

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: P158931

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P158931
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33715)
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-SLL-7050
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(9) LIGHTBARS WITH AccuLED OPTICS - 90° SPILL LIGHT ELIMINATOR LEFT
Light Source: (189) 5000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 24816.9 lumens
Efficiency: N/A
Efficacy: 110.0 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B3 - U0 - 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

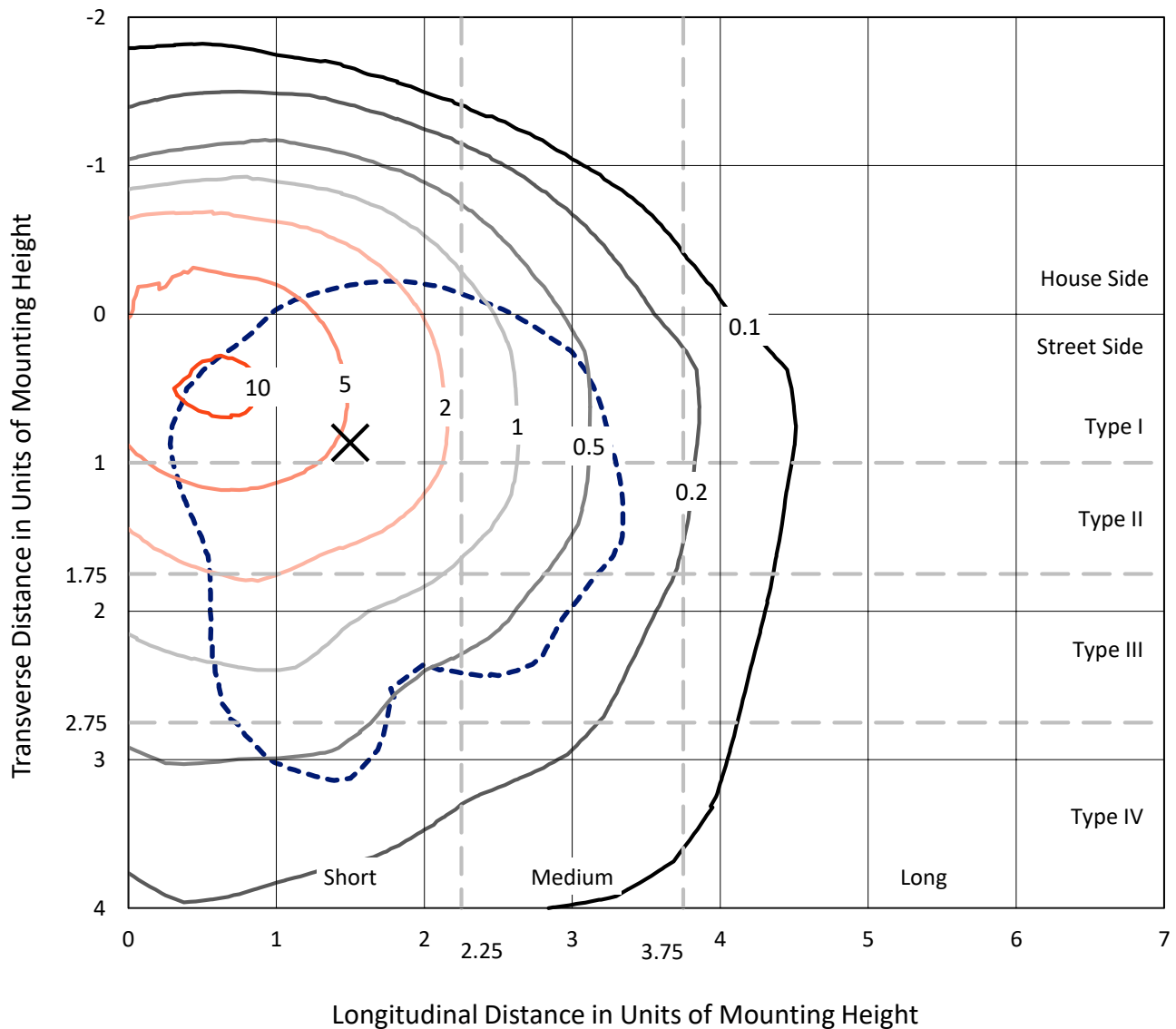


REPORT NUMBER: P158931

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

Iso-Footcandle Lines of Horizontal Illumination

× Max cd
- - - 1/2 Max cd

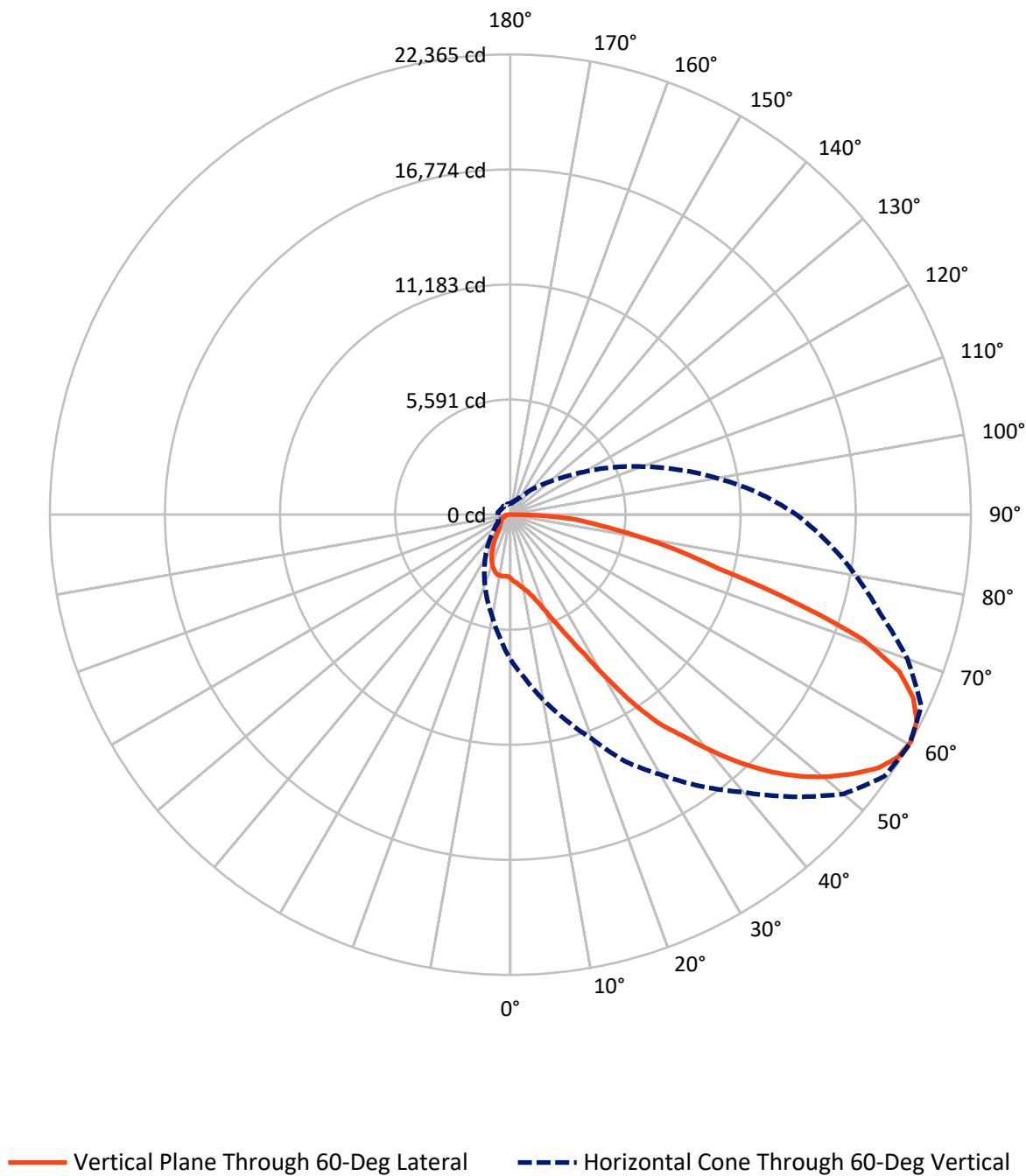


Based on 25 foot mounting height. Maximum calculated value = 11.4 fc
Type IV - Short - Non-Cutoff

REPORT NUMBER: P158931

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

Luminous Intensity Polar Plot



REPORT NUMBER: P158931

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

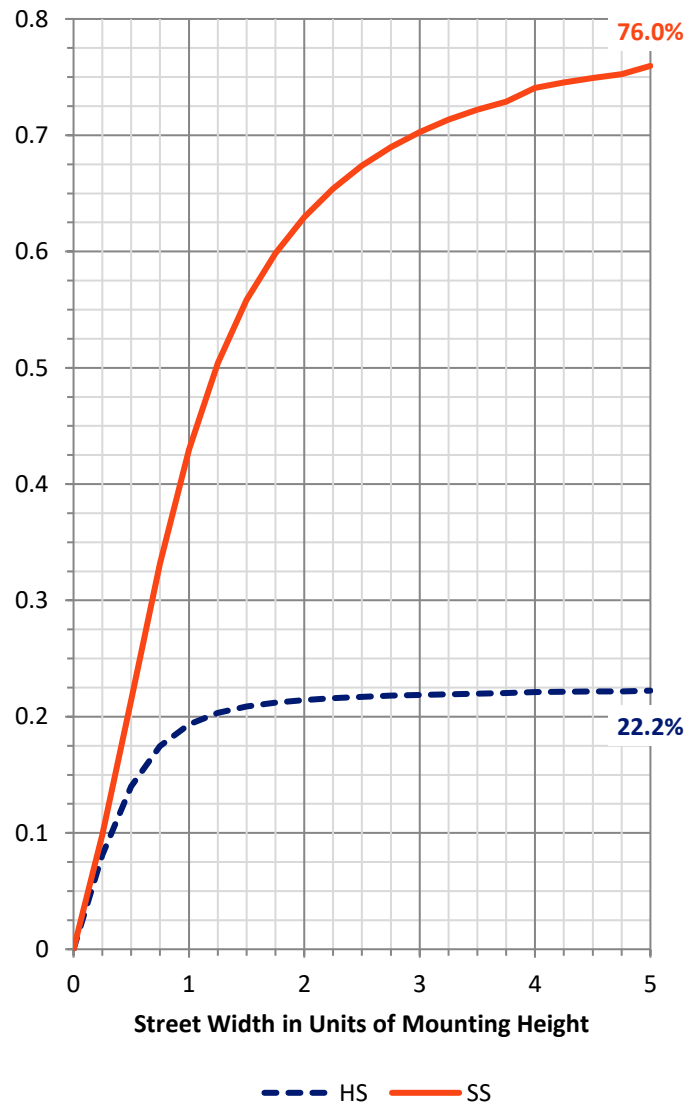
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	5588.0	0.0	5588.0
	% Fixture	22.5	0.0	22.5
Street Side	Lumens	19228.9	0.0	19228.9
	% Fixture	77.5	0.0	77.5
Total	Lumens	24816.9	0.0	24816.9
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	304.5	1.2
10°-20°	983.1	4.0
20°-30°	1865.6	7.5
30°-40°	2937.9	11.8
40°-50°	4100.7	16.5
50°-60°	5071.5	20.4
60°-70°	5256.9	21.2
70°-80°	3307.8	13.3
80°-90°	988.8	4.0
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°	24816.9	100.0
0°-180°	24816.9	100.0

Coefficient of Utilization



REPORT NUMBER: P158931

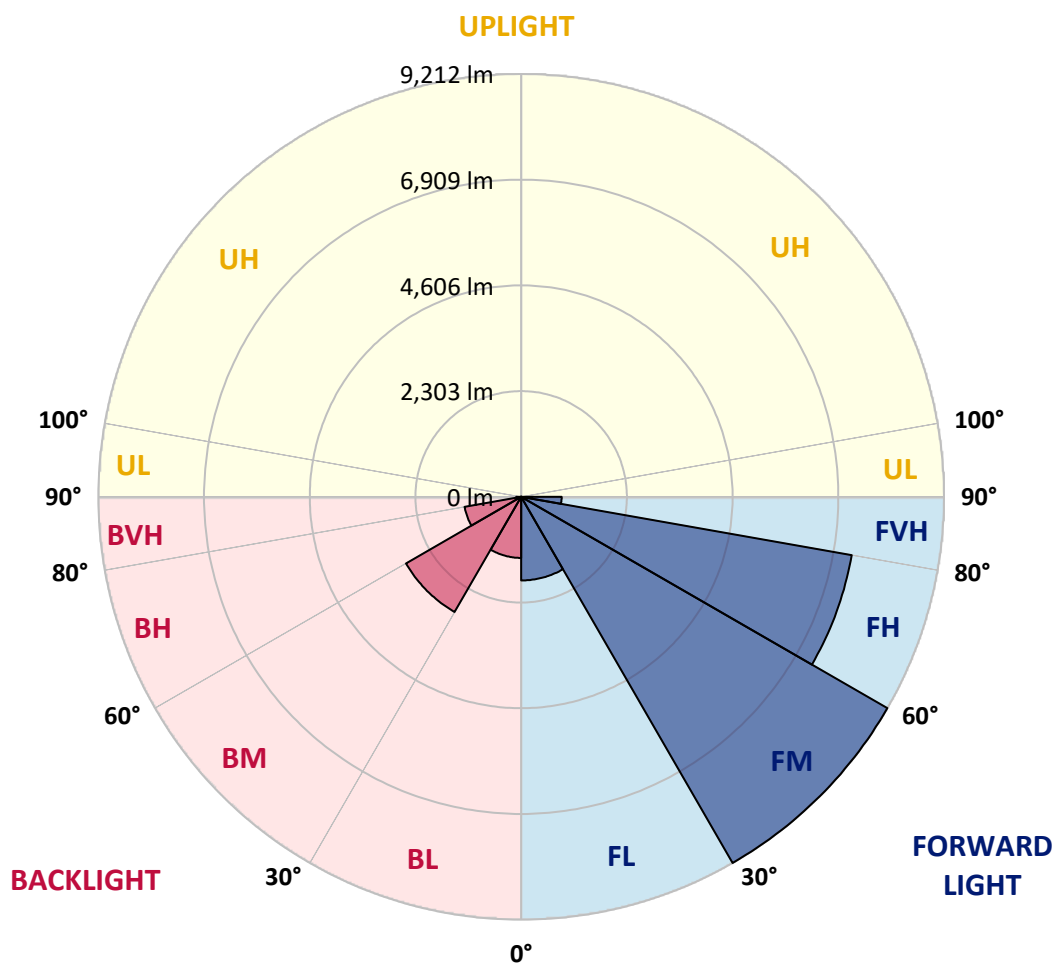
CATALOG NUMBER: VST-E09-LED-E-U-SLL-7050

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1821.9	7.3			
FM	(30°-60°)	9212.4	37.1			
FH	(60°-80°)	7313.3	29.5			G3/7500
FVH	(80°-90°)	881.2	3.6			G5
BL	(0°-30°)	1331.3	5.4	B3/2500		
BM	(30°-60°)	2897.7	11.7	B3/5000		
BH	(60°-80°)	1251.5	5.0	B3/2500		G3/2500
BVH	(80°-90°)	107.6	0.4			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G5

Type IV Short





REPORT NUMBER: P158931

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

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	3086.3	3086.3	3086.3	3086.3	3086.3	3086.3	3086.3	3086.3	3086.3	3086.3	3086.3
2.5°	3269.2	3265.5	3265.5	3265.5	3263.6	3259.9	3265.5	3263.6	3254.4	3248.9	3254.4
5°	3311.7	3313.5	3319.0	3320.9	3320.9	3326.4	3341.2	3343.1	3341.2	3344.9	3354.1
7.5°	3352.3	3361.5	3367.1	3376.3	3387.4	3396.6	3422.5	3448.3	3465.0	3477.9	3481.6
10°	3418.8	3433.6	3450.2	3474.2	3500.0	3546.2	3568.4	3594.2	3610.9	3636.7	3642.3
12.5°	3588.7	3607.2	3618.3	3655.2	3688.4	3732.8	3764.2	3771.6	3810.3	3832.5	3858.4
15°	3875.0	3902.7	3941.5	3963.6	4000.6	4039.4	4067.1	4104.0	4109.6	4139.1	4159.4
17.5°	4225.9	4264.7	4344.1	4397.7	4445.7	4484.5	4539.9	4582.4	4591.6	4624.9	4582.4
20°	4717.2	4811.4	4824.3	4931.5	4973.9	5051.5	5162.3	5182.7	5236.2	5182.7	5151.3
22.5°	5382.1	5529.9	5570.5	5674.0	5725.7	5843.9	5877.1	5986.1	6023.0	5982.4	5897.4
25°	6146.8	6375.8	6494.0	6652.9	6678.7	6920.7	6946.5	7074.0	7005.6	6907.7	6909.6
27.5°	6710.1	7099.8	7404.6	7676.1	7866.3	8139.7	8352.1	8411.2	8346.5	8219.1	8174.8
30°	7031.5	7472.9	7910.7	8285.6	8728.9	9146.3	9580.3	9796.4	9833.4	9899.9	9632.1
32.5°	7238.4	7805.4	8326.2	8789.8	9244.2	9781.7	10363.5	10919.4	11386.7	11739.5	11573.2
35°	7412.0	8112.0	8778.7	9340.2	9877.7	10463.2	11050.5	11706.2	12480.1	12932.6	13026.8
37.5°	7482.2	8337.3	9153.7	9874.0	10629.4	11288.8	11872.5	12456.1	13268.8	14075.9	14325.3
40°	7469.2	8448.1	9377.2	10282.2	11207.5	12031.3	12714.7	13405.5	14356.7	15300.5	15706.8
42.5°	7382.4	8464.8	9519.4	10553.7	11608.3	12703.6	13577.2	14373.3	15285.7	16495.5	17069.9
45°	7273.4	8407.5	9548.9	10692.2	11905.7	13172.7	14277.2	15261.7	16331.1	17526.1	18220.6
47.5°	7125.7	8317.0	9512.0	10740.2	12038.7	13473.8	14772.2	15956.1	17132.7	18508.7	19389.7
50°	6965.0	8187.7	9436.3	10705.2	12071.9	13638.2	15054.8	16403.1	17777.3	19262.3	20376.0
52.5°	6852.3	8049.2	9367.9	10633.1	12038.7	13688.0	15158.2	16643.2	18172.5	19707.4	21037.2
55°	6713.8	7864.5	9185.1	10465.0	11916.8	13660.3	15147.2	16726.3	18281.5	19879.2	21397.4
57.5°	6723.0	7779.5	9029.9	10263.7	11667.4	13403.6	14938.5	16643.2	18109.7	19768.3	21410.3
60°	7014.9	7962.4	9111.2	10304.4	11593.6	13241.1	14583.8	16107.6	17605.5	19386.0	21111.1
62.5°	7617.0	8485.1	9528.6	10710.7	12009.1	13566.1	14423.1	15217.3	16547.2	18682.3	20601.3
65°	8335.5	9118.6	10023.6	11148.4	12603.9	14094.4	14332.6	14493.3	15165.6	17313.7	19644.6
67.5°	9053.9	9754.0	10465.0	11397.8	12941.9	14245.8	13963.2	13580.9	13942.9	15723.4	17764.3
70°	9312.5	10241.6	10708.8	11349.8	12685.1	13893.1	13366.7	12404.4	12530.0	14147.9	15640.3
72.5°	8924.7	10248.9	10404.1	10642.4	11541.8	12677.7	12121.8	10884.3	10858.5	12094.1	13300.2
75°	7485.8	9349.5	9347.6	9259.0	9462.1	10108.6	9820.4	9074.3	9390.1	10363.5	10760.6
77.5°	5336.0	7295.6	7388.0	6791.4	6776.6	7068.4	7242.0	8110.1	9255.3	9802.0	9676.4
80°	3352.3	4922.2	5319.3	4582.4	4425.4	4839.1	5912.2	7175.6	8584.8	9076.1	8653.1
82.5°	2018.8	3171.3	4017.2	3599.8	3562.8	4316.4	5502.2	5993.5	6416.4	6939.1	6231.7
85°	1370.5	2113.0	2748.3	2831.4	3154.7	3934.1	4449.4	4231.5	4242.5	4105.9	3740.2
87.5°	262.3	576.3	942.0	1148.8	1274.4	1712.2	1861.8	1686.3	1780.5	1302.1	1424.0
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: P158931

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

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	3086.3	3086.3	3086.3	3086.3	3086.3	3086.3	3086.3	3086.3	3086.3	3086.3	3086.3
2.5°	3245.2	3245.2	3245.2	3235.9	3237.8	3224.8	3219.3	3219.3	3213.8	3213.8	3211.9
5°	3346.7	3335.7	3341.2	3339.4	3339.4	3320.9	3311.7	3311.7	3287.6	3289.5	3282.1
7.5°	3498.2	3496.4	3501.9	3490.8	3476.0	3461.3	3446.5	3439.1	3405.8	3385.5	3372.6
10°	3670.0	3668.1	3673.7	3671.8	3646.0	3618.3	3577.6	3548.1	3507.4	3476.0	3444.6
12.5°	3858.4	3856.5	3852.8	3836.2	3808.5	3764.2	3712.4	3662.6	3601.6	3561.0	3514.8
15°	4152.0	4146.5	4124.3	4100.3	4070.8	4002.4	3911.9	3839.9	3758.6	3688.4	3612.7
17.5°	4586.1	4539.9	4536.2	4482.6	4403.2	4312.7	4227.8	4107.7	3991.3	3886.1	3782.6
20°	5184.5	5077.4	5047.8	4986.9	4881.6	4787.4	4602.7	4442.0	4283.2	4139.1	4008.0
22.5°	5836.5	5758.9	5686.9	5587.1	5443.1	5306.4	5071.8	4870.5	4667.3	4482.6	4336.7
25°	6747.1	6612.2	6482.9	6324.1	6124.6	5962.1	5694.3	5491.1	5225.1	5057.1	4846.5
27.5°	7923.6	7692.7	7474.8	7338.1	6987.2	6750.7	6409.1	6146.8	5825.4	5598.2	5348.9
30°	9454.7	9186.9	8863.7	8390.9	7973.5	7504.3	7081.4	6745.2	6403.5	6085.8	5797.7
32.5°	11353.4	10880.6	10369.0	9619.1	8933.9	8265.3	7701.9	7288.2	6939.1	6543.9	6137.5
35°	12958.5	12470.9	11745.0	10792.0	9946.0	9181.4	8507.2	7942.1	7485.8	6985.3	6447.8
37.5°	14225.5	13669.6	12988.0	11975.9	11081.9	10212.0	9504.6	8784.3	8185.9	7496.9	6817.2
40°	15677.2	15119.5	14369.6	13320.5	12262.2	11318.4	10489.1	9744.7	9009.6	8169.2	7295.6
42.5°	16942.4	16539.8	15780.7	14696.5	13523.7	12472.7	11565.9	10714.4	9754.0	8813.8	7779.5
45°	18261.2	17851.2	17130.8	15996.8	14750.1	13579.1	12494.9	11578.8	10444.7	9325.5	8141.5
47.5°	19426.6	19005.5	18277.8	17151.1	15826.9	14593.1	13399.9	12291.7	10974.8	9689.3	8377.9
50°	20538.5	20023.2	19356.5	18233.5	16818.7	15499.9	14205.2	12783.0	11386.7	9944.2	8538.6
52.5°	21559.9	20904.2	20272.6	19116.3	17587.0	16209.2	14764.8	13200.4	11639.7	10145.5	8647.6
55°	22139.9	21716.9	20961.5	19825.6	18133.7	16696.8	15119.5	13494.1	11890.9	10287.7	8693.8
57.5°	22319.0	22215.6	21582.1	20235.6	18455.1	16964.6	15359.6	13726.8	12059.0	10328.4	8629.1
60°	22176.8	22365.2	22018.0	20523.8	18601.0	17044.0	15477.8	13893.1	12088.5	10199.1	8433.4
62.5°	21720.6	22149.1	22104.8	20619.8	18525.3	16944.3	15464.8	13808.1	11811.5	9796.4	7993.8
65°	20970.7	21510.0	21700.3	20263.3	18098.7	16580.4	15136.1	13274.3	11041.3	9009.6	7256.8
67.5°	19559.6	20376.0	20560.7	19096.0	16983.1	15573.8	14188.6	12166.1	9615.4	7792.4	6106.1
70°	16731.9	18159.6	18408.9	16872.3	15016.0	13778.5	12603.9	10409.6	8006.7	6250.2	4685.8
72.5°	13357.4	14255.1	14764.8	13706.5	12325.0	11427.3	10537.1	7986.4	6041.5	4611.9	3224.8
75°	10442.9	10389.3	10845.5	10141.8	9329.1	8909.9	8241.3	5572.4	4046.8	3054.9	2040.9
77.5°	8928.3	8241.3	7722.3	7227.3	6745.2	6612.2	5971.3	3457.6	2500.8	1830.4	1220.9
80°	7421.2	6167.1	5219.6	4523.3	4351.5	4613.8	3908.2	2039.1	1481.3	1050.9	766.5
82.5°	5302.7	4436.5	3610.9	3169.4	2875.8	3293.2	2305.0	1132.2	803.4	629.8	507.9
85°	3437.2	3285.8	3250.7	3106.6	2750.2	2596.9	1750.9	975.2	602.1	391.6	315.8
87.5°	1322.4	1695.5	1956.0	2096.3	2266.3	2018.8	912.4	336.2	330.6	203.2	153.3
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):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	3086.3	3086.3	3086.3	3086.3	3086.3	3086.3	3086.3	3086.3	3086.3	3086.3	3086.3
2.5°	3199.0	3191.6	3189.8	3184.2	3180.5	3180.5	3171.3	3003.2	3001.4	3001.4	2999.5
5°	3267.3	3258.1	3248.9	3247.0	3239.6	3239.6	3230.4	3062.3	3062.3	3062.3	3058.6
7.5°	3359.7	3341.2	3330.1	3324.6	3313.5	3319.0	3326.4	3156.5	3158.4	3156.5	3160.2
10°	3426.2	3415.1	3402.2	3398.5	3391.1	3396.6	3407.7	3239.6	3245.2	3247.0	3250.7
12.5°	3490.8	3472.3	3455.7	3450.2	3446.5	3461.3	3474.2	3311.7	3317.2	3322.7	3322.7
15°	3570.2	3538.8	3516.7	3503.7	3496.4	3511.1	3529.6	3368.9	3370.8	3376.3	3374.5
17.5°	3705.1	3658.9	3607.2	3597.9	3573.9	3579.5	3583.2	3404.0	3396.6	3383.7	3361.5
20°	3913.8	3843.6	3773.4	3743.8	3695.8	3675.5	3634.9	3405.8	3359.7	3320.9	3287.6
22.5°	4213.0	4109.6	4033.8	3984.0	3886.1	3817.7	3706.9	3396.6	3309.8	3243.3	3191.6
25°	4696.9	4573.1	4456.8	4331.2	4177.9	4041.2	3878.7	3477.9	3343.1	3228.5	3128.8
27.5°	5167.9	4972.1	4792.9	4604.5	4388.4	4183.4	3954.4	3503.7	3350.4	3202.7	3040.1
30°	5520.7	5236.2	4964.7	4689.5	4406.9	4141.0	3882.4	3415.1	3232.2	3066.0	2894.2
32.5°	5734.9	5365.5	5012.7	4671.0	4338.6	4039.4	3749.4	3261.8	3060.5	2864.7	2681.8
35°	5938.1	5480.0	5042.3	4639.6	4259.2	3926.7	3614.6	3082.6	2842.5	2633.8	2402.9
37.5°	6189.3	5600.1	5060.8	4582.4	4142.8	3762.3	3418.8	2857.3	2617.2	2360.5	2142.5
40°	6490.3	5723.8	5042.3	4467.9	3961.8	3546.2	3182.4	2620.9	2353.1	2103.7	1889.5
42.5°	6776.6	5832.8	4994.3	4314.6	3764.2	3320.9	2966.3	2410.3	2142.5	1887.6	1675.2
45°	6989.0	5925.1	4970.2	4207.4	3612.7	3167.6	2776.0	2240.4	1957.8	1701.1	1485.0
47.5°	7136.8	5980.6	4959.2	4148.3	3507.4	3008.7	2602.4	2070.5	1773.1	1514.5	1304.0
50°	7214.3	5978.7	4931.5	4083.7	3352.3	2818.5	2423.3	1898.7	1603.2	1350.1	1158.1
52.5°	7234.7	5945.5	4872.4	3965.5	3163.9	2628.3	2231.2	1719.5	1453.6	1211.6	1017.7
55°	7188.5	5864.2	4748.6	3767.9	2962.6	2426.9	2055.7	1579.2	1307.7	1078.6	927.2
57.5°	7057.3	5720.1	4515.9	3496.4	2750.2	2240.4	1854.4	1409.3	1148.8	956.7	831.1
60°	6813.5	5415.4	4152.0	3175.0	2480.5	1956.0	1577.3	1187.6	980.8	836.7	735.1
62.5°	6362.9	4937.0	3640.4	2731.7	2092.6	1586.6	1259.6	947.5	792.4	698.2	635.4
65°	5637.0	4216.7	3047.5	2151.7	1590.3	1154.4	936.4	712.9	600.3	543.0	524.5
67.5°	4600.9	3256.2	2216.4	1494.2	1076.8	809.0	652.0	520.9	467.3	445.1	437.7
70°	3344.9	2218.2	1435.1	943.8	711.1	565.2	493.1	419.3	389.7	384.2	384.2
72.5°	2100.0	1348.3	879.2	646.4	539.3	458.1	421.1	369.4	358.3	354.6	349.1
75°	1231.9	818.2	622.4	530.1	461.7	410.0	378.6	336.2	328.8	326.9	321.4
77.5°	785.0	589.2	502.4	452.5	417.4	371.2	343.5	299.2	297.4	295.5	293.7
80°	563.3	489.5	439.6	400.8	365.7	323.2	306.6	271.5	267.8	266.0	269.7
82.5°	426.7	404.5	384.2	354.6	306.6	275.2	262.3	238.3	240.1	230.9	229.0
85°	293.7	290.0	288.1	275.2	240.1	212.4	203.2	190.2	199.5	190.2	179.2
87.5°	144.1	142.2	131.1	155.1	144.1	114.5	103.4	114.5	127.4	123.7	114.5
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: P158931

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

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
0°	3086.3	3086.3	3086.3	3086.3	3086.3	3086.3	3086.3	3086.3	3086.3	3086.3	3086.3
2.5°	2992.1	2984.7	2990.3	2986.6	2986.6	2984.7	2988.4	2982.9	2979.2	2982.9	2984.7
5°	3051.2	3042.0	3043.8	3030.9	3036.5	3023.5	3027.2	3018.0	3008.7	3005.1	3005.1
7.5°	3151.0	3141.7	3130.6	3128.8	3108.5	3101.1	3088.2	3080.8	3075.2	3062.3	3054.9
10°	3241.5	3226.7	3213.8	3211.9	3191.6	3173.1	3156.5	3141.7	3132.5	3114.0	3104.8
12.5°	3315.3	3300.6	3280.3	3269.2	3248.9	3226.7	3215.6	3193.4	3180.5	3160.2	3143.6
15°	3357.8	3332.0	3302.4	3282.1	3252.5	3228.5	3211.9	3195.3	3182.4	3156.5	3132.5
17.5°	3337.5	3295.0	3254.4	3217.5	3176.8	3154.7	3130.6	3110.3	3106.6	3077.1	3040.1
20°	3252.5	3202.7	3149.1	3099.2	3045.7	3014.3	2984.7	2953.3	2944.1	2909.0	2861.0
22.5°	3149.1	3091.9	3030.9	2970.0	2901.6	2857.3	2813.0	2774.2	2742.8	2691.1	2622.7
25°	3043.8	2958.9	2870.2	2792.6	2713.2	2657.8	2611.6	2569.2	2532.2	2449.1	2378.9
27.5°	2905.3	2772.3	2681.8	2593.2	2497.1	2425.1	2373.4	2314.3	2273.6	2177.6	2103.7
30°	2728.0	2595.0	2465.7	2377.1	2281.0	2203.5	2137.0	2052.0	1992.9	1922.7	1854.4
32.5°	2504.5	2371.5	2240.4	2140.7	2061.2	1965.2	1882.1	1800.8	1732.5	1664.1	1610.6
35°	2233.0	2103.7	1980.0	1880.2	1791.6	1715.9	1636.4	1566.2	1488.7	1414.8	1383.4
37.5°	1946.7	1808.2	1671.5	1584.7	1514.5	1461.0	1387.1	1329.8	1259.6	1215.3	1178.4
40°	1697.4	1549.6	1420.3	1346.5	1291.0	1230.1	1169.1	1124.8	1074.9	1030.6	1002.9
42.5°	1486.8	1348.3	1237.5	1174.7	1108.2	1041.7	995.5	958.6	927.2	893.9	860.7
45°	1292.9	1159.9	1067.6	990.0	934.6	881.0	849.6	833.0	814.5	794.2	772.0
47.5°	1130.4	1015.8	925.3	853.3	796.1	759.1	744.3	738.8	731.4	714.8	703.7
50°	1006.6	912.4	820.1	755.4	707.4	688.9	672.3	666.8	657.5	652.0	644.6
52.5°	903.2	803.4	725.9	666.8	637.2	629.8	622.4	615.0	613.2	609.5	605.8
55°	818.2	731.4	659.4	615.0	600.3	594.7	592.9	585.5	583.6	583.6	578.1
57.5°	742.5	668.6	604.0	576.3	567.0	561.5	557.8	554.1	554.1	557.8	555.9
60°	664.9	602.1	563.3	548.6	543.0	533.8	524.5	520.9	522.7	531.9	531.9
62.5°	589.2	543.0	519.0	513.5	507.9	500.5	489.5	485.8	489.5	500.5	506.1
65°	506.1	485.8	478.4	474.7	471.0	465.4	458.1	454.4	456.2	461.7	469.1
67.5°	430.3	428.5	428.5	430.3	428.5	426.7	423.0	417.4	415.6	415.6	419.3
70°	384.2	384.2	389.7	389.7	387.9	387.9	382.3	376.8	373.1	369.4	371.2
72.5°	349.1	349.1	350.9	352.8	350.9	350.9	343.5	339.8	330.6	328.8	325.1
75°	319.5	315.8	315.8	314.0	312.1	314.0	306.6	297.4	293.7	291.8	288.1
77.5°	290.0	282.6	278.9	275.2	277.0	275.2	269.7	264.1	258.6	256.7	254.9
80°	256.7	245.6	240.1	230.9	236.4	238.3	234.6	229.0	227.2	225.3	223.5
82.5°	212.4	201.3	193.9	188.4	184.7	188.4	193.9	206.9	203.2	201.3	197.6
85°	166.2	147.8	138.5	140.4	131.1	133.0	149.6	157.0	157.0	160.7	157.0
87.5°	94.2	90.5	68.3	62.8	66.5	79.4	88.7	97.9	97.9	92.3	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: P158931

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

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
0°	3086.3	3086.3	3086.3	3086.3	3086.3	3086.3	3086.3	3086.3	3086.3	3086.3	3086.3
2.5°	2984.7	2988.4	2990.3	2997.7	3001.4	3003.2	3005.1	3008.7	3010.6	3008.7	3018.0
5°	2999.5	2999.5	2995.8	3001.4	3003.2	3003.2	2999.5	3003.2	3003.2	3003.2	3012.4
7.5°	3038.3	3027.2	3021.7	3014.3	3008.7	3001.4	2992.1	2992.1	2990.3	2992.1	2997.7
10°	3078.9	3062.3	3042.0	3023.5	3006.9	2994.0	2977.3	2971.8	2970.0	2968.1	2982.9
12.5°	3110.3	3080.8	3049.4	3018.0	2984.7	2962.6	2934.9	2918.2	2916.4	2916.4	2934.9
15°	3088.2	3040.1	2979.2	2923.8	2894.2	2862.8	2831.4	2811.1	2809.3	2813.0	2824.0
17.5°	2977.3	2899.8	2846.2	2792.6	2753.9	2728.0	2707.7	2704.0	2711.4	2704.0	2718.8
20°	2789.0	2705.8	2668.9	2626.4	2611.6	2593.2	2563.6	2537.8	2537.8	2504.5	2513.8
22.5°	2545.2	2499.0	2451.0	2417.7	2406.6	2375.2	2343.8	2308.7	2305.0	2264.4	2258.9
25°	2290.3	2244.1	2205.3	2197.9	2164.7	2122.2	2092.6	2052.0	2042.8	2002.1	1996.6
27.5°	2029.8	1992.9	1954.1	1932.0	1913.5	1867.3	1841.4	1793.4	1775.0	1730.6	1725.1
30°	1782.3	1756.5	1710.3	1691.8	1656.7	1603.2	1547.8	1518.2	1503.4	1457.3	1442.5
32.5°	1549.6	1509.0	1473.9	1451.7	1407.4	1346.5	1296.6	1254.1	1226.4	1171.0	1156.2
35°	1328.0	1287.4	1270.7	1213.5	1174.7	1134.1	1065.7	1039.9	990.0	947.5	932.7
37.5°	1132.2	1093.4	1071.3	1023.2	984.4	943.8	903.2	869.9	845.9	836.7	836.7
40°	964.1	943.8	916.1	881.0	855.2	825.6	803.4	792.4	790.5	794.2	803.4
42.5°	844.1	821.9	803.4	785.0	766.5	762.8	757.3	764.7	773.9	783.1	792.4
45°	753.6	735.1	724.0	716.6	714.8	720.3	731.4	742.5	759.1	770.2	777.6
47.5°	688.9	674.2	670.5	668.6	677.8	694.5	709.2	725.9	738.8	749.9	757.3
50°	633.5	620.6	618.7	616.9	629.8	644.6	657.5	679.7	688.9	696.3	701.9
52.5°	594.7	583.6	578.1	580.0	592.9	605.8	624.3	640.9	653.8	659.4	664.9
55°	563.3	559.6	546.7	552.2	565.2	581.8	600.3	618.7	631.7	640.9	650.1
57.5°	539.3	530.1	520.9	530.1	543.0	559.6	581.8	598.4	615.0	628.0	637.2
60°	513.5	506.1	498.7	507.9	520.9	537.5	554.1	576.3	596.6	609.5	618.7
62.5°	491.3	485.8	478.4	480.2	485.8	496.8	506.1	526.4	544.9	561.5	572.6
65°	459.9	458.1	447.0	448.8	452.5	463.6	471.0	489.5	507.9	522.7	531.9
67.5°	413.7	410.0	410.0	415.6	417.4	423.0	428.5	447.0	461.7	472.8	483.9
70°	367.6	365.7	365.7	369.4	367.6	373.1	380.5	397.1	415.6	426.7	437.7
72.5°	323.2	323.2	321.4	325.1	325.1	326.9	336.2	350.9	367.6	376.8	384.2
75°	284.4	282.6	282.6	282.6	284.4	284.4	293.7	306.6	323.2	328.8	339.8
77.5°	249.3	249.3	249.3	249.3	251.2	249.3	254.9	264.1	269.7	278.9	278.9
80°	219.8	217.9	219.8	221.6	221.6	219.8	219.8	221.6	223.5	223.5	223.5
82.5°	193.9	188.4	192.1	201.3	201.3	201.3	199.5	186.5	177.3	177.3	181.0
85°	155.1	155.1	157.0	169.9	171.8	164.4	171.8	153.3	134.8	129.3	133.0
87.5°	96.0	75.7	92.3	105.3	105.3	99.7	110.8	103.4	86.8	70.2	66.5
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: P158931
CATALOG NUMBER: VST-E09-LED-E-U-SLL-7050

REPORT N
CATALOG

CANDELA DISTRIBUTION (continued):

CANDELA

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°	
0°	3086.3	3086.3	3086.3	3086.3	3086.3	3086.3	3086.3	3086.3	3086.3	3086.3	3086.3	0°
2.5°	3025.4	3027.2	3038.3	3043.8	3043.8	3051.2	3054.9	3066.0	3064.2	3064.2	3067.9	2.5°
5°	3021.7	3027.2	3038.3	3045.7	3049.4	3058.6	3066.0	3078.9	3077.1	3080.8	3082.6	5°
7.5°	3008.7	3023.5	3034.6	3049.4	3062.3	3069.7	3078.9	3090.0	3086.3	3088.2	3086.3	7.5°
10°	2997.7	3012.4	3034.6	3054.9	3073.4	3084.5	3090.0	3102.9	3101.1	3104.8	3104.8	10°
12.5°	2953.3	2979.2	3006.9	3038.3	3066.0	3095.6	3114.0	3141.7	3154.7	3171.3	3189.8	12.5°
15°	2840.7	2870.2	2914.5	2949.6	3003.2	3043.8	3097.4	3151.0	3199.0	3245.2	3298.7	15°
17.5°	2729.9	2742.8	2777.9	2825.9	2873.9	2934.9	2999.5	3095.6	3182.4	3276.6	3380.0	17.5°
20°	2524.8	2547.0	2571.0	2628.3	2685.5	2772.3	2851.8	2977.3	3104.8	3252.5	3411.4	20°
22.5°	2271.8	2294.0	2319.8	2384.5	2454.6	2543.3	2639.3	2779.7	2949.6	3141.7	3354.1	22.5°
25°	1998.4	2011.4	2031.7	2096.3	2138.8	2255.2	2371.5	2517.4	2702.1	2949.6	3197.1	25°
27.5°	1697.4	1721.4	1738.0	1767.6	1865.5	1965.2	2087.1	2244.1	2467.6	2720.6	3019.8	27.5°
30°	1409.3	1429.6	1420.3	1483.1	1547.8	1653.1	1784.2	1957.8	2172.1	2473.1	2818.5	30°
32.5°	1126.7	1141.4	1135.9	1180.2	1244.9	1350.1	1473.9	1662.3	1889.5	2210.8	2585.8	32.5°
35°	929.0	932.7	953.0	973.4	1028.8	1113.7	1219.0	1383.4	1616.1	1911.6	2308.7	35°
37.5°	836.7	844.1	857.0	884.7	925.3	986.3	1073.1	1200.5	1400.0	1660.4	2015.1	37.5°
40°	809.0	814.5	821.9	840.4	879.2	932.7	1010.3	1117.4	1263.3	1483.1	1771.3	40°
42.5°	796.1	796.1	796.1	807.1	836.7	893.9	982.6	1087.9	1215.3	1381.5	1614.3	42.5°
45°	777.6	777.6	775.7	781.3	801.6	858.9	954.9	1073.1	1209.8	1368.6	1569.9	45°
47.5°	757.3	755.4	749.9	749.9	762.8	820.1	919.8	1047.2	1196.8	1379.7	1595.8	47.5°
50°	701.9	701.9	701.9	707.4	718.5	770.2	877.3	1012.2	1183.9	1387.1	1636.4	50°
52.5°	670.5	672.3	677.8	677.8	688.9	742.5	855.2	1004.8	1191.3	1414.8	1688.1	52.5°
55°	655.7	661.2	666.8	666.8	676.0	731.4	847.8	1010.3	1219.0	1472.1	1776.8	55°
57.5°	642.8	648.3	652.0	652.0	659.4	707.4	827.5	1001.1	1235.6	1527.5	1885.8	57.5°
60°	618.7	622.4	624.3	624.3	626.1	666.8	781.3	956.7	1198.7	1523.8	1944.9	60°
62.5°	574.4	581.8	583.6	585.5	585.5	624.3	722.2	884.7	1119.3	1468.4	1928.3	62.5°
65°	541.2	544.9	550.4	554.1	561.5	587.3	664.9	797.9	1015.8	1357.5	1835.9	65°
67.5°	489.5	495.0	500.5	507.9	515.3	531.9	592.9	700.0	875.5	1169.1	1629.0	67.5°
70°	443.3	445.1	450.7	459.9	461.7	471.0	515.3	589.2	716.6	938.3	1311.4	70°
72.5°	386.0	389.7	397.1	408.2	408.2	415.6	441.4	480.2	561.5	716.6	967.8	72.5°
75°	336.2	339.8	345.4	345.4	336.2	338.0	356.5	384.2	445.1	539.3	705.6	75°
77.5°	278.9	286.3	291.8	280.7	277.0	282.6	291.8	312.1	356.5	428.5	530.1	77.5°
80°	230.9	234.6	236.4	238.3	234.6	240.1	247.5	260.4	290.0	345.4	419.3	80°
82.5°	184.7	188.4	193.9	201.3	201.3	221.6	223.5	223.5	240.1	275.2	328.8	82.5°
85°	136.7	144.1	151.5	160.7	162.5	173.6	168.1	166.2	171.8	205.0	227.2	85°
87.5°	70.2	75.7	79.4	86.8	77.6	81.3	81.3	75.7	66.5	83.1	92.3	87.5°
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	90°



NUMBER: P158931

NUMBER: VST-E09-LED-E-U-SLL-7050

DISTRIBUTION (continued):

330°	335°	340°	345°	350°	355°	360°
3086.3	3086.3	3086.3	3086.3	3086.3	3086.3	3086.3
3071.5	3067.9	3071.5	3071.5	3077.1	3073.4	3269.2
3086.3	3082.6	3086.3	3090.0	3095.6	3095.6	3311.7
3088.2	3088.2	3084.5	3093.7	3101.1	3108.5	3352.3
3110.3	3110.3	3114.0	3115.9	3132.5	3151.0	3418.8
3200.8	3210.1	3226.7	3232.2	3261.8	3282.1	3588.7
3339.4	3391.1	3424.3	3435.4	3461.3	3500.0	3875.0
3479.7	3566.5	3657.0	3712.4	3745.7	3791.9	4225.9
3585.0	3747.5	3902.7	4041.2	4120.6	4211.1	4717.2
3594.2	3852.8	4115.1	4371.8	4584.2	4752.3	5382.1
3505.6	3845.4	4207.4	4600.9	4966.6	5269.5	6146.8
3392.9	3810.3	4272.1	4774.5	5254.7	5701.7	6710.1
3250.7	3751.2	4283.2	4848.3	5411.7	5949.2	7031.5
3034.6	3575.8	4150.2	4774.5	5428.3	6082.1	7238.4
2757.6	3309.8	3899.0	4610.1	5350.7	6135.7	7412.0
2475.0	3019.8	3653.3	4390.3	5227.0	6126.5	7482.2
2175.8	2716.9	3365.2	4155.7	5058.9	6041.5	7469.2
1972.6	2465.7	3101.1	3917.5	4872.4	5928.8	7382.4
1854.4	2286.6	2892.4	3699.5	4702.4	5794.0	7273.4
1852.5	2233.0	2781.6	3544.4	4530.7	5644.4	7125.7
1917.2	2266.3	2768.6	3477.9	4436.5	5535.4	6965.0
1992.9	2358.6	2837.0	3501.9	4434.6	5487.4	6852.3
2113.0	2515.6	2986.6	3605.3	4482.6	5480.0	6713.8
2266.3	2728.0	3256.2	3860.2	4669.2	5625.9	6723.0
2423.3	2977.3	3609.0	4296.1	5036.7	5965.8	7014.9
2480.5	3169.4	3967.3	4807.7	5587.1	6475.5	7617.0
2430.6	3213.8	4185.3	5204.8	6122.8	7072.1	8335.5
2245.9	3034.6	4096.6	5317.5	6431.2	7495.1	9053.9
1848.8	2589.5	3694.0	5064.4	6407.2	7581.9	9312.5
1355.7	2007.7	3003.2	4303.5	5696.1	7038.9	8924.7
978.9	1420.3	2168.4	3241.5	4503.0	5668.4	7485.8
701.9	984.4	1407.4	2129.6	3067.9	3947.0	5336.0
504.2	668.6	877.3	1278.1	1869.2	2423.3	3352.3
371.2	458.1	576.3	794.2	1100.8	1411.1	2018.8
253.0	269.7	347.2	469.1	722.2	1038.0	1370.5
96.0	109.0	127.4	192.1	323.2	371.2	262.3
0.0	0.0	0.0	0.0	0.0	0.0	0.0

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