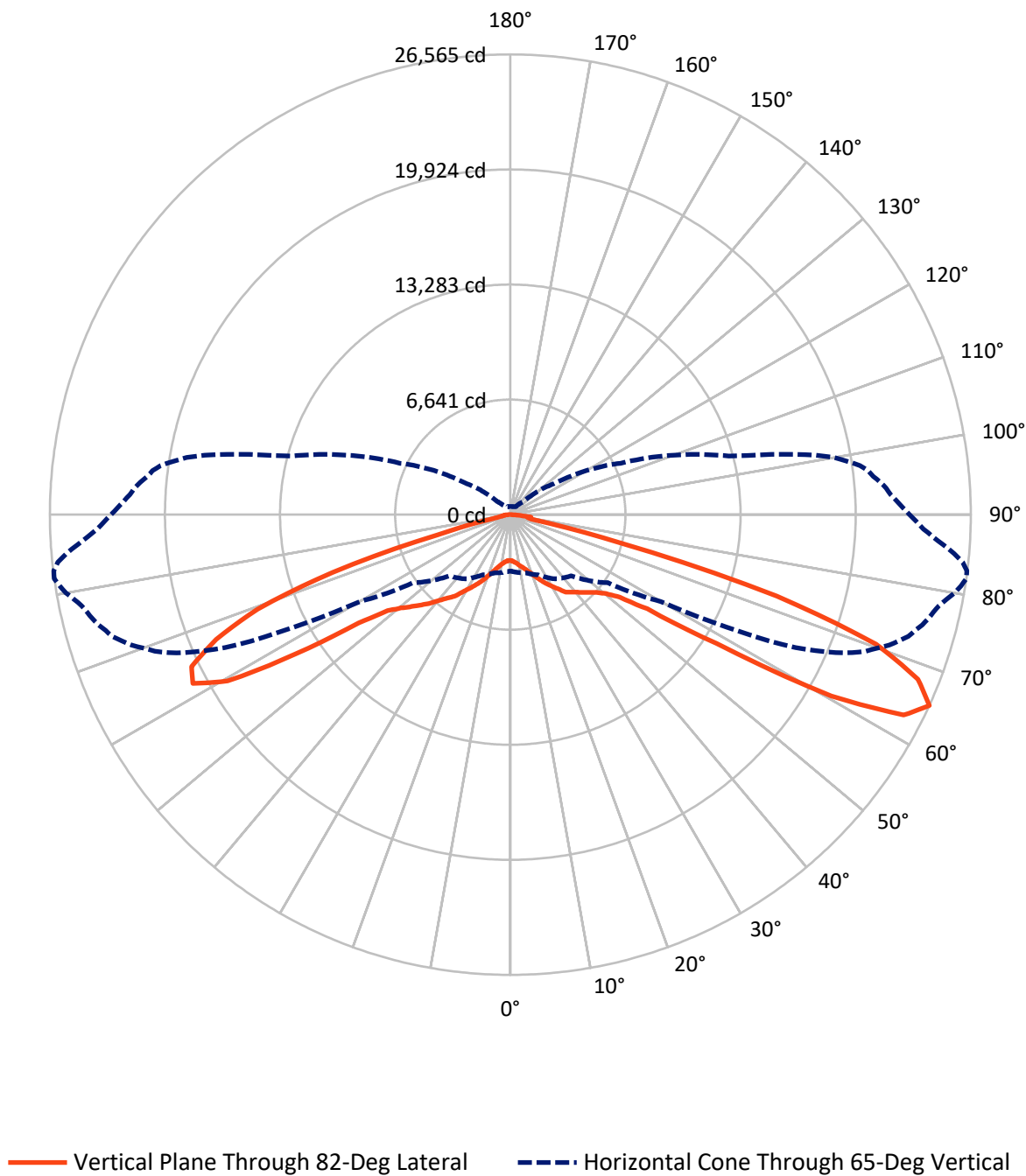


Based on 25 foot mounting height. Maximum calculated value = 5.4 fc
Type II - Short - Semi-Cutoff

REPORT NUMBER: P159371

CATALOG NUMBER: VST-E09-LED-E-U-T2-7050

Luminous Intensity Polar Plot



REPORT NUMBER: P159371

CATALOG NUMBER: VST-E09-LED-E-U-T2-7050

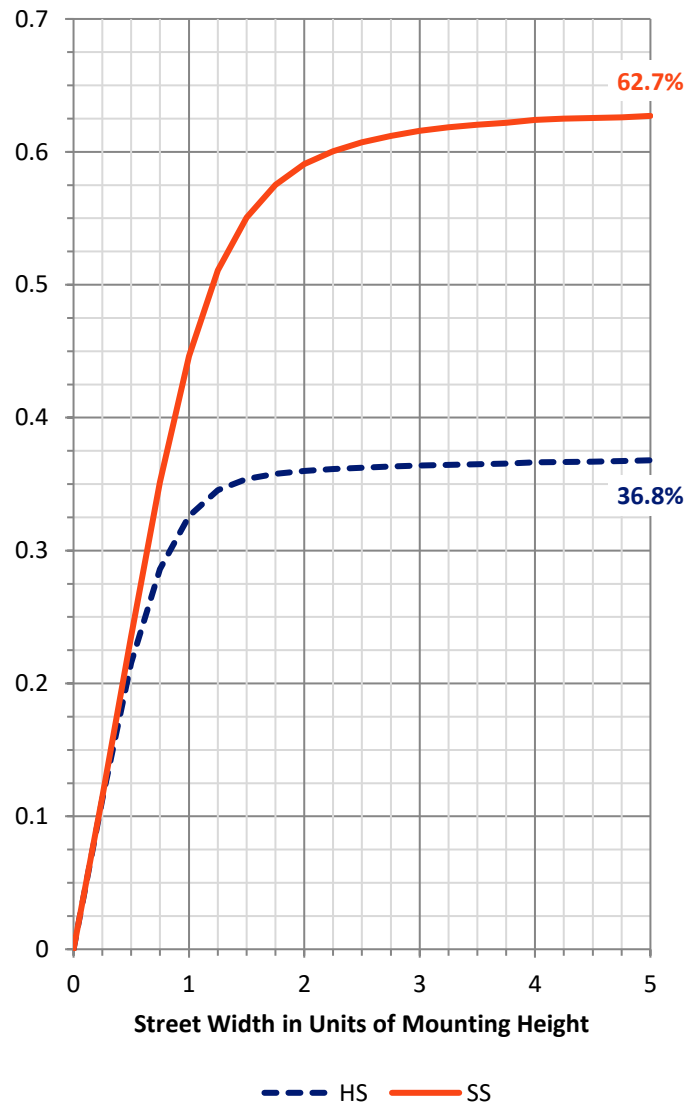
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	10613.6	0.0	10613.6
	% Fixture	37.2	0.0	37.2
Street Side	Lumens	17892.1	0.0	17892.1
	% Fixture	62.8	0.0	62.8
Total	Lumens	28505.7	0.0	28505.7
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	268.5	0.9
10°-20°	943.5	3.3
20°-30°	1869.4	6.6
30°-40°	3204.6	11.2
40°-50°	4814.1	16.9
50°-60°	6688.4	23.5
60°-70°	7630.4	26.8
70°-80°	2628.6	9.2
80°-90°	458.1	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°	28505.7	100.0
0°-180°	28505.7	100.0

Coefficient of Utilization



REPORT NUMBER: P159371

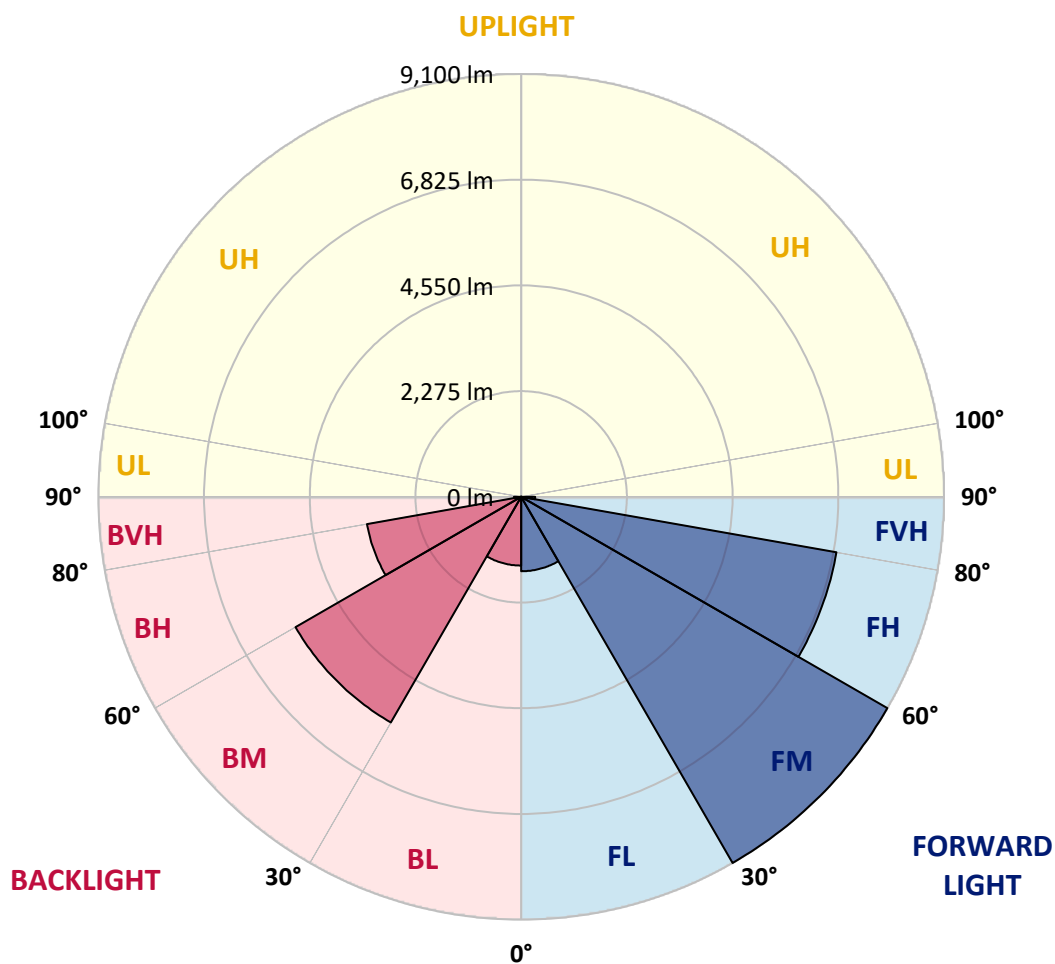
CATALOG NUMBER: VST-E09-LED-E-U-T2-7050

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1601.4	5.6			
FM	(30°-60°)	9099.6	31.9			
FH	(60°-80°)	6889.5	24.2			G3/7500
FVH	(80°-90°)	301.6	1.1			G3/500
BL	(0°-30°)	1480.0	5.2	B3/2500		
BM	(30°-60°)	5607.5	19.7	B4/8500		
BH	(60°-80°)	3369.5	11.8	B4/5000		G4/5000
BVH	(80°-90°)	156.5	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





REPORT NUMBER: P159371

CATALOG NUMBER: VST-E09-LED-E-U-T2-7050

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	60°	61°	62°	64°
0°	2652.3	2652.3	2652.3	2652.3	2652.3	2652.3	2652.3	2652.3	2652.3	2652.3	2652.3
2.5°	2796.3	2798.2	2796.3	2790.8	2789.0	2772.3	2753.9	2744.6	2742.8	2735.4	2737.2
5°	2970.0	2964.4	2957.0	2947.8	2938.6	2910.9	2879.5	2862.8	2857.3	2851.8	2844.4
7.5°	3125.1	3128.8	3125.1	3112.2	3088.2	3053.1	3012.4	2986.6	2984.7	2979.2	2973.7
10°	3324.6	3333.8	3311.7	3289.5	3256.2	3202.7	3156.5	3123.3	3117.7	3110.3	3106.6
12.5°	3540.7	3542.5	3535.1	3485.3	3429.9	3356.0	3289.5	3256.2	3248.9	3239.6	3235.9
15°	3771.6	3773.4	3732.8	3684.7	3599.8	3511.1	3418.8	3381.8	3372.6	3374.5	3359.7
17.5°	3954.4	3958.1	3919.3	3858.4	3756.8	3651.5	3551.8	3522.2	3516.7	3518.5	3511.1
20°	4033.8	4039.4	4015.4	3969.2	3873.1	3780.8	3708.8	3690.3	3688.4	3684.7	3699.5
22.5°	4030.1	4032.0	4022.7	4004.3	3947.0	3893.5	3884.2	3895.3	3893.5	3897.1	3910.1
25°	3996.9	4002.4	4000.6	4008.0	3998.7	4019.0	4061.5	4100.3	4105.9	4113.2	4137.3
27.5°	4081.8	4092.9	4080.0	4087.4	4102.2	4170.5	4257.3	4316.4	4327.5	4347.8	4368.1
30°	4414.3	4399.5	4382.9	4364.4	4373.7	4416.2	4514.0	4565.8	4571.3	4586.1	4613.8
32.5°	4907.5	4890.8	4876.1	4846.5	4839.1	4820.6	4853.9	4866.8	4865.0	4879.7	4887.1
35°	5463.4	5465.2	5461.5	5483.7	5502.2	5408.0	5291.6	5260.2	5273.2	5256.5	5260.2
37.5°	5938.1	5943.6	6041.5	6163.4	6198.5	6139.4	5884.5	5758.9	5716.4	5710.9	5668.4
40°	6464.5	6464.5	6612.2	6761.8	6859.7	6933.6	6630.7	6409.1	6318.6	6292.7	6187.4
42.5°	7042.6	7013.0	7147.9	7312.2	7493.2	7661.3	7504.3	7255.0	7125.7	7079.5	6894.8
45°	7517.2	7498.8	7565.3	7718.6	8012.2	8341.0	8363.2	8235.7	8158.2	8062.1	7892.2
47.5°	7809.1	7799.8	7838.6	8004.9	8372.4	8904.3	9201.7	9266.3	9220.2	9146.3	8981.9
50°	7923.6	7910.7	7938.4	8123.1	8534.9	9236.8	9894.3	10199.1	10221.2	10237.9	10186.1
52.5°	7883.0	7866.3	7923.6	8078.7	8507.2	9353.2	10435.5	11021.0	11118.9	11202.0	11371.9
55°	7493.2	7467.4	7622.5	7914.4	8387.2	9310.7	10830.7	11811.5	12018.4	12240.0	12616.8
57.5°	6896.7	6874.5	7098.0	7498.8	8174.8	9194.3	11096.7	12810.7	13276.2	13675.1	14744.5
60°	6322.2	6303.8	6434.9	6822.8	7485.8	8627.3	10768.0	13146.9	13928.2	14788.8	16741.1
62.5°	5295.3	5245.5	5420.9	5747.8	6167.1	7136.8	9332.8	12398.8	13603.1	14868.3	17515.0
65°	3254.4	3326.4	3477.9	3839.9	4527.0	4988.7	6854.2	10031.0	11619.4	13206.0	16639.5
67.5°	2066.8	2087.1	2199.8	2451.0	2982.9	3446.5	4153.9	6294.5	7519.1	9079.8	13063.8
70°	1771.3	1784.2	1880.2	2142.5	2510.1	3080.8	3143.6	3287.6	3727.2	4720.9	7679.8
72.5°	1396.3	1418.5	1494.2	1721.4	2164.7	2777.9	3880.5	2598.7	2510.1	2593.2	3747.5
75°	831.1	857.0	919.8	1043.5	1390.8	2124.0	4065.2	3023.5	2818.5	2657.8	2585.8
77.5°	439.6	421.1	463.6	535.6	714.8	1132.2	3054.9	3705.1	3561.0	3368.9	2960.7
80°	217.9	225.3	238.3	253.0	319.5	459.9	1527.5	3832.5	4248.1	4432.8	4070.8
82.5°	86.8	97.9	138.5	147.8	175.5	195.8	491.3	2124.0	3042.0	4126.2	5387.7
85°	44.3	42.5	73.9	88.7	103.4	92.3	173.6	792.4	1425.9	2221.9	3599.8
87.5°	5.5	7.4	16.6	22.2	31.4	29.6	49.9	171.8	273.4	387.9	544.9
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: P159371

CATALOG NUMBER: VST-E09-LED-E-U-T2-7050

CANDELA DISTRIBUTION (continued):

	65°	66°	67°	68°	69°	70°	71°	72°	73°	74°	75°
0°	2652.3	2652.3	2652.3	2652.3	2652.3	2652.3	2652.3	2652.3	2652.3	2652.3	2652.3
2.5°	2728.0	2726.2	2726.2	2718.8	2718.8	2720.6	2715.1	2711.4	2711.4	2713.2	2705.8
5°	2838.8	2833.3	2833.3	2825.9	2816.7	2816.7	2809.3	2807.4	2803.7	2796.3	2790.8
7.5°	2968.1	2962.6	2953.3	2947.8	2944.1	2938.6	2929.3	2925.6	2918.2	2910.9	2903.5
10°	3101.1	3093.7	3090.0	3080.8	3077.1	3066.0	3060.5	3062.3	3047.5	3042.0	3043.8
12.5°	3234.1	3226.7	3213.8	3210.1	3208.2	3197.1	3191.6	3187.9	3176.8	3175.0	3169.4
15°	3352.3	3356.0	3350.4	3341.2	3333.8	3332.0	3326.4	3322.7	3315.3	3308.0	3300.6
17.5°	3505.6	3511.1	3503.7	3490.8	3490.8	3489.0	3490.8	3489.0	3476.0	3481.6	3477.9
20°	3701.4	3705.1	3686.6	3692.1	3695.8	3694.0	3699.5	3705.1	3701.4	3701.4	3706.9
22.5°	3926.7	3932.2	3921.2	3928.5	3939.6	3930.4	3947.0	3945.2	3948.9	3954.4	3956.3
25°	4157.6	4168.7	4159.4	4179.7	4172.3	4179.7	4200.1	4194.5	4203.7	4218.5	4224.1
27.5°	4388.4	4395.8	4397.7	4410.6	4423.5	4434.6	4460.5	4460.5	4467.9	4493.7	4493.7
30°	4630.4	4637.8	4645.2	4663.6	4671.0	4691.4	4717.2	4724.6	4720.9	4757.8	4768.9
32.5°	4909.3	4916.7	4929.6	4951.8	4961.0	4981.3	4981.3	5001.6	5016.4	5047.8	5049.7
35°	5280.5	5286.1	5280.5	5278.7	5291.6	5319.3	5321.2	5350.7	5363.7	5395.1	5404.3
37.5°	5651.8	5649.9	5625.9	5600.1	5601.9	5590.8	5583.5	5596.4	5601.9	5603.8	5624.1
40°	6152.3	6104.3	6067.4	6002.7	5973.2	5927.0	5899.3	5897.4	5867.9	5864.2	5869.7
42.5°	6808.0	6752.6	6665.8	6556.8	6473.7	6388.7	6325.9	6289.0	6224.4	6191.1	6163.4
45°	7724.1	7587.4	7484.0	7354.7	7194.0	7046.3	6891.1	6820.9	6697.2	6621.5	6536.5
47.5°	8843.4	8708.6	8549.7	8416.7	8206.2	8001.2	7788.8	7602.2	7386.1	7214.3	7074.0
50°	10058.7	9979.3	9864.8	9741.0	9469.5	9334.7	9066.9	8813.8	8581.1	8274.5	8006.7
52.5°	11305.4	11351.6	11325.7	11281.4	11109.6	11057.9	10827.1	10518.6	10284.0	10073.5	9608.0
55°	12842.1	12897.5	13008.3	13073.0	13052.7	13183.8	13126.6	12886.4	12792.3	12694.4	12363.7
57.5°	15193.3	15588.6	16011.6	16382.8	16469.6	16935.0	16835.3	17075.4	17245.3	17123.4	17016.3
60°	17699.7	18497.6	19216.1	19967.8	20579.2	21037.2	21643.0	22051.2	22307.9	22769.7	22806.6
62.5°	18710.0	19794.2	20706.6	21578.4	22304.2	22939.6	23486.3	24049.7	24511.4	24928.8	25229.9
65°	18155.9	19288.1	20394.5	21279.2	21977.3	22524.0	23118.8	23565.7	24020.1	24287.9	24603.8
67.5°	15093.6	16593.4	17954.6	18952.0	19906.9	20462.8	21166.5	21606.1	22088.2	22370.7	22573.9
70°	9840.8	11793.0	13652.9	15165.6	16454.8	17103.1	17952.7	18553.0	19133.0	19147.7	19485.7
72.5°	5310.1	6942.8	8499.8	10045.8	11516.0	12378.5	13217.1	13946.6	14522.9	14277.2	14613.4
75°	2957.0	3721.7	4573.1	5502.2	6398.0	6891.1	7517.2	7520.9	7818.3	7351.0	7469.2
77.5°	2844.4	2809.3	2822.2	2848.1	2892.4	2798.2	2796.3	2739.1	2650.4	2489.7	2517.4
80°	3736.5	3289.5	2968.1	2463.9	1983.7	1618.0	1516.4	1540.4	1612.4	1756.5	1939.3
82.5°	5402.4	5025.7	4486.3	3692.1	2897.9	2234.9	1835.9	1629.0	1619.8	1763.9	2040.9
85°	3934.1	4161.3	4126.2	3444.6	2840.7	2306.9	1678.9	1418.5	1174.7	1117.4	1215.3
87.5°	580.0	480.2	541.2	452.5	328.8	254.9	223.5	179.2	171.8	175.5	192.1
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: P159371

CATALOG NUMBER: VST-E09-LED-E-U-T2-7050

CANDELA DISTRIBUTION (continued):

	76°	77°	78°	79°	80°	81°	82°	83°	84°	85°	86°
0°	2652.3	2652.3	2652.3	2652.3	2652.3	2652.3	2652.3	2652.3	2652.3	2652.3	2652.3
2.5°	2707.7	2700.3	2692.9	2698.5	2692.9	2691.1	2685.5	2681.8	2680.0	2680.0	2680.0
5°	2790.8	2781.6	2776.0	2774.2	2768.6	2763.1	2761.2	2752.0	2750.2	2750.2	2744.6
7.5°	2903.5	2896.1	2886.8	2881.3	2877.6	2868.4	2859.1	2857.3	2855.4	2848.1	2842.5
10°	3034.6	3023.5	3012.4	3012.4	3005.1	3003.2	2994.0	2981.0	2979.2	2968.1	2964.4
12.5°	3158.4	3154.7	3141.7	3138.0	3132.5	3127.0	3121.4	3115.9	3110.3	3101.1	3104.8
15°	3306.1	3296.9	3285.8	3287.6	3285.8	3278.4	3271.0	3265.5	3261.8	3258.1	3258.1
17.5°	3483.4	3479.7	3477.9	3468.6	3461.3	3466.8	3466.8	3466.8	3457.6	3459.4	3461.3
20°	3708.8	3712.4	3708.8	3701.4	3699.5	3705.1	3692.1	3712.4	3701.4	3694.0	3697.7
22.5°	3958.1	3971.0	3956.3	3958.1	3967.3	3971.0	3958.1	3974.7	3969.2	3958.1	3967.3
25°	4229.6	4238.8	4231.5	4229.6	4235.1	4248.1	4246.2	4244.4	4257.3	4246.2	4251.8
27.5°	4508.5	4514.0	4517.7	4523.3	4527.0	4525.1	4532.5	4532.5	4539.9	4527.0	4532.5
30°	4785.6	4785.6	4792.9	4800.3	4800.3	4800.3	4815.1	4816.9	4805.9	4809.6	4796.6
32.5°	5081.1	5082.9	5090.3	5090.3	5105.1	5106.9	5123.5	5101.4	5123.5	5105.1	5108.8
35°	5428.3	5452.3	5456.0	5474.5	5489.3	5494.8	5494.8	5496.6	5517.0	5502.2	5507.7
37.5°	5631.5	5637.0	5651.8	5661.0	5661.0	5668.4	5674.0	5668.4	5674.0	5672.1	5677.6
40°	5871.6	5866.0	5882.7	5886.4	5879.0	5888.2	5886.4	5880.8	5895.6	5884.5	5891.9
42.5°	6163.4	6132.0	6130.2	6144.9	6130.2	6137.5	6135.7	6122.8	6141.2	6146.8	6141.2
45°	6475.5	6458.9	6425.7	6425.7	6410.9	6405.4	6407.2	6405.4	6407.2	6429.4	6436.8
47.5°	6983.5	6881.9	6824.6	6771.1	6726.7	6724.9	6704.6	6715.7	6730.4	6767.4	6800.6
50°	7834.9	7600.4	7456.3	7323.3	7227.3	7194.0	7155.2	7151.5	7164.5	7207.0	7264.2
52.5°	9353.2	9028.1	8721.5	8437.0	8189.6	7999.3	7905.1	7855.2	7836.8	7879.3	7934.7
55°	12131.0	11517.8	11085.6	10797.5	10182.5	9922.0	9587.7	9434.4	9284.8	9299.6	9393.8
57.5°	16877.8	16547.2	16185.2	15680.9	15304.2	14849.8	14015.0	13549.5	13569.8	13678.8	13339.0
60°	23098.5	22764.1	22614.5	22156.5	21894.2	21711.4	21268.1	20496.0	20222.7	20171.0	19546.7
62.5°	25460.8	25540.2	25658.4	25787.7	25780.3	25859.7	25471.8	25220.6	24904.8	24494.8	23877.9
65°	24843.9	25045.2	25285.3	25632.5	26027.8	26319.6	26565.3	26535.7	26240.2	25693.5	25041.5
67.5°	22754.9	22954.4	23129.9	23595.3	24243.6	24836.5	25361.0	25717.5	25519.9	25067.3	24306.4
70°	19615.0	19759.1	19869.9	20274.4	20985.5	21709.5	22394.8	22993.2	22932.2	22383.7	21776.0
72.5°	14212.6	14561.7	14750.1	14722.4	15161.9	15972.8	16068.8	16580.4	16722.6	16131.6	15163.8
75°	6924.4	6929.9	6712.0	6639.9	6662.1	6802.5	6534.6	6551.3	6458.9	6039.7	5694.3
77.5°	2419.6	2353.1	2194.2	2005.8	1736.2	1483.1	1226.4	1115.6	1078.6	969.7	893.9
80°	2085.3	2183.1	2151.7	1996.6	1712.2	1364.9	1019.5	755.4	644.6	605.8	568.9
82.5°	2367.8	2744.6	2984.7	2971.8	2582.1	1939.3	1209.8	694.5	495.0	434.0	398.9
85°	1320.6	1420.3	1448.0	1318.8	1095.3	748.0	417.4	293.7	249.3	227.2	205.0
87.5°	210.6	192.1	188.4	164.4	155.1	142.2	125.6	118.2	109.0	103.4	103.4
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: P159371

CATALOG NUMBER: VST-E09-LED-E-U-T2-7050

CANDELA DISTRIBUTION (continued):

	87°	88°	89°	90°	91°	92°	93°	94°	95°	96°	97°
0°	2652.3	2652.3	2652.3	2652.3	2652.3	2652.3	2652.3	2652.3	2652.3	2652.3	2652.3
2.5°	2678.1	2676.3	2670.7	2665.2	2661.5	2659.7	2657.8	2654.1	2652.3	2650.4	2646.7
5°	2740.9	2737.2	2728.0	2718.8	2715.1	2709.5	2704.0	2700.3	2696.6	2694.8	2687.4
7.5°	2838.8	2835.1	2824.0	2816.7	2814.8	2800.0	2798.2	2792.6	2783.4	2781.6	2770.5
10°	2957.0	2955.2	2945.9	2940.4	2936.7	2929.3	2918.2	2909.0	2899.8	2899.8	2892.4
12.5°	3093.7	3086.3	3091.9	3078.9	3075.2	3067.9	3062.3	3060.5	3049.4	3040.1	3038.3
15°	3254.4	3245.2	3245.2	3241.5	3237.8	3230.4	3228.5	3230.4	3219.3	3223.0	3211.9
17.5°	3453.9	3457.6	3455.7	3455.7	3446.5	3446.5	3431.7	3450.2	3437.2	3446.5	3442.8
20°	3703.2	3705.1	3701.4	3706.9	3710.6	3708.8	3706.9	3705.1	3710.6	3718.0	3712.4
22.5°	3969.2	3969.2	3967.3	3987.7	3965.5	3982.1	3987.7	3976.6	4006.1	4002.4	4008.0
25°	4257.3	4257.3	4272.1	4288.7	4292.4	4279.5	4286.9	4277.6	4296.1	4310.9	4314.6
27.5°	4525.1	4549.1	4560.2	4549.1	4558.4	4578.7	4576.8	4576.8	4589.8	4586.1	4621.2
30°	4800.3	4815.1	4829.9	4822.5	4826.2	4852.0	4853.9	4855.7	4872.4	4896.4	4922.2
32.5°	5114.3	5129.1	5121.7	5145.7	5143.9	5175.3	5180.8	5186.3	5238.1	5228.8	5282.4
35°	5500.3	5515.1	5507.7	5533.6	5529.9	5541.0	5561.3	5583.5	5592.7	5646.2	5688.7
37.5°	5681.3	5681.3	5698.0	5727.5	5738.6	5757.1	5788.5	5816.2	5862.3	5919.6	5986.1
40°	5899.3	5904.8	5927.0	5958.4	5978.7	6021.2	6078.4	6117.2	6187.4	6250.2	6327.8
42.5°	6163.4	6187.4	6213.3	6255.8	6300.1	6366.6	6447.8	6497.7	6590.1	6671.3	6767.4
45°	6471.9	6495.9	6556.8	6634.4	6699.0	6772.9	6839.4	6957.6	7040.7	7125.7	7208.8
47.5°	6844.9	6915.1	6965.0	7057.3	7136.8	7234.7	7317.8	7428.6	7519.1	7622.5	7692.7
50°	7323.3	7410.1	7474.8	7594.8	7672.4	7781.4	7886.6	7969.8	8062.1	8163.7	8221.0
52.5°	8010.4	8099.1	8180.3	8329.9	8426.0	8499.8	8640.2	8743.6	8828.6	8902.5	8965.3
55°	9499.1	9473.2	9698.5	9988.5	10021.8	10289.6	10339.4	10426.3	10583.3	10605.4	10780.9
57.5°	13752.7	13619.7	13946.6	14371.4	14297.5	14162.7	14726.0	14761.1	14681.7	14894.1	14654.0
60°	19639.0	19406.3	19495.0	19611.3	19443.3	19363.8	19391.5	19471.0	19393.4	19308.4	19075.7
62.5°	23569.4	23211.1	22954.4	22738.3	22464.9	22267.3	22045.7	21772.3	21698.4	21388.1	21127.7
65°	24408.0	23850.2	23443.8	23035.7	22658.9	22309.8	21975.5	21740.9	21430.6	21063.1	20791.6
67.5°	23486.3	22795.5	22200.8	21607.9	21181.3	20667.8	20416.6	20034.3	19652.0	19230.9	18981.5
70°	20808.2	20087.9	19339.8	18759.9	18179.9	17544.6	17420.8	16968.3	16748.5	16174.1	16074.4
72.5°	14362.2	13882.0	13547.7	12831.0	12478.3	12153.2	12049.8	11630.5	11674.8	11045.0	11274.0
75°	5106.9	5038.6	4940.7	4536.2	4464.2	4338.6	4305.3	4275.8	4575.0	4159.4	4460.5
77.5°	877.3	871.8	821.9	797.9	844.1	814.5	821.9	807.1	893.9	906.9	886.6
80°	544.9	530.1	513.5	502.4	504.2	493.1	495.0	498.7	504.2	502.4	507.9
82.5°	373.1	360.2	352.8	345.4	356.5	360.2	369.4	378.6	393.4	402.6	413.7
85°	203.2	186.5	186.5	184.7	199.5	210.6	225.3	243.8	269.7	291.8	315.8
87.5°	103.4	99.7	101.6	105.3	118.2	127.4	145.9	162.5	184.7	208.7	230.9
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: P159371

CATALOG NUMBER: VST-E09-LED-E-U-T2-7050

CANDELA DISTRIBUTION (continued):

	98°	99°	100°	101°	102°	103°	104°	105°	115°	125°	135°
0°	2652.3	2652.3	2652.3	2652.3	2652.3	2652.3	2652.3	2652.3	2652.3	2652.3	2652.3
2.5°	2644.9	2644.9	2643.0	2643.0	2641.2	2639.3	2637.5	2632.0	2611.6	2593.2	2580.2
5°	2685.5	2680.0	2678.1	2672.6	2670.7	2667.1	2661.5	2656.0	2619.0	2585.8	2561.8
7.5°	2768.6	2761.2	2757.6	2752.0	2746.5	2739.1	2731.7	2726.2	2681.8	2643.0	2613.5
10°	2877.6	2873.9	2872.1	2864.7	2864.7	2853.6	2851.8	2838.8	2790.8	2755.7	2729.9
12.5°	3029.1	3021.7	3019.8	3010.6	3014.3	3010.6	3006.9	2999.5	2964.4	2923.8	2888.7
15°	3217.5	3217.5	3208.2	3200.8	3202.7	3199.0	3206.4	3197.1	3175.0	3138.0	3080.8
17.5°	3444.6	3440.9	3444.6	3439.1	3442.8	3446.5	3437.2	3439.1	3428.0	3381.8	3296.9
20°	3708.8	3703.2	3725.4	3716.1	3736.5	3718.0	3721.7	3727.2	3727.2	3666.3	3551.8
22.5°	4011.7	4008.0	4008.0	4026.4	4033.8	4035.7	4043.1	4048.6	4063.4	3985.8	3803.0
25°	4314.6	4327.5	4329.3	4353.4	4364.4	4364.4	4370.0	4390.3	4434.6	4327.5	4091.1
27.5°	4623.0	4654.4	4661.8	4678.4	4695.0	4711.7	4724.6	4739.4	4811.4	4695.0	4386.6
30°	4931.5	4966.6	4992.4	5010.9	5031.2	5071.8	5079.2	5108.8	5228.8	5086.6	4667.3
32.5°	5293.5	5343.3	5376.6	5400.6	5432.0	5470.8	5492.9	5529.9	5646.2	5413.5	4872.4
35°	5725.7	5755.2	5803.2	5843.9	5862.3	5928.8	5963.9	5973.2	6061.8	5696.1	5023.8
37.5°	6024.9	6074.7	6157.9	6215.1	6248.4	6285.3	6344.4	6383.2	6468.2	5952.8	5099.5
40°	6405.4	6481.1	6547.6	6632.5	6686.1	6713.8	6772.9	6804.3	6815.4	6172.6	5075.5
42.5°	6869.0	6937.3	7025.9	7094.3	7134.9	7166.3	7214.3	7227.3	7083.2	6276.1	4946.2
45°	7304.8	7410.1	7485.8	7535.7	7565.3	7581.9	7611.4	7613.3	7304.8	6224.4	4724.6
47.5°	7774.0	7849.7	7919.9	7955.0	7951.3	7955.0	7943.9	7936.5	7415.7	6045.2	4440.2
50°	8293.0	8342.9	8372.4	8389.0	8398.3	8363.2	8313.3	8280.1	7424.9	5790.3	4152.0
52.5°	8989.3	9052.1	9046.6	9044.7	8970.8	8937.6	8804.6	8736.3	7371.3	5491.1	3827.0
55°	10753.2	10692.2	10572.2	10631.3	10330.2	10173.2	9966.4	9774.3	7441.5	5206.7	3450.2
57.5°	14750.1	14774.1	14432.4	14249.5	13741.6	13106.2	12594.6	12097.8	8073.2	5033.0	2958.9
60°	18920.6	18606.6	18172.5	17511.3	16857.5	15913.7	15003.1	14142.4	8703.0	4852.0	2377.1
62.5°	20741.7	20294.7	19639.0	18783.9	17757.0	16602.6	15468.5	14419.4	8398.3	4266.5	1728.8
65°	20372.3	19688.9	18964.9	17963.8	16715.3	15450.1	14125.8	13054.5	7025.9	3182.4	1065.7
67.5°	18440.3	17860.4	17095.7	15908.1	14572.7	13255.8	12042.4	10841.8	5219.6	1983.7	596.6
70°	15564.6	14997.6	14221.8	13006.5	11673.0	10413.3	9127.8	8148.9	3326.4	956.7	430.3
72.5°	10797.5	10337.6	9789.0	8922.8	7753.7	6608.5	5738.6	4986.9	1843.3	507.9	393.4
75°	4384.8	4386.6	4286.9	3921.2	3313.5	2857.3	2436.2	2066.8	770.2	432.2	387.9
77.5°	993.7	1010.3	1104.5	1047.2	943.8	882.9	790.5	698.2	469.1	445.1	391.6
80°	502.4	504.2	498.7	500.5	495.0	496.8	489.5	483.9	439.6	458.1	391.6
82.5°	419.3	428.5	426.7	426.7	428.5	428.5	428.5	426.7	456.2	482.1	378.6
85°	332.5	350.9	365.7	380.5	397.1	408.2	413.7	419.3	443.3	474.7	343.5
87.5°	251.2	273.4	291.8	306.6	332.5	332.5	350.9	363.9	363.9	371.2	181.0
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: P159371

CATALOG NUMBER: VST-E09-LED-E-U-T2-7050

CANDELA DISTRIBUTION (continued):

	145°	155°	165°	175°	180°
0°	2652.3	2652.3	2652.3	2652.3	2652.3
2.5°	2561.8	2554.4	2547.0	2543.3	2535.9
5°	2543.3	2528.5	2519.3	2519.3	2511.9
7.5°	2596.9	2591.3	2578.4	2571.0	2578.4
10°	2711.4	2702.1	2687.4	2676.3	2681.8
12.5°	2864.7	2827.7	2798.2	2785.3	2776.0
15°	3023.5	2949.6	2890.5	2857.3	2848.1
17.5°	3193.4	3064.2	2975.5	2925.6	2916.4
20°	3367.1	3206.4	3080.8	3016.1	3014.3
22.5°	3575.8	3361.5	3200.8	3115.9	3110.3
25°	3795.6	3500.0	3287.6	3178.7	3167.6
27.5°	3985.8	3610.9	3341.2	3211.9	3200.8
30°	4144.6	3694.0	3385.5	3235.9	3221.2
32.5°	4259.2	3742.0	3404.0	3243.3	3226.7
35°	4296.1	3723.5	3352.3	3176.8	3158.4
37.5°	4246.2	3603.5	3208.2	3014.3	2992.1
40°	4096.6	3392.9	2973.7	2774.2	2746.5
42.5°	3867.6	3134.3	2691.1	2500.8	2465.7
45°	3585.0	2842.5	2410.3	2197.9	2181.3
47.5°	3289.5	2535.9	2094.5	1902.4	1882.1
50°	2970.0	2181.3	1786.0	1577.3	1577.3
52.5°	2589.5	1835.9	1427.7	1270.7	1257.8
55°	2151.7	1446.2	1137.7	1017.7	1001.1
57.5°	1680.8	1111.9	908.7	838.5	820.1
60°	1235.6	834.8	731.4	692.6	685.2
62.5°	838.5	635.4	589.2	572.6	570.7
65°	567.0	495.0	482.1	476.5	478.4
67.5°	435.9	411.9	406.3	404.5	404.5
70°	378.6	363.9	358.3	360.2	358.3
72.5°	356.5	336.2	338.0	341.7	339.8
75°	349.1	323.2	330.6	332.5	325.1
77.5°	343.5	308.4	326.9	332.5	312.1
80°	332.5	295.5	339.8	341.7	306.6
82.5°	304.8	262.3	339.8	314.0	277.0
85°	258.6	199.5	384.2	273.4	205.0
87.5°	164.4	118.2	260.4	186.5	123.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)