

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: P159170

Luminaire Tested: **VST-E11-LED-E-U-SLR**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P159170
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-E11-LED-E-U-SLR
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(11) LIGHTBARS WITH AccuLED OPTICS - 90° SPILL LIGHT ELIMINATOR RIGHT
Light Source: (231) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 29560.1 lumens
Efficiency: N/A
Efficacy: 109.6 lumens/watt
Luminous Opening: Rectangular (W 1.83' x L: 1' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B3 - U0 - G5

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

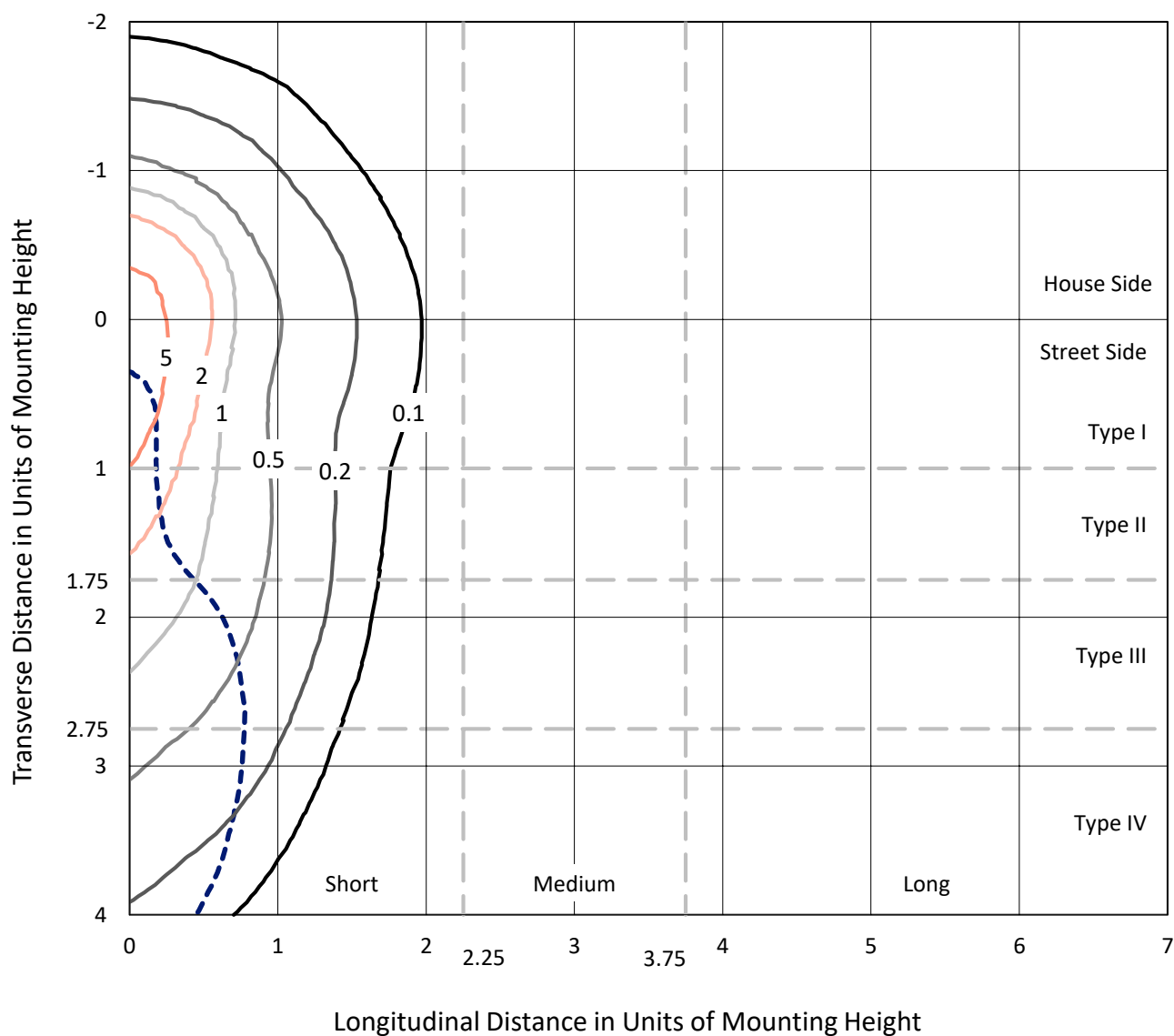


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

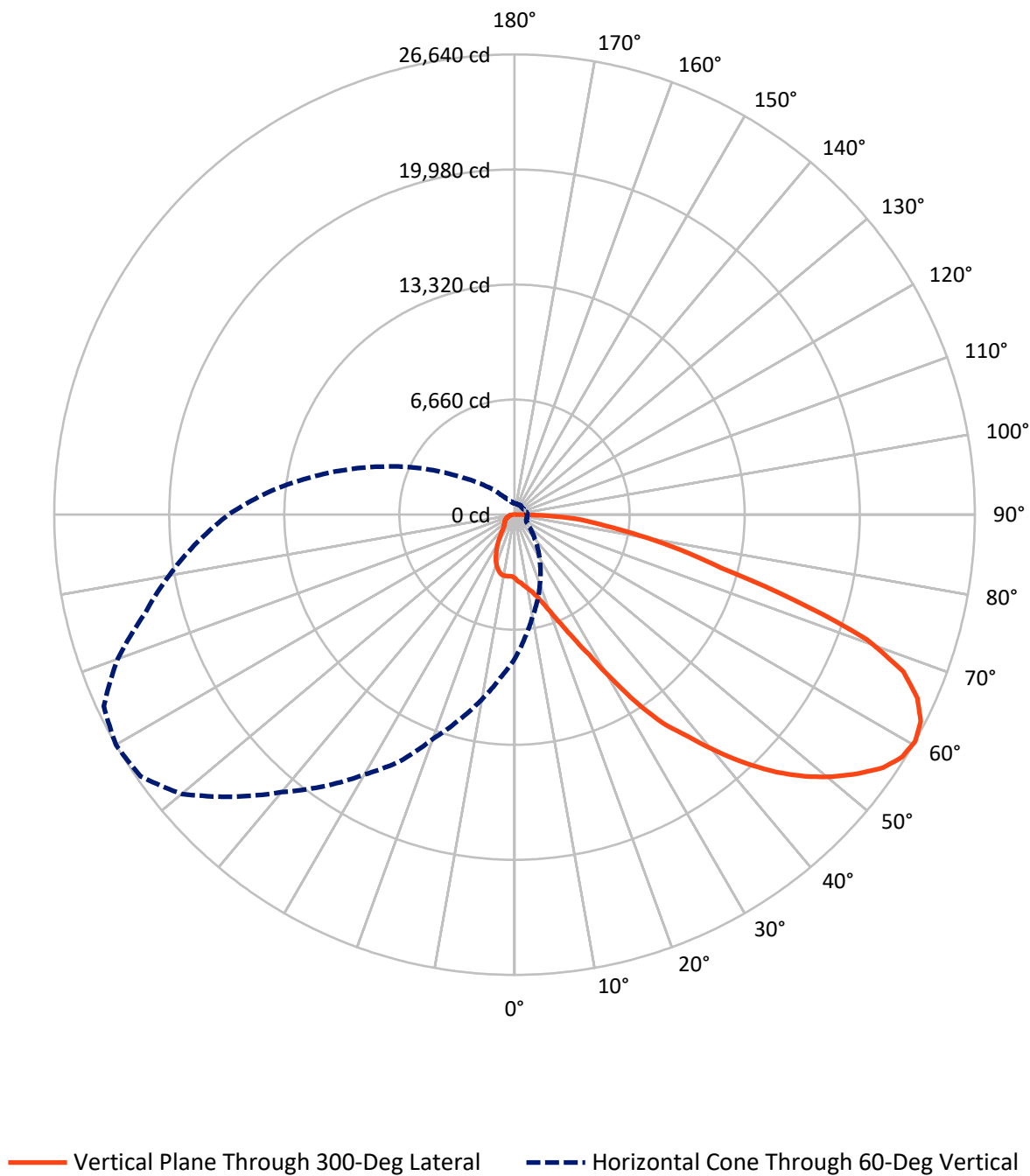


Based on 25 foot mounting height. Maximum calculated value = 8.9 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



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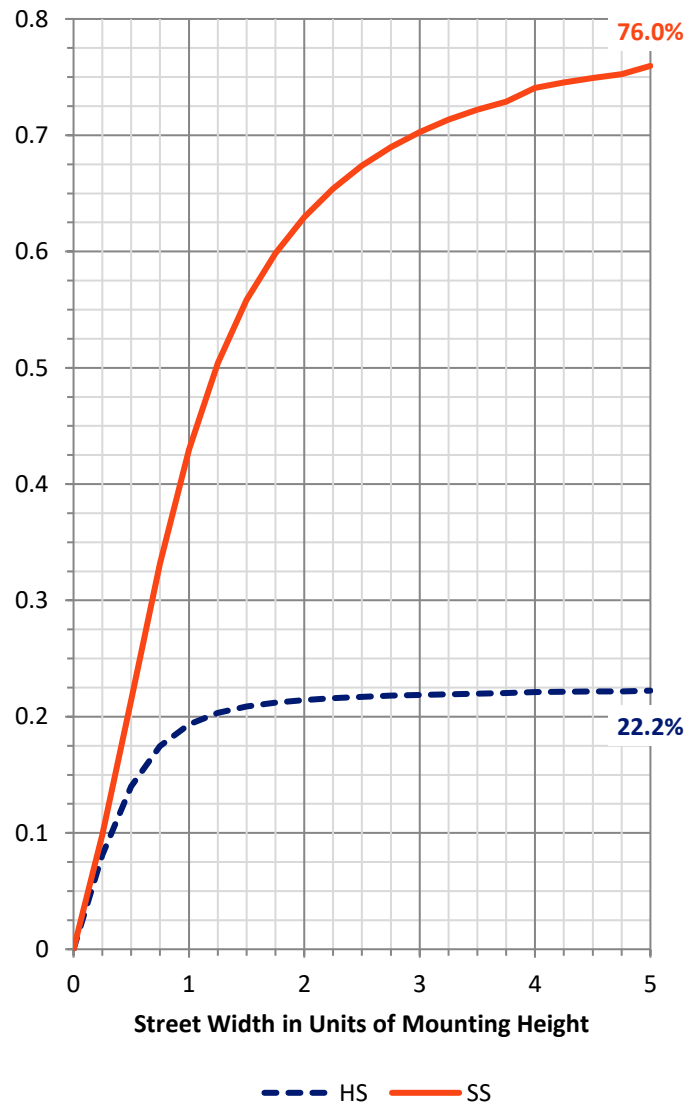
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	6656.0	0.0	6656.0
	% Fixture	22.5	0.0	22.5
Street Side	Lumens	22904.1	0.0	22904.1
	% Fixture	77.5	0.0	77.5
Total	Lumens	29560.1	0.0	29560.1
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	362.7	1.2
10°-20°	1171.0	4.0
20°-30°	2222.1	7.5
30°-40°	3499.5	11.8
40°-50°	4884.4	16.5
50°-60°	6040.9	20.4
60°-70°	6261.7	21.2
70°-80°	3940.1	13.3
80°-90°	1177.8	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°	29560.1	100.0
0°-180°	29560.1	100.0

Coefficient of Utilization



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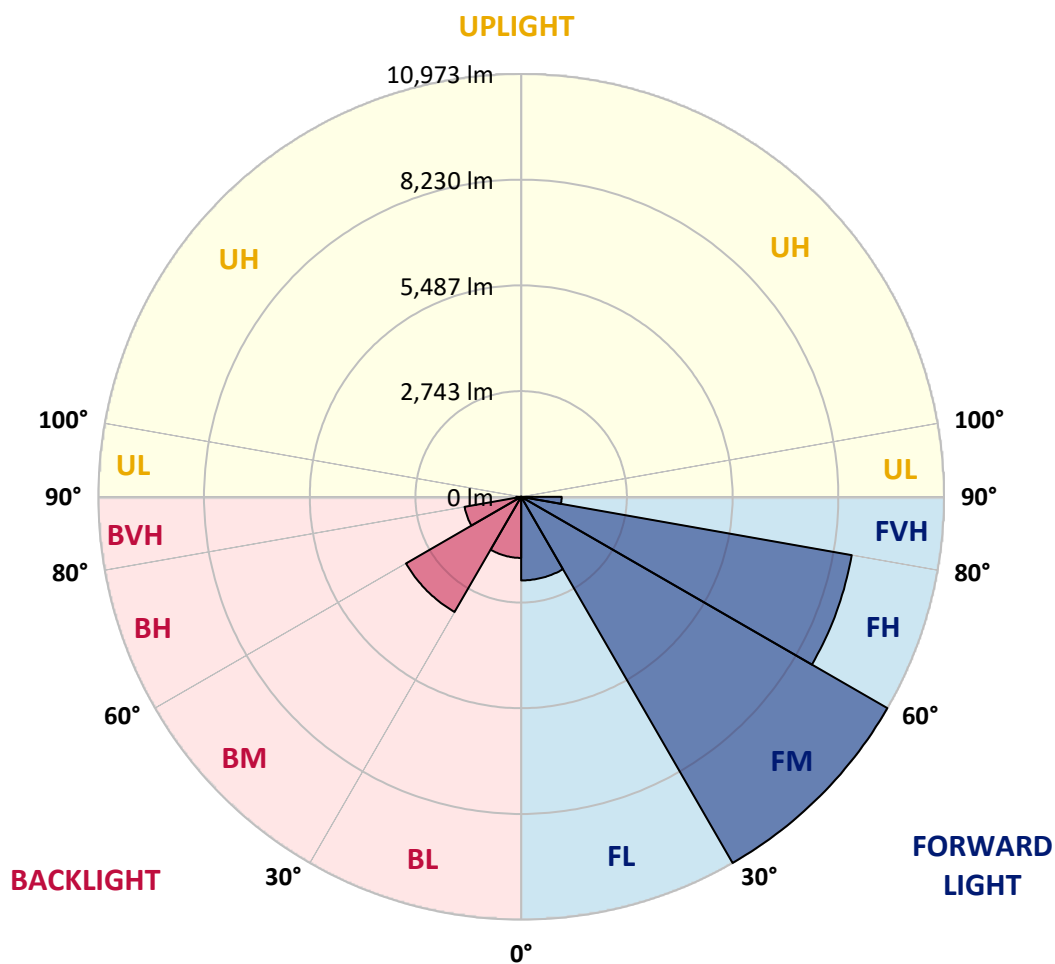
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2170.2	7.3			
FM	(30°-60°)	10973.2	37.1			
FH	(60°-80°)	8711.1	29.5			G4/12000
FVH	(80°-90°)	1049.7	3.6			G5
BL	(0°-30°)	1585.7	5.4	B3/2500		
BM	(30°-60°)	3451.5	11.7	B3/5000		
BH	(60°-80°)	1490.6	5.0	B3/2500		G3/2500
BVH	(80°-90°)	128.1	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





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	3676.2	3676.2	3676.2	3676.2	3676.2	3676.2	3676.2	3676.2	3676.2	3676.2	3676.2
2.5°	3894.0	3660.8	3665.2	3658.6	3658.6	3654.2	3658.6	3654.2	3649.8	3649.8	3652.0
5°	3944.6	3687.2	3687.2	3680.6	3676.2	3671.8	3676.2	3671.8	3669.6	3665.2	3667.4
7.5°	3993.0	3702.6	3693.8	3685.0	3674.0	3678.4	3678.4	3676.2	3678.4	3676.2	3680.6
10°	4072.2	3753.2	3731.2	3711.4	3709.2	3704.8	3704.8	3698.2	3698.2	3693.8	3696.0
12.5°	4274.6	3909.4	3885.2	3850.0	3843.4	3823.6	3812.6	3799.4	3777.4	3757.6	3742.2
15°	4615.6	4169.0	4122.8	4092.0	4078.8	4039.2	3977.6	3929.2	3865.4	3810.4	3753.2
17.5°	5033.6	4516.6	4461.6	4422.0	4356.0	4248.2	4144.8	4026.0	3902.8	3790.6	3687.2
20°	5618.8	5016.0	4908.2	4813.6	4648.6	4463.8	4270.2	4063.4	3874.2	3698.2	3546.4
22.5°	6410.8	5660.6	5460.4	5207.4	4901.6	4589.2	4281.2	3995.2	3742.2	3513.4	3311.0
25°	7321.6	6276.6	5915.8	5480.2	5011.6	4580.4	4175.6	3808.2	3513.4	3218.6	2998.6
27.5°	7992.6	6791.4	6259.0	5687.0	5088.6	4538.6	4041.4	3597.0	3240.6	2939.2	2673.0
30°	8375.4	7086.2	6446.0	5775.0	5101.8	4468.2	3872.0	3357.2	2945.8	2587.2	2332.0
32.5°	8621.8	7244.6	6465.8	5687.0	4943.4	4259.2	3614.6	3080.0	2633.4	2250.6	1980.0
35°	8828.6	7308.4	6373.4	5491.2	4644.2	3942.4	3284.6	2750.0	2277.0	1925.0	1647.8
37.5°	8912.2	7297.4	6226.0	5229.4	4351.6	3597.0	2948.0	2400.2	1977.8	1667.6	1430.0
40°	8896.8	7196.2	6025.8	4950.0	4008.4	3236.2	2591.6	2109.8	1766.6	1504.8	1331.0
42.5°	8793.4	7062.0	5803.6	4666.2	3693.8	2937.0	2349.6	1922.8	1645.6	1447.6	1295.8
45°	8663.6	6901.4	5601.2	4406.6	3445.2	2723.6	2208.8	1870.0	1630.2	1441.0	1278.2
47.5°	8487.6	6723.2	5396.6	4221.8	3313.2	2659.8	2206.6	1900.8	1643.4	1425.6	1247.4
50°	8296.2	6593.4	5284.4	4142.6	3297.8	2699.4	2283.6	1949.2	1652.2	1410.2	1205.6
52.5°	8162.0	6536.2	5282.2	4171.2	3379.2	2809.4	2373.8	2010.8	1685.2	1419.0	1196.8
55°	7997.0	6527.4	5339.4	4294.4	3557.4	2996.4	2516.8	2116.4	1753.4	1452.0	1203.4
57.5°	8008.0	6701.2	5561.6	4598.0	3878.6	3249.4	2699.4	2246.2	1819.4	1471.8	1192.4
60°	8355.6	7106.0	5999.4	5117.2	4298.8	3546.4	2886.4	2316.6	1815.0	1427.8	1139.6
62.5°	9072.8	7713.2	6655.0	5726.6	4725.6	3775.2	2954.6	2296.8	1749.0	1333.2	1053.8
65°	9928.6	8423.8	7293.0	6199.6	4985.2	3828.0	2895.2	2186.8	1617.0	1210.0	950.4
67.5°	10784.4	8927.6	7660.4	6333.8	4879.6	3614.6	2675.2	1940.4	1392.6	1042.8	833.8
70°	11092.4	9031.0	7631.8	6032.4	4400.0	3084.4	2202.2	1562.0	1117.6	853.6	701.8
72.5°	10630.4	8384.2	6784.8	5126.0	3577.2	2391.4	1614.8	1152.8	853.6	668.8	572.0
75°	8916.6	6751.8	5363.6	3861.0	2582.8	1691.8	1166.0	840.4	642.4	530.2	457.6
77.5°	6355.8	4701.4	3654.2	2536.6	1676.4	1172.6	836.0	631.4	510.4	424.6	371.8
80°	3993.0	2886.4	2226.4	1522.4	1045.0	796.4	600.6	499.4	411.4	345.4	310.2
82.5°	2404.6	1680.8	1311.2	946.0	686.4	545.6	442.2	391.6	327.8	286.0	266.2
85°	1632.4	1236.4	860.2	558.8	413.6	321.2	301.4	270.6	244.2	204.6	198.0
87.5°	312.4	442.2	385.0	228.8	151.8	129.8	114.4	110.0	99.0	79.2	90.2
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):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	3676.2	3676.2	3676.2	3676.2	3676.2	3676.2	3676.2	3676.2	3676.2	3676.2	3676.2
2.5°	3638.8	3634.4	3625.6	3625.6	3619.0	3605.8	3603.6	3594.8	3583.8	3586.0	3583.8
5°	3652.0	3643.2	3632.2	3627.8	3619.0	3605.8	3599.2	3588.2	3577.2	3577.2	3577.2
7.5°	3667.4	3656.4	3647.6	3632.2	3614.6	3601.4	3583.8	3570.6	3564.0	3561.8	3564.0
10°	3680.6	3674.0	3660.8	3638.8	3614.6	3588.2	3570.6	3553.0	3535.4	3537.6	3539.8
12.5°	3709.2	3687.2	3652.0	3619.0	3581.6	3548.6	3517.8	3495.8	3473.8	3473.8	3476.0
15°	3689.4	3625.6	3577.2	3513.4	3471.6	3418.8	3383.6	3363.8	3350.6	3346.2	3348.4
17.5°	3572.8	3495.8	3423.2	3366.0	3308.8	3267.0	3251.6	3238.4	3220.8	3229.6	3220.8
20°	3396.8	3302.2	3198.8	3130.6	3062.4	3033.8	3007.4	2994.2	2983.2	3022.8	3022.8
22.5°	3143.8	3029.4	2923.8	2840.2	2763.2	2732.4	2706.0	2690.6	2697.2	2745.6	2750.0
25°	2824.8	2686.2	2547.6	2497.0	2420.0	2395.8	2380.4	2378.2	2384.8	2433.2	2444.2
27.5°	2486.0	2340.8	2222.0	2105.4	2070.2	2050.4	2021.8	2054.8	2061.4	2114.2	2136.2
30°	2125.2	1969.0	1843.6	1766.6	1691.8	1702.8	1678.6	1718.2	1735.8	1790.8	1808.4
32.5°	1755.6	1608.2	1482.8	1405.8	1353.0	1359.6	1342.0	1377.2	1394.8	1460.8	1493.8
35°	1452.0	1326.6	1225.4	1159.4	1135.2	1111.0	1106.6	1111.0	1128.6	1179.2	1238.6
37.5°	1278.2	1174.8	1102.2	1053.8	1020.8	1005.4	996.6	996.6	996.6	1007.6	1036.2
40°	1203.4	1111.0	1047.2	1001.0	979.0	970.2	963.6	957.0	946.0	941.6	943.8
42.5°	1170.4	1064.8	996.6	961.4	948.2	948.2	948.2	943.8	932.8	921.8	910.8
45°	1137.4	1023.0	954.8	930.6	924.0	926.2	926.2	926.2	917.4	904.2	884.4
47.5°	1095.6	976.8	908.6	893.2	893.2	899.8	902.0	902.0	893.2	880.0	864.6
50°	1045.0	917.4	855.8	842.6	836.0	836.0	836.0	836.0	829.4	820.6	809.6
52.5°	1018.6	884.4	820.6	807.4	807.4	800.8	798.6	792.0	785.4	778.8	763.4
55°	1009.8	871.2	805.2	794.2	794.2	787.6	781.0	774.4	763.4	752.4	737.0
57.5°	985.6	842.6	785.4	776.6	776.6	772.2	765.6	759.0	748.0	732.6	712.8
60°	930.6	794.2	745.8	743.6	743.6	741.4	737.0	737.0	726.0	710.6	686.4
62.5°	860.2	743.6	697.4	697.4	695.2	693.0	684.2	682.0	668.8	649.0	627.0
65°	792.0	699.6	668.8	660.0	655.6	649.0	644.6	633.6	622.6	605.0	583.0
67.5°	706.2	633.6	613.8	605.0	596.2	589.6	583.0	576.4	563.2	550.0	532.4
70°	613.8	561.0	550.0	547.8	536.8	530.2	528.0	521.4	508.2	495.0	473.0
72.5°	525.8	495.0	486.2	486.2	473.0	464.2	459.8	457.6	448.8	437.8	418.0
75°	424.6	402.6	400.4	411.4	411.4	404.8	400.4	404.8	391.6	385.0	365.2
77.5°	347.6	336.6	330.0	334.4	347.6	341.0	332.2	332.2	332.2	321.2	314.6
80°	294.8	286.0	279.4	283.8	281.6	279.4	275.0	266.2	266.2	266.2	264.0
82.5°	266.2	264.0	239.8	239.8	231.0	224.4	220.0	215.6	211.2	211.2	222.2
85°	200.2	206.8	193.6	191.4	180.4	171.6	162.8	158.4	154.0	160.6	182.6
87.5°	96.8	96.8	92.4	103.4	94.6	90.2	83.6	79.2	83.6	103.4	123.2
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°	3676.2	3676.2	3676.2	3676.2	3676.2	3676.2	3676.2	3676.2	3676.2	3676.2	3676.2
2.5°	3579.4	3577.2	3575.0	3570.6	3561.8	3559.6	3555.2	3555.2	3553.0	3548.6	3553.0
5°	3572.8	3577.2	3577.2	3575.0	3568.4	3572.8	3572.8	3579.4	3579.4	3583.8	3594.8
7.5°	3564.0	3575.0	3583.8	3590.4	3599.2	3605.8	3619.0	3638.8	3647.6	3663.0	3669.6
10°	3546.4	3566.2	3581.6	3601.4	3623.4	3647.6	3667.4	3698.2	3709.2	3731.2	3742.2
12.5°	3495.8	3528.8	3555.2	3594.8	3632.2	3669.6	3704.8	3744.4	3764.2	3788.4	3803.8
15°	3372.6	3410.0	3447.4	3482.6	3548.6	3621.2	3678.4	3731.2	3759.8	3790.6	3806.0
17.5°	3225.2	3249.4	3280.2	3326.4	3390.2	3454.0	3546.4	3621.2	3665.2	3700.4	3704.8
20°	3053.6	3088.8	3110.8	3128.4	3179.0	3223.0	3322.0	3407.8	3465.0	3506.8	3517.8
22.5°	2791.8	2829.2	2866.6	2879.8	2919.4	2976.6	3031.6	3124.0	3205.4	3267.0	3304.4
25°	2492.6	2527.8	2578.4	2618.0	2626.8	2673.0	2728.0	2833.6	2917.2	3016.2	3060.2
27.5°	2193.4	2224.2	2279.2	2301.2	2327.6	2373.8	2417.8	2505.8	2593.8	2708.2	2756.6
30°	1843.6	1909.6	1973.4	2015.2	2037.2	2092.2	2123.0	2208.8	2290.2	2373.8	2444.2
32.5°	1544.4	1603.8	1676.4	1729.2	1755.6	1797.4	1845.8	1918.4	1982.2	2063.6	2145.0
35°	1269.4	1350.8	1399.2	1445.4	1513.6	1533.4	1581.8	1647.8	1685.2	1773.2	1865.6
37.5°	1075.8	1124.2	1172.6	1218.8	1276.0	1302.4	1348.6	1403.6	1447.6	1500.4	1584.0
40°	957.0	983.4	1018.6	1049.4	1091.2	1124.2	1148.4	1194.6	1227.6	1280.4	1339.8
42.5°	902.0	908.6	913.0	935.0	957.0	979.0	1005.4	1025.2	1064.8	1104.4	1141.8
45°	871.2	858.0	851.4	853.6	862.4	875.6	897.6	919.6	946.0	970.2	992.2
47.5°	844.8	827.2	807.4	796.4	798.6	803.0	820.6	838.2	851.4	871.2	880.0
50°	783.2	767.8	750.2	734.8	737.0	739.2	754.6	767.8	776.6	783.2	794.2
52.5°	743.6	721.6	706.2	690.8	688.6	695.2	708.4	721.6	726.0	730.4	732.6
55°	715.0	693.0	673.2	657.8	651.2	666.6	671.0	688.6	695.2	695.2	697.4
57.5°	693.0	666.6	646.8	631.4	620.4	631.4	642.4	662.2	664.4	660.0	660.0
60°	660.0	640.2	620.4	605.0	594.0	602.8	611.6	633.6	633.6	622.6	620.4
62.5°	602.8	591.8	578.6	572.0	569.8	578.6	585.2	602.8	596.2	583.0	578.6
65°	561.0	552.2	539.0	534.6	532.4	545.6	547.8	558.8	550.0	543.4	541.2
67.5°	510.4	503.8	497.2	495.0	488.4	488.4	492.8	499.4	495.0	495.0	497.2
70°	453.2	444.4	437.8	440.0	435.6	435.6	437.8	442.2	440.0	444.4	448.8
72.5°	400.4	389.4	387.2	387.2	382.8	385.0	385.0	387.2	391.6	393.8	404.8
75°	349.8	338.8	338.8	336.6	336.6	336.6	338.8	343.2	347.6	349.8	354.2
77.5°	303.6	297.0	299.2	297.0	297.0	297.0	297.0	303.6	305.8	308.0	314.6
80°	261.8	261.8	264.0	264.0	261.8	259.6	261.8	266.2	268.4	270.6	272.8
82.5°	237.6	239.8	239.8	239.8	228.8	224.4	231.0	235.4	239.8	242.0	246.4
85°	204.6	195.8	204.6	202.4	187.0	184.8	184.8	187.0	191.4	187.0	187.0
87.5°	132.0	118.8	125.4	125.4	110.0	90.2	114.4	123.2	110.0	116.6	116.6
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: P159170

CATALOG NUMBER: VST-E11-LED-E-U-SLR

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
0°	3676.2	3676.2	3676.2	3676.2	3676.2	3676.2	3676.2	3676.2	3676.2	3676.2	3676.2
2.5°	3559.6	3555.2	3557.4	3557.4	3561.8	3555.2	3564.0	3572.8	3575.0	3575.0	3577.2
5°	3605.8	3601.4	3616.8	3610.2	3625.6	3623.4	3634.4	3643.2	3647.6	3647.6	3647.6
7.5°	3678.4	3693.8	3702.6	3726.8	3729.0	3742.2	3753.2	3764.2	3759.8	3762.0	3759.8
10°	3759.8	3779.6	3801.6	3825.8	3828.0	3843.4	3861.0	3872.0	3867.6	3865.4	3858.8
12.5°	3830.2	3843.4	3869.8	3894.0	3907.2	3931.4	3949.0	3957.8	3957.8	3951.2	3944.6
15°	3825.8	3845.6	3874.2	3909.4	3933.6	3968.8	3999.6	4019.4	4021.6	4015.0	4012.8
17.5°	3729.0	3757.6	3784.0	3832.4	3876.4	3924.8	3975.4	4004.0	4030.4	4045.8	4054.6
20°	3555.2	3590.4	3627.8	3691.6	3751.0	3814.8	3874.2	3916.0	3955.6	4001.8	4056.8
22.5°	3350.6	3403.4	3456.2	3537.6	3610.2	3682.8	3751.0	3801.6	3863.2	3942.4	4045.8
25°	3110.8	3165.8	3231.8	3326.4	3418.8	3524.4	3625.6	3726.8	3845.6	3982.0	4142.6
27.5°	2827.0	2888.6	2974.4	3088.8	3194.4	3302.2	3460.6	3621.2	3814.8	3990.8	4173.4
30°	2545.4	2624.6	2717.0	2831.4	2937.0	3091.0	3249.4	3447.4	3652.0	3850.0	4067.8
32.5°	2241.8	2340.8	2455.2	2549.8	2668.6	2824.8	2983.2	3194.4	3412.2	3645.4	3885.2
35°	1949.2	2043.8	2134.0	2239.6	2358.4	2505.8	2659.8	2862.2	3137.2	3385.8	3671.8
37.5°	1652.2	1740.2	1804.0	1887.6	1991.0	2153.8	2318.8	2552.0	2811.6	3117.4	3403.4
40°	1392.6	1465.2	1537.8	1603.8	1691.8	1845.8	2021.8	2250.6	2505.8	2802.8	3121.8
42.5°	1185.8	1240.8	1320.0	1399.2	1474.0	1606.0	1771.0	1995.4	2248.4	2552.0	2871.0
45°	1012.0	1049.4	1113.2	1179.2	1271.6	1381.6	1540.0	1768.8	2026.2	2332.0	2668.6
47.5°	886.6	904.2	948.2	1016.4	1102.2	1210.0	1346.4	1553.2	1804.0	2112.0	2466.2
50°	800.8	820.6	842.6	899.8	976.8	1086.8	1199.0	1379.4	1608.2	1909.6	2261.6
52.5°	741.4	750.2	759.0	794.2	864.6	957.0	1075.8	1212.2	1443.2	1731.4	2048.2
55°	706.2	708.4	715.0	732.6	785.4	871.2	974.6	1104.4	1284.8	1557.6	1881.0
57.5°	664.4	668.8	675.4	686.4	719.4	796.4	884.4	990.0	1139.6	1368.4	1678.6
60°	624.8	635.8	646.8	653.4	671.0	717.2	792.0	875.6	996.6	1168.2	1414.6
62.5°	583.0	596.2	605.0	611.6	618.2	646.8	701.8	756.8	831.6	943.8	1128.6
65°	545.6	554.4	561.0	565.4	569.8	578.6	602.8	624.8	646.8	715.0	849.2
67.5°	503.8	508.2	510.4	512.6	510.4	510.4	512.6	521.4	530.2	556.6	620.4
70°	455.4	462.0	462.0	464.2	464.2	457.6	457.6	457.6	457.6	464.2	499.4
72.5°	409.2	418.0	418.0	420.2	418.0	415.8	415.8	415.8	422.4	426.8	440.0
75°	365.2	374.0	371.8	374.0	376.2	376.2	380.6	382.8	389.4	391.6	400.4
77.5°	321.2	327.8	330.0	327.8	332.2	336.6	345.4	349.8	352.0	354.2	356.4
80°	279.4	283.8	281.6	275.0	286.0	292.6	305.8	321.2	316.8	319.0	323.4
82.5°	231.0	224.4	220.0	224.4	231.0	239.8	253.0	272.8	275.0	286.0	283.8
85°	178.2	158.4	156.2	167.2	165.0	176.0	198.0	213.4	226.6	237.6	226.6
87.5°	105.6	94.6	79.2	74.8	81.4	107.8	112.2	136.4	147.4	151.8	136.4
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: P159170

CATALOG NUMBER: VST-E11-LED-E-U-SLR

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
0°	3676.2	3676.2	3676.2	3676.2	3676.2	3676.2	3676.2	3676.2	3676.2	3676.2	3676.2
2.5°	3777.4	3788.4	3788.4	3792.8	3799.4	3801.6	3810.4	3825.8	3828.0	3828.0	3834.6
5°	3847.8	3858.8	3858.8	3867.6	3869.8	3880.8	3891.8	3909.4	3918.2	3916.0	3944.6
7.5°	3962.2	3953.4	3946.8	3960.0	3966.6	3979.8	4001.8	4017.2	4032.6	4056.8	4096.4
10°	4059.0	4045.8	4039.2	4048.0	4052.4	4067.8	4081.0	4103.0	4140.4	4177.8	4226.2
12.5°	4138.2	4122.8	4105.2	4109.6	4116.2	4136.0	4158.0	4186.6	4241.6	4290.0	4362.6
15°	4204.2	4182.2	4164.6	4173.4	4188.8	4215.2	4252.6	4303.2	4393.4	4477.0	4573.8
17.5°	4268.0	4263.6	4257.0	4285.6	4296.6	4358.2	4413.2	4505.6	4628.8	4754.2	4892.8
20°	4329.6	4378.0	4402.2	4459.4	4494.6	4578.2	4661.8	4774.0	4930.2	5101.8	5291.0
22.5°	4415.4	4547.4	4628.8	4745.4	4804.8	4895.0	5018.2	5165.6	5339.4	5559.4	5801.4
25°	4620.0	4813.6	4976.4	5159.0	5308.6	5447.2	5594.6	5772.8	6023.6	6223.8	6540.6
27.5°	4710.2	4983.0	5227.2	5484.6	5709.0	5922.4	6155.6	6371.2	6668.2	6938.8	7321.6
30°	4624.4	4932.4	5249.2	5585.8	5913.6	6237.0	6575.8	6905.8	7249.0	7627.4	8034.4
32.5°	4466.0	4811.4	5167.8	5563.8	5970.8	6391.0	6831.0	7310.6	7794.6	8265.4	8681.2
35°	4305.4	4677.2	5073.2	5526.4	6006.0	6527.4	7073.0	7680.2	8320.4	8916.6	9460.0
37.5°	4072.2	4481.4	4934.6	5458.2	6028.0	6670.4	7372.2	8120.2	8929.8	9750.4	10463.2
40°	3790.6	4224.0	4719.0	5321.8	6006.0	6817.8	7730.8	8690.0	9730.6	10731.6	11607.2
42.5°	3533.2	3955.6	4483.6	5139.2	5948.8	6947.6	8071.8	9266.4	10498.4	11618.2	12762.2
45°	3306.6	3773.0	4303.2	5011.6	5920.2	7057.6	8324.8	9697.6	11107.8	12441.0	13791.8
47.5°	3099.8	3583.8	4177.8	4941.2	5907.0	7123.6	8500.8	9979.2	11541.2	13072.4	14641.0
50°	2886.4	3357.2	3993.0	4864.2	5874.0	7121.4	8593.2	10170.6	11844.8	13563.0	15226.2
52.5°	2657.6	3130.6	3768.6	4723.4	5803.6	7081.8	8617.4	10300.4	12084.6	13864.4	15723.4
55°	2448.6	2890.8	3528.8	4488.0	5656.2	6985.0	8562.4	10355.4	12254.0	14163.6	16073.2
57.5°	2208.8	2668.6	3275.8	4164.6	5379.0	6813.4	8406.2	10278.4	12302.4	14363.8	16350.4
60°	1878.8	2329.8	2954.6	3781.8	4945.6	6450.4	8115.8	10045.2	12148.4	14399.0	16548.4
62.5°	1500.4	1889.8	2492.6	3253.8	4336.2	5880.6	7579.0	9521.6	11668.8	14069.0	16447.2
65°	1115.4	1375.0	1894.2	2563.0	3630.0	5022.6	6714.4	8643.8	10731.6	13151.6	15811.4
67.5°	776.6	963.6	1282.6	1779.8	2640.0	3878.6	5480.2	7273.2	9281.8	11453.2	14491.4
70°	587.4	673.2	847.0	1124.2	1709.4	2642.2	3984.2	5581.4	7444.8	9537.0	12399.2
72.5°	501.6	545.6	642.4	770.0	1047.2	1606.0	2501.4	3841.2	5493.4	7196.2	9512.8
75°	451.0	488.4	550.0	631.4	741.4	974.6	1467.4	2431.0	3638.8	4820.2	6637.4
77.5°	409.2	442.2	497.2	539.0	598.4	701.8	935.0	1454.2	2180.2	2978.8	4118.4
80°	365.2	385.0	435.6	477.4	523.6	583.0	671.0	913.0	1251.8	1764.4	2428.8
82.5°	312.4	327.8	365.2	422.4	457.6	481.8	508.2	605.0	750.2	957.0	1348.6
85°	242.0	253.0	286.0	327.8	343.2	345.4	349.8	376.2	466.4	717.2	1161.6
87.5°	123.2	136.4	171.6	184.8	156.2	169.4	171.6	182.6	242.0	393.8	400.4
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: P159170
CATALOG NUMBER: VST-E11-LED-E-U-SLR

REPORT N
CATALOG

CANDELA DISTRIBUTION (continued):

CANDELA

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°	
0°	3676.2	3676.2	3676.2	3676.2	3676.2	3676.2	3676.2	3676.2	3676.2	3676.2	3676.2	0°
2.5°	3834.6	3841.2	3856.6	3854.4	3865.4	3865.4	3865.4	3876.4	3869.8	3876.4	3887.4	2.5°
5°	3944.6	3955.6	3977.6	3977.6	3979.8	3973.2	3986.4	3995.2	3984.2	3979.8	3982.0	5°
7.5°	4105.2	4122.8	4140.4	4158.0	4171.2	4164.6	4166.8	4147.0	4142.6	4127.2	4107.4	7.5°
10°	4261.4	4309.8	4342.8	4373.6	4375.8	4369.2	4371.4	4338.4	4331.8	4301.0	4281.2	10°
12.5°	4422.0	4483.6	4536.4	4569.4	4589.2	4593.6	4595.8	4595.8	4565.0	4538.6	4492.4	12.5°
15°	4659.6	4767.4	4848.8	4884.0	4912.6	4939.0	4945.6	4954.4	4930.2	4895.0	4888.4	15°
17.5°	5035.8	5137.0	5244.8	5339.4	5403.2	5407.6	5462.6	5458.2	5508.8	5469.2	5458.2	17.5°
20°	5482.4	5702.4	5814.6	5940.0	6012.6	6047.8	6175.4	6135.8	6173.2	6237.0	6173.2	20°
22.5°	6041.2	6320.6	6483.4	6655.0	6773.8	6859.6	6952.0	7024.6	7125.8	7174.2	7130.2	22.5°
25°	6782.6	7101.6	7295.2	7532.8	7722.0	7876.0	8036.6	8230.2	8228.0	8344.6	8426.0	25°
27.5°	7634.0	8041.0	8322.6	8740.6	8903.4	9163.0	9438.0	9737.2	9790.0	9941.8	10018.8	27.5°
30°	8434.8	8938.6	9497.4	9994.6	10557.8	10942.8	11261.8	11473.0	11792.0	11712.8	11668.8	30°
32.5°	9174.0	9845.0	10641.4	11457.6	12350.8	12960.2	13523.4	13785.2	13983.2	13563.0	13006.4	32.5°
35°	10133.2	10936.2	11847.0	12854.6	13989.8	14854.4	15435.2	15516.6	15404.4	14865.4	13943.6	35°
37.5°	11321.2	12163.8	13200.0	14264.8	15470.4	16282.2	16944.4	17063.2	16766.2	15804.8	14836.8	37.5°
40°	12493.8	13481.6	14605.8	15866.4	17116.0	18009.2	18673.6	18708.8	18224.8	17100.6	15967.6	40°
42.5°	13776.4	14856.6	16108.4	17505.4	18796.8	19701.0	20180.6	20332.4	19648.2	18207.2	17120.4	42.5°
45°	14883.0	16174.4	17569.2	19054.2	20405.0	21263.0	21751.4	21703.0	20875.8	19452.4	18178.6	45°
47.5°	15961.0	17382.2	18851.8	20429.2	21771.2	22638.0	23139.6	23095.6	22046.2	20407.2	19005.8	47.5°
50°	16920.2	18462.4	20033.2	21718.4	23056.0	23850.2	24464.0	24270.4	22943.8	21175.0	19538.2	50°
52.5°	17586.8	19307.2	20948.4	22770.0	24147.2	24899.6	25680.6	25058.0	23474.0	21645.8	19824.2	52.5°
55°	18009.2	19888.0	21599.6	23614.8	24967.8	25867.6	26371.4	25487.0	23678.6	21775.6	19923.2	55°
57.5°	18295.2	20207.0	21982.4	24103.2	25707.0	26461.6	26584.8	25502.4	23546.6	21571.0	19824.2	57.5°
60°	18436.0	20301.6	22156.2	24446.4	26226.2	26639.8	26415.4	25146.0	23091.2	20970.4	19186.2	60°
62.5°	18420.6	20182.8	22066.0	24560.8	26329.6	26382.4	25872.0	24538.8	22253.0	19709.8	18125.8	62.5°
65°	18029.0	19749.4	21557.8	24136.2	25847.8	25621.2	24978.8	23399.2	20622.8	18064.2	17263.4	65°
67.5°	16900.4	18550.4	20229.0	22745.8	24490.4	24270.4	23298.0	21159.6	18728.6	16607.8	16176.6	67.5°
70°	15012.8	16412.0	17886.0	20097.0	21927.4	21630.4	19929.8	18629.6	16852.0	14924.8	14775.2	70°
72.5°	12551.0	13611.4	14680.6	16326.2	17586.8	16979.6	15910.4	15842.2	14405.6	12933.8	12964.6	72.5°
75°	9816.4	10612.8	11112.2	12080.2	12918.4	12375.0	12438.8	12817.2	12344.2	11184.8	10808.6	75°
77.5°	7112.6	7876.0	8034.4	8608.6	9198.2	9816.4	10634.8	11525.8	11675.4	11024.2	9660.2	77.5°
80°	4655.2	5495.6	5183.2	5387.8	6217.2	7345.8	8839.6	10307.0	10810.8	10225.6	8547.0	80°
82.5°	2745.6	3922.6	3425.4	3775.2	4301.0	5284.4	6316.2	7422.8	8265.4	7642.8	7139.0	82.5°
85°	2085.6	3093.2	3275.8	3700.4	3872.0	3913.8	4094.2	4455.0	4890.6	5053.4	5040.2	85°
87.5°	1086.8	2404.6	2699.4	2497.0	2329.8	2019.6	1575.2	1696.2	1551.0	2120.8	2008.6	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: P159170

NUMBER: VST-E11-LED-E-U-SLR

DISTRIBUTION (continued):

330°	335°	340°	345°	350°	355°	360°
3676.2	3676.2	3676.2	3676.2	3676.2	3676.2	3676.2
3889.6	3883.0	3887.4	3889.6	3889.6	3889.6	3894.0
3979.8	3962.2	3955.6	3955.6	3953.4	3946.8	3944.6
4076.6	4045.8	4034.8	4021.6	4010.6	4004.0	3993.0
4250.4	4224.0	4169.0	4138.2	4109.6	4089.8	4072.2
4483.6	4446.2	4393.4	4353.8	4309.8	4296.6	4274.6
4844.4	4811.4	4765.2	4721.2	4694.8	4648.6	4615.6
5407.6	5341.6	5295.4	5238.2	5174.4	5079.8	5033.6
6149.0	6017.0	5924.6	5874.0	5746.4	5731.0	5618.8
7000.4	6960.8	6820.0	6758.4	6635.2	6586.8	6410.8
8274.2	8243.4	7955.2	7924.4	7735.2	7594.4	7321.6
9948.4	9695.4	9369.8	9143.2	8819.8	8456.8	7992.6
11411.4	10894.4	10397.2	9869.2	9422.6	8901.2	8375.4
12344.2	11651.2	11011.0	10469.8	9917.6	9297.2	8621.8
13162.6	12463.0	11765.6	11125.4	10456.6	9662.4	8828.6
14141.6	13446.4	12661.0	11761.2	10903.2	9930.8	8912.2
15144.8	14330.8	13349.6	12247.4	11169.4	10062.8	8896.8
16172.2	15131.6	13827.0	12570.8	11338.8	10082.6	8793.4
17006.0	15690.4	14181.2	12735.8	11374.0	10014.4	8663.6
17595.6	16049.0	14339.6	12793.0	11330.0	9906.6	8487.6
17932.2	16244.8	14379.2	12751.2	11239.8	9752.6	8296.2
18055.4	16304.2	14339.6	12665.4	11158.4	9587.6	8162.0
18042.2	16271.2	14194.4	12465.2	10940.6	9367.6	7997.0
17793.6	15965.4	13897.4	12225.4	10755.8	9266.4	8008.0
17371.2	15771.8	13809.4	12273.8	10852.6	9484.2	8355.6
17179.8	16159.0	14304.4	12757.8	11349.8	10106.8	9072.8
17072.0	16788.2	15012.8	13279.2	11939.4	10861.4	9928.6
16632.0	16968.6	15415.4	13576.2	12465.2	11618.2	10784.4
15921.4	16548.4	15109.6	13519.0	12755.6	12199.0	11092.4
14438.6	15100.8	13747.8	12676.4	12392.6	12207.8	10630.4
11697.4	12040.6	11270.6	11028.6	11134.2	11136.4	8916.6
8626.2	8419.4	8071.8	8089.4	8800.0	8690.0	6355.8
7042.2	5764.0	5271.2	5458.2	6336.0	5863.0	3993.0
6553.8	5141.4	4243.8	4287.8	4785.0	3777.4	2404.6
5299.8	4686.0	3757.6	3372.6	3273.6	2516.8	1632.4
2217.6	2039.4	1518.0	1368.4	1122.0	686.4	312.4
0.0	0.0	0.0	0.0	0.0	0.0	0.0

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