

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: P159180

Luminaire Tested: **VST-E12-LED-E-U-SLR**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P159180
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-E12-LED-E-U-SLR
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(12) LIGHTBARS WITH AccuLED OPTICS - 90° SPILL LIGHT ELIMINATOR RIGHT
Light Source: (252) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 32247.4 lumens
Efficiency: N/A
Efficacy: 110.5 lumens/watt
Luminous Opening: Rectangular (W 2' x L: 1' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B3 - U0 - G5

Input Watts (W): 291.7
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



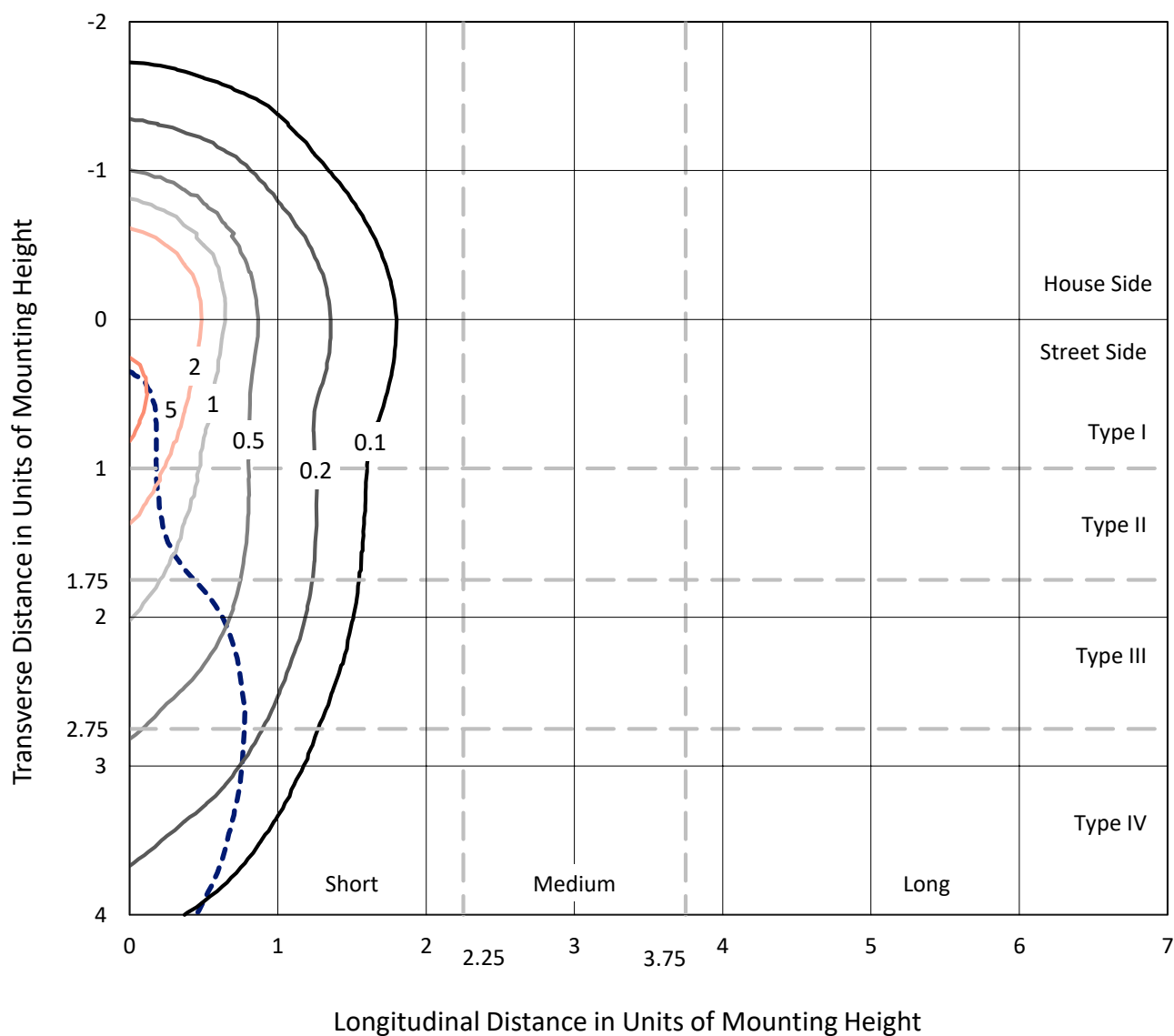
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Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

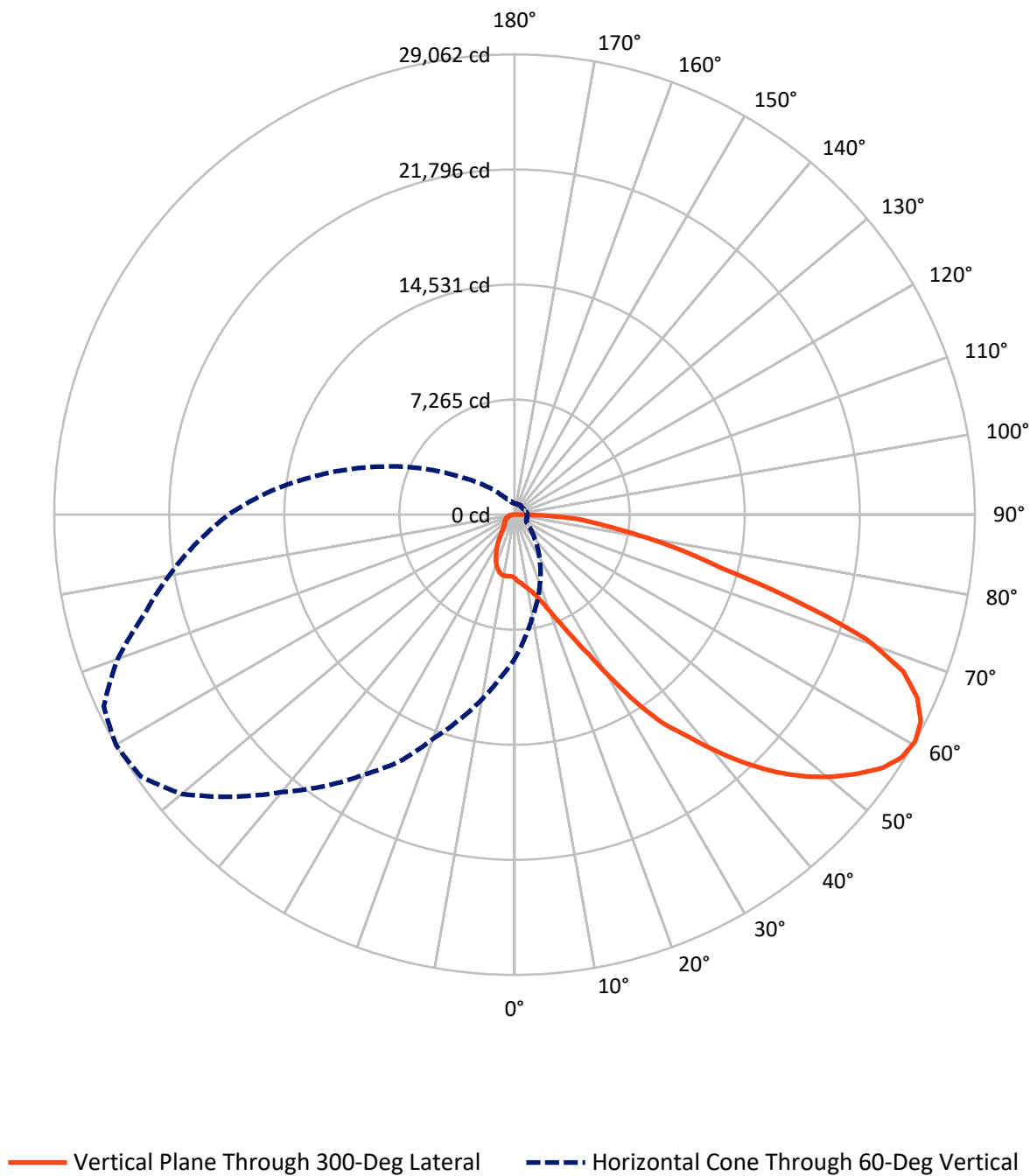


Based on 30 foot mounting height. Maximum calculated value = 6.7 fc
Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



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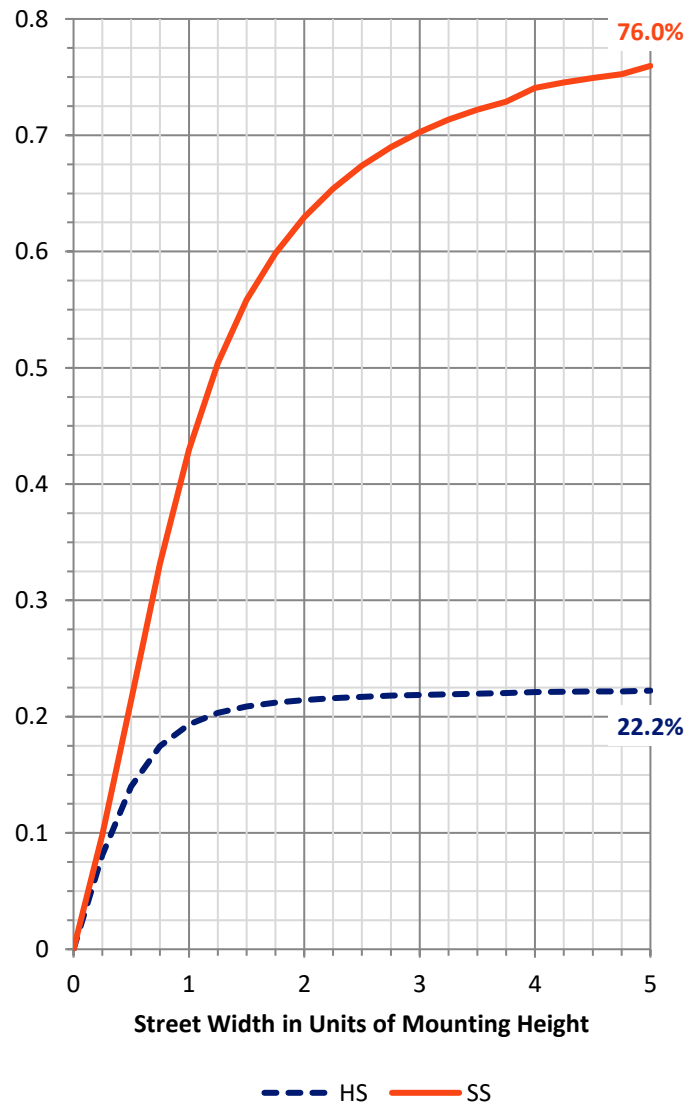
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	7261.1	0.0	7261.1
	% Fixture	22.5	0.0	22.5
Street Side	Lumens	24986.3	0.0	24986.3
	% Fixture	77.5	0.0	77.5
Total	Lumens	32247.4	0.0	32247.4
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	395.7	1.2
10°-20°	1277.5	4.0
20°-30°	2424.1	7.5
30°-40°	3817.6	11.8
40°-50°	5328.4	16.5
50°-60°	6590.0	20.4
60°-70°	6830.9	21.2
70°-80°	4298.3	13.3
80°-90°	1284.9	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°	32247.4	100.0
0°-180°	32247.4	100.0

Coefficient of Utilization



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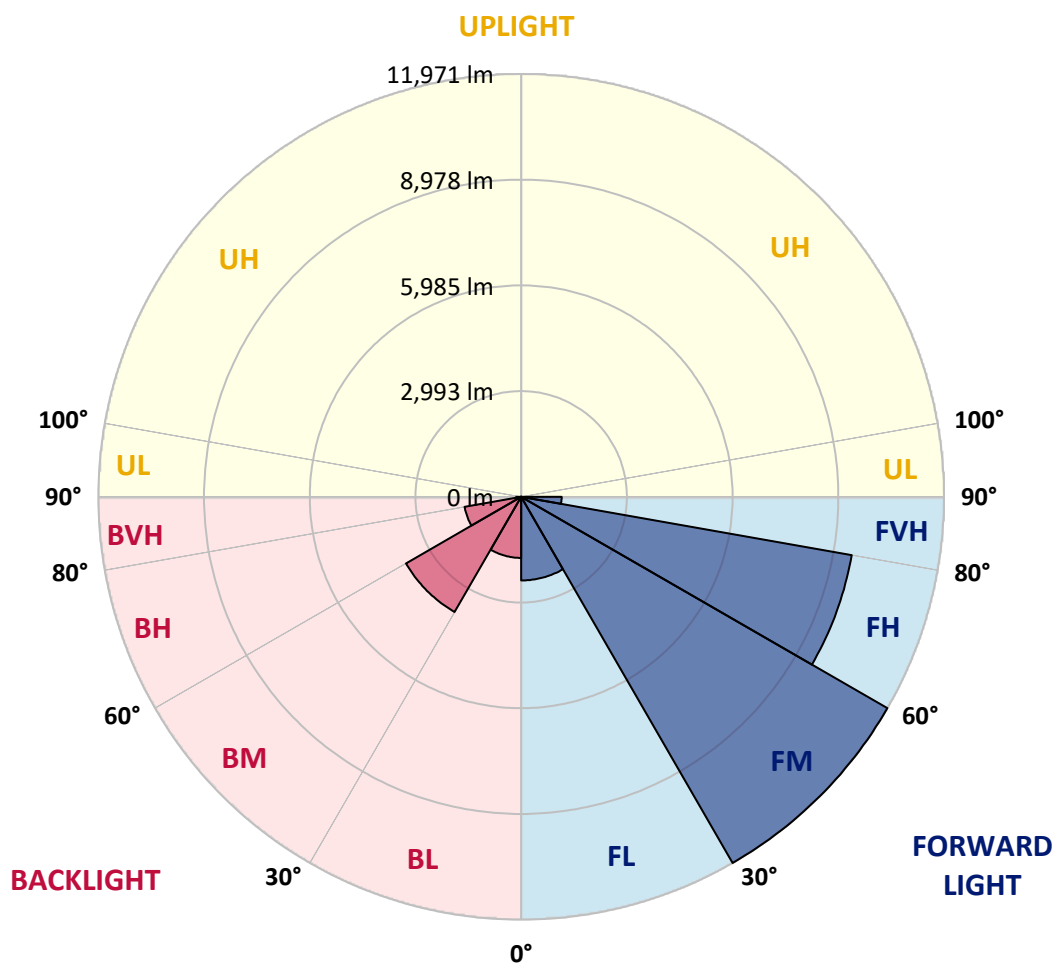
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2367.4	7.3			
FM	(30°-60°)	11970.7	37.1			
FH	(60°-80°)	9503.0	29.5			G4/12000
FVH	(80°-90°)	1145.1	3.6			G5
BL	(0°-30°)	1729.9	5.4	B3/2500		
BM	(30°-60°)	3765.3	11.7	B3/5000		
BH	(60°-80°)	1626.2	5.0	B3/2500		G3/2500
BVH	(80°-90°)	139.8	0.4			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: 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°	4010.4	4010.4	4010.4	4010.4	4010.4	4010.4	4010.4	4010.4	4010.4	4010.4	4010.4
2.5°	4248.0	3993.6	3998.4	3991.2	3991.2	3986.4	3991.2	3986.4	3981.6	3981.6	3984.0
5°	4303.2	4022.4	4022.4	4015.2	4010.4	4005.6	4010.4	4005.6	4003.2	3998.4	4000.8
7.5°	4356.0	4039.2	4029.6	4020.0	4008.0	4012.8	4012.8	4010.4	4012.8	4010.4	4015.2
10°	4442.4	4094.4	4070.4	4048.8	4046.4	4041.6	4041.6	4034.4	4034.4	4029.6	4032.0
12.5°	4663.2	4264.8	4238.4	4200.0	4192.8	4171.2	4159.2	4144.8	4120.8	4099.2	4082.4
15°	5035.2	4548.0	4497.6	4464.0	4449.6	4406.4	4339.2	4286.4	4216.8	4156.8	4094.4
17.5°	5491.2	4927.2	4867.2	4824.0	4752.0	4634.4	4521.6	4392.0	4257.6	4135.2	4022.4
20°	6129.6	5472.0	5354.4	5251.2	5071.2	4869.6	4658.4	4432.8	4226.4	4034.4	3868.8
22.5°	6993.6	6175.2	5956.8	5680.8	5347.2	5006.4	4670.4	4358.4	4082.4	3832.8	3612.0
25°	7987.2	6847.2	6453.6	5978.4	5467.2	4996.8	4555.2	4154.4	3832.8	3511.2	3271.2
27.5°	8719.2	7408.8	6828.0	6204.0	5551.2	4951.2	4408.8	3924.0	3535.2	3206.4	2916.0
30°	9136.8	7730.4	7032.0	6300.0	5565.6	4874.4	4224.0	3662.4	3213.6	2822.4	2544.0
32.5°	9405.6	7903.2	7053.6	6204.0	5392.8	4646.4	3943.2	3360.0	2872.8	2455.2	2160.0
35°	9631.2	7972.8	6952.8	5990.4	5066.4	4300.8	3583.2	3000.0	2484.0	2100.0	1797.6
37.5°	9722.4	7960.8	6792.0	5704.8	4747.2	3924.0	3216.0	2618.4	2157.6	1819.2	1560.0
40°	9705.6	7850.4	6573.6	5400.0	4372.8	3530.4	2827.2	2301.6	1927.2	1641.6	1452.0
42.5°	9592.8	7704.0	6331.2	5090.4	4029.6	3204.0	2563.2	2097.6	1795.2	1579.2	1413.6
45°	9451.2	7528.8	6110.4	4807.2	3758.4	2971.2	2409.6	2040.0	1778.4	1572.0	1394.4
47.5°	9259.2	7334.4	5887.2	4605.6	3614.4	2901.6	2407.2	2073.6	1792.8	1555.2	1360.8
50°	9050.4	7192.8	5764.8	4519.2	3597.6	2944.8	2491.2	2126.4	1802.4	1538.4	1315.2
52.5°	8904.0	7130.4	5762.4	4550.4	3686.4	3064.8	2589.6	2193.6	1838.4	1548.0	1305.6
55°	8724.0	7120.8	5824.8	4684.8	3880.8	3268.8	2745.6	2308.8	1912.8	1584.0	1312.8
57.5°	8736.0	7310.4	6067.2	5016.0	4231.2	3544.8	2944.8	2450.4	1984.8	1605.6	1300.8
60°	9115.2	7752.0	6544.8	5582.4	4689.6	3868.8	3148.8	2527.2	1980.0	1557.6	1243.2
62.5°	9897.6	8414.4	7260.0	6247.2	5155.2	4118.4	3223.2	2505.6	1908.0	1454.4	1149.6
65°	10831.2	9189.6	7956.0	6763.2	5438.4	4176.0	3158.4	2385.6	1764.0	1320.0	1036.8
67.5°	11764.8	9739.2	8356.8	6909.6	5323.2	3943.2	2918.4	2116.8	1519.2	1137.6	909.6
70°	12100.8	9852.0	8325.6	6580.8	4800.0	3364.8	2402.4	1704.0	1219.2	931.2	765.6
72.5°	11596.8	9146.4	7401.6	5592.0	3902.4	2608.8	1761.6	1257.6	931.2	729.6	624.0
75°	9727.2	7365.6	5851.2	4212.0	2817.6	1845.6	1272.0	916.8	700.8	578.4	499.2
77.5°	6933.6	5128.8	3986.4	2767.2	1828.8	1279.2	912.0	688.8	556.8	463.2	405.6
80°	4356.0	3148.8	2428.8	1660.8	1140.0	868.8	655.2	544.8	448.8	376.8	338.4
82.5°	2623.2	1833.6	1430.4	1032.0	748.8	595.2	482.4	427.2	357.6	312.0	290.4
85°	1780.8	1348.8	938.4	609.6	451.2	350.4	328.8	295.2	266.4	223.2	216.0
87.5°	340.8	482.4	420.0	249.6	165.6	141.6	124.8	120.0	108.0	86.4	98.4
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-E12-LED-E-U-SLR

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	4010.4	4010.4	4010.4	4010.4	4010.4	4010.4	4010.4	4010.4	4010.4	4010.4	4010.4
2.5°	3969.6	3964.8	3955.2	3955.2	3948.0	3933.6	3931.2	3921.6	3909.6	3912.0	3909.6
5°	3984.0	3974.4	3962.4	3957.6	3948.0	3933.6	3926.4	3914.4	3902.4	3902.4	3902.4
7.5°	4000.8	3988.8	3979.2	3962.4	3943.2	3928.8	3909.6	3895.2	3888.0	3885.6	3888.0
10°	4015.2	4008.0	3993.6	3969.6	3943.2	3914.4	3895.2	3876.0	3856.8	3859.2	3861.6
12.5°	4046.4	4022.4	3984.0	3948.0	3907.2	3871.2	3837.6	3813.6	3789.6	3789.6	3792.0
15°	4024.8	3955.2	3902.4	3832.8	3787.2	3729.6	3691.2	3669.6	3655.2	3650.4	3652.8
17.5°	3897.6	3813.6	3734.4	3672.0	3609.6	3564.0	3547.2	3532.8	3513.6	3523.2	3513.6
20°	3705.6	3602.4	3489.6	3415.2	3340.8	3309.6	3280.8	3266.4	3254.4	3297.6	3297.6
22.5°	3429.6	3304.8	3189.6	3098.4	3014.4	2980.8	2952.0	2935.2	2942.4	2995.2	3000.0
25°	3081.6	2930.4	2779.2	2724.0	2640.0	2613.6	2596.8	2594.4	2601.6	2654.4	2666.4
27.5°	2712.0	2553.6	2424.0	2296.8	2258.4	2236.8	2205.6	2241.6	2248.8	2306.4	2330.4
30°	2318.4	2148.0	2011.2	1927.2	1845.6	1857.6	1831.2	1874.4	1893.6	1953.6	1972.8
32.5°	1915.2	1754.4	1617.6	1533.6	1476.0	1483.2	1464.0	1502.4	1521.6	1593.6	1629.6
35°	1584.0	1447.2	1336.8	1264.8	1238.4	1212.0	1207.2	1212.0	1231.2	1286.4	1351.2
37.5°	1394.4	1281.6	1202.4	1149.6	1113.6	1096.8	1087.2	1087.2	1087.2	1099.2	1130.4
40°	1312.8	1212.0	1142.4	1092.0	1068.0	1058.4	1051.2	1044.0	1032.0	1027.2	1029.6
42.5°	1276.8	1161.6	1087.2	1048.8	1034.4	1034.4	1034.4	1029.6	1017.6	1005.6	993.6
45°	1240.8	1116.0	1041.6	1015.2	1008.0	1010.4	1010.4	1010.4	1000.8	986.4	964.8
47.5°	1195.2	1065.6	991.2	974.4	974.4	981.6	984.0	984.0	974.4	960.0	943.2
50°	1140.0	1000.8	933.6	919.2	912.0	912.0	912.0	912.0	904.8	895.2	883.2
52.5°	1111.2	964.8	895.2	880.8	880.8	873.6	871.2	864.0	856.8	849.6	832.8
55°	1101.6	950.4	878.4	866.4	866.4	859.2	852.0	844.8	832.8	820.8	804.0
57.5°	1075.2	919.2	856.8	847.2	847.2	842.4	835.2	828.0	816.0	799.2	777.6
60°	1015.2	866.4	813.6	811.2	811.2	808.8	804.0	804.0	792.0	775.2	748.8
62.5°	938.4	811.2	760.8	760.8	758.4	756.0	746.4	744.0	729.6	708.0	684.0
65°	864.0	763.2	729.6	720.0	715.2	708.0	703.2	691.2	679.2	660.0	636.0
67.5°	770.4	691.2	669.6	660.0	650.4	643.2	636.0	628.8	614.4	600.0	580.8
70°	669.6	612.0	600.0	597.6	585.6	578.4	576.0	568.8	554.4	540.0	516.0
72.5°	573.6	540.0	530.4	530.4	516.0	506.4	501.6	499.2	489.6	477.6	456.0
75°	463.2	439.2	436.8	448.8	448.8	441.6	436.8	441.6	427.2	420.0	398.4
77.5°	379.2	367.2	360.0	364.8	379.2	372.0	362.4	362.4	362.4	350.4	343.2
80°	321.6	312.0	304.8	309.6	307.2	304.8	300.0	290.4	290.4	290.4	288.0
82.5°	290.4	288.0	261.6	261.6	252.0	244.8	240.0	235.2	230.4	230.4	242.4
85°	218.4	225.6	211.2	208.8	196.8	187.2	177.6	172.8	168.0	175.2	199.2
87.5°	105.6	105.6	100.8	112.8	103.2	98.4	91.2	86.4	91.2	112.8	134.4
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°	4010.4	4010.4	4010.4	4010.4	4010.4	4010.4	4010.4	4010.4	4010.4	4010.4	4010.4
2.5°	3904.8	3902.4	3900.0	3895.2	3885.6	3883.2	3878.4	3878.4	3876.0	3871.2	3876.0
5°	3897.6	3902.4	3902.4	3900.0	3892.8	3897.6	3897.6	3904.8	3904.8	3909.6	3921.6
7.5°	3888.0	3900.0	3909.6	3916.8	3926.4	3933.6	3948.0	3969.6	3979.2	3996.0	4003.2
10°	3868.8	3890.4	3907.2	3928.8	3952.8	3979.2	4000.8	4034.4	4046.4	4070.4	4082.4
12.5°	3813.6	3849.6	3878.4	3921.6	3962.4	4003.2	4041.6	4084.8	4106.4	4132.8	4149.6
15°	3679.2	3720.0	3760.8	3799.2	3871.2	3950.4	4012.8	4070.4	4101.6	4135.2	4152.0
17.5°	3518.4	3544.8	3578.4	3628.8	3698.4	3768.0	3868.8	3950.4	3998.4	4036.8	4041.6
20°	3331.2	3369.6	3393.6	3412.8	3468.0	3516.0	3624.0	3717.6	3780.0	3825.6	3837.6
22.5°	3045.6	3086.4	3127.2	3141.6	3184.8	3247.2	3307.2	3408.0	3496.8	3564.0	3604.8
25°	2719.2	2757.6	2812.8	2856.0	2865.6	2916.0	2976.0	3091.2	3182.4	3290.4	3338.4
27.5°	2392.8	2426.4	2486.4	2510.4	2539.2	2589.6	2637.6	2733.6	2829.6	2954.4	3007.2
30°	2011.2	2083.2	2152.8	2198.4	2222.4	2282.4	2316.0	2409.6	2498.4	2589.6	2666.4
32.5°	1684.8	1749.6	1828.8	1886.4	1915.2	1960.8	2013.6	2092.8	2162.4	2251.2	2340.0
35°	1384.8	1473.6	1526.4	1576.8	1651.2	1672.8	1725.6	1797.6	1838.4	1934.4	2035.2
37.5°	1173.6	1226.4	1279.2	1329.6	1392.0	1420.8	1471.2	1531.2	1579.2	1636.8	1728.0
40°	1044.0	1072.8	1111.2	1144.8	1190.4	1226.4	1252.8	1303.2	1339.2	1396.8	1461.6
42.5°	984.0	991.2	996.0	1020.0	1044.0	1068.0	1096.8	1118.4	1161.6	1204.8	1245.6
45°	950.4	936.0	928.8	931.2	940.8	955.2	979.2	1003.2	1032.0	1058.4	1082.4
47.5°	921.6	902.4	880.8	868.8	871.2	876.0	895.2	914.4	928.8	950.4	960.0
50°	854.4	837.6	818.4	801.6	804.0	806.4	823.2	837.6	847.2	854.4	866.4
52.5°	811.2	787.2	770.4	753.6	751.2	758.4	772.8	787.2	792.0	796.8	799.2
55°	780.0	756.0	734.4	717.6	710.4	727.2	732.0	751.2	758.4	758.4	760.8
57.5°	756.0	727.2	705.6	688.8	676.8	688.8	700.8	722.4	724.8	720.0	720.0
60°	720.0	698.4	676.8	660.0	648.0	657.6	667.2	691.2	691.2	679.2	676.8
62.5°	657.6	645.6	631.2	624.0	621.6	631.2	638.4	657.6	650.4	636.0	631.2
65°	612.0	602.4	588.0	583.2	580.8	595.2	597.6	609.6	600.0	592.8	590.4
67.5°	556.8	549.6	542.4	540.0	532.8	532.8	537.6	544.8	540.0	540.0	542.4
70°	494.4	484.8	477.6	480.0	475.2	475.2	477.6	482.4	480.0	484.8	489.6
72.5°	436.8	424.8	422.4	422.4	417.6	420.0	420.0	422.4	427.2	429.6	441.6
75°	381.6	369.6	369.6	367.2	367.2	367.2	369.6	374.4	379.2	381.6	386.4
77.5°	331.2	324.0	326.4	324.0	324.0	324.0	324.0	331.2	333.6	336.0	343.2
80°	285.6	285.6	288.0	288.0	285.6	283.2	285.6	290.4	292.8	295.2	297.6
82.5°	259.2	261.6	261.6	261.6	249.6	244.8	252.0	256.8	261.6	264.0	268.8
85°	223.2	213.6	223.2	220.8	204.0	201.6	201.6	204.0	208.8	204.0	204.0
87.5°	144.0	129.6	136.8	136.8	120.0	98.4	124.8	134.4	120.0	127.2	127.2
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: P159180

CATALOG NUMBER: VST-E12-LED-E-U-SLR

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
0°	4010.4	4010.4	4010.4	4010.4	4010.4	4010.4	4010.4	4010.4	4010.4	4010.4	4010.4
2.5°	3883.2	3878.4	3880.8	3880.8	3885.6	3878.4	3888.0	3897.6	3900.0	3900.0	3902.4
5°	3933.6	3928.8	3945.6	3938.4	3955.2	3952.8	3964.8	3974.4	3979.2	3979.2	3979.2
7.5°	4012.8	4029.6	4039.2	4065.6	4068.0	4082.4	4094.4	4106.4	4101.6	4104.0	4101.6
10°	4101.6	4123.2	4147.2	4173.6	4176.0	4192.8	4212.0	4224.0	4219.2	4216.8	4209.6
12.5°	4178.4	4192.8	4221.6	4248.0	4262.4	4288.8	4308.0	4317.6	4317.6	4310.4	4303.2
15°	4173.6	4195.2	4226.4	4264.8	4291.2	4329.6	4363.2	4384.8	4387.2	4380.0	4377.6
17.5°	4068.0	4099.2	4128.0	4180.8	4228.8	4281.6	4336.8	4368.0	4396.8	4413.6	4423.2
20°	3878.4	3916.8	3957.6	4027.2	4092.0	4161.6	4226.4	4272.0	4315.2	4365.6	4425.6
22.5°	3655.2	3712.8	3770.4	3859.2	3938.4	4017.6	4092.0	4147.2	4214.4	4300.8	4413.6
25°	3393.6	3453.6	3525.6	3628.8	3729.6	3844.8	3955.2	4065.6	4195.2	4344.0	4519.2
27.5°	3084.0	3151.2	3244.8	3369.6	3484.8	3602.4	3775.2	3950.4	4161.6	4353.6	4552.8
30°	2776.8	2863.2	2964.0	3088.8	3204.0	3372.0	3544.8	3760.8	3984.0	4200.0	4437.6
32.5°	2445.6	2553.6	2678.4	2781.6	2911.2	3081.6	3254.4	3484.8	3722.4	3976.8	4238.4
35°	2126.4	2229.6	2328.0	2443.2	2572.8	2733.6	2901.6	3122.4	3422.4	3693.6	4005.6
37.5°	1802.4	1898.4	1968.0	2059.2	2172.0	2349.6	2529.6	2784.0	3067.2	3400.8	3712.8
40°	1519.2	1598.4	1677.6	1749.6	1845.6	2013.6	2205.6	2455.2	2733.6	3057.6	3405.6
42.5°	1293.6	1353.6	1440.0	1526.4	1608.0	1752.0	1932.0	2176.8	2452.8	2784.0	3132.0
45°	1104.0	1144.8	1214.4	1286.4	1387.2	1507.2	1680.0	1929.6	2210.4	2544.0	2911.2
47.5°	967.2	986.4	1034.4	1108.8	1202.4	1320.0	1468.8	1694.4	1968.0	2304.0	2690.4
50°	873.6	895.2	919.2	981.6	1065.6	1185.6	1308.0	1504.8	1754.4	2083.2	2467.2
52.5°	808.8	818.4	828.0	866.4	943.2	1044.0	1173.6	1322.4	1574.4	1888.8	2234.4
55°	770.4	772.8	780.0	799.2	856.8	950.4	1063.2	1204.8	1401.6	1699.2	2052.0
57.5°	724.8	729.6	736.8	748.8	784.8	868.8	964.8	1080.0	1243.2	1492.8	1831.2
60°	681.6	693.6	705.6	712.8	732.0	782.4	864.0	955.2	1087.2	1274.4	1543.2
62.5°	636.0	650.4	660.0	667.2	674.4	705.6	765.6	825.6	907.2	1029.6	1231.2
65°	595.2	604.8	612.0	616.8	621.6	631.2	657.6	681.6	705.6	780.0	926.4
67.5°	549.6	554.4	556.8	559.2	556.8	556.8	559.2	568.8	578.4	607.2	676.8
70°	496.8	504.0	504.0	506.4	506.4	499.2	499.2	499.2	499.2	506.4	544.8
72.5°	446.4	456.0	456.0	458.4	456.0	453.6	453.6	453.6	460.8	465.6	480.0
75°	398.4	408.0	405.6	408.0	410.4	410.4	415.2	417.6	424.8	427.2	436.8
77.5°	350.4	357.6	360.0	357.6	362.4	367.2	376.8	381.6	384.0	386.4	388.8
80°	304.8	309.6	307.2	300.0	312.0	319.2	333.6	350.4	345.6	348.0	352.8
82.5°	252.0	244.8	240.0	244.8	252.0	261.6	276.0	297.6	300.0	312.0	309.6
85°	194.4	172.8	170.4	182.4	180.0	192.0	216.0	232.8	247.2	259.2	247.2
87.5°	115.2	103.2	86.4	81.6	88.8	117.6	122.4	148.8	160.8	165.6	148.8
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: P159180

CATALOG NUMBER: VST-E12-LED-E-U-SLR

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
0°	4010.4	4010.4	4010.4	4010.4	4010.4	4010.4	4010.4	4010.4	4010.4	4010.4	4010.4
2.5°	4120.8	4132.8	4132.8	4137.6	4144.8	4147.2	4156.8	4173.6	4176.0	4176.0	4183.2
5°	4197.6	4209.6	4209.6	4219.2	4221.6	4233.6	4245.6	4264.8	4274.4	4272.0	4303.2
7.5°	4322.4	4312.8	4305.6	4320.0	4327.2	4341.6	4365.6	4382.4	4399.2	4425.6	4468.8
10°	4428.0	4413.6	4406.4	4416.0	4420.8	4437.6	4452.0	4476.0	4516.8	4557.6	4610.4
12.5°	4514.4	4497.6	4478.4	4483.2	4490.4	4512.0	4536.0	4567.2	4627.2	4680.0	4759.2
15°	4586.4	4562.4	4543.2	4552.8	4569.6	4598.4	4639.2	4694.4	4792.8	4884.0	4989.6
17.5°	4656.0	4651.2	4644.0	4675.2	4687.2	4754.4	4814.4	4915.2	5049.6	5186.4	5337.6
20°	4723.2	4776.0	4802.4	4864.8	4903.2	4994.4	5085.6	5208.0	5378.4	5565.6	5772.0
22.5°	4816.8	4960.8	5049.6	5176.8	5241.6	5340.0	5474.4	5635.2	5824.8	6064.8	6328.8
25°	5040.0	5251.2	5428.8	5628.0	5791.2	5942.4	6103.2	6297.6	6571.2	6789.6	7135.2
27.5°	5138.4	5436.0	5702.4	5983.2	6228.0	6460.8	6715.2	6950.4	7274.4	7569.6	7987.2
30°	5044.8	5380.8	5726.4	6093.6	6451.2	6804.0	7173.6	7533.6	7908.0	8320.8	8764.8
32.5°	4872.0	5248.8	5637.6	6069.6	6513.6	6972.0	7452.0	7975.2	8503.2	9016.8	9470.4
35°	4696.8	5102.4	5534.4	6028.8	6552.0	7120.8	7716.0	8378.4	9076.8	9727.2	10320.0
37.5°	4442.4	4888.8	5383.2	5954.4	6576.0	7276.8	8042.4	8858.4	9741.6	10636.8	11414.4
40°	4135.2	4608.0	5148.0	5805.6	6552.0	7437.6	8433.6	9480.0	10615.2	11707.2	12662.4
42.5°	3854.4	4315.2	4891.2	5606.4	6489.6	7579.2	8805.6	10108.8	11452.8	12674.4	13922.4
45°	3607.2	4116.0	4694.4	5467.2	6458.4	7699.2	9081.6	10579.2	12117.6	13572.0	15045.6
47.5°	3381.6	3909.6	4557.6	5390.4	6444.0	7771.2	9273.6	10886.4	12590.4	14260.8	15972.0
50°	3148.8	3662.4	4356.0	5306.4	6408.0	7768.8	9374.4	11095.2	12921.6	14796.0	16610.4
52.5°	2899.2	3415.2	4111.2	5152.8	6331.2	7725.6	9400.8	11236.8	13183.2	15124.8	17152.8
55°	2671.2	3153.6	3849.6	4896.0	6170.4	7620.0	9340.8	11296.8	13368.0	15451.2	17534.4
57.5°	2409.6	2911.2	3573.6	4543.2	5868.0	7432.8	9170.4	11212.8	13420.8	15669.6	17836.8
60°	2049.6	2541.6	3223.2	4125.6	5395.2	7036.8	8853.6	10958.4	13252.8	15708.0	18052.8
62.5°	1636.8	2061.6	2719.2	3549.6	4730.4	6415.2	8268.0	10387.2	12729.6	15348.0	17942.4
65°	1216.8	1500.0	2066.4	2796.0	3960.0	5479.2	7324.8	9429.6	11707.2	14347.2	17248.8
67.5°	847.2	1051.2	1399.2	1941.6	2880.0	4231.2	5978.4	7934.4	10125.6	12494.4	15808.8
70°	640.8	734.4	924.0	1226.4	1864.8	2882.4	4346.4	6088.8	8121.6	10404.0	13526.4
72.5°	547.2	595.2	700.8	840.0	1142.4	1752.0	2728.8	4190.4	5992.8	7850.4	10377.6
75°	492.0	532.8	600.0	688.8	808.8	1063.2	1600.8	2652.0	3969.6	5258.4	7240.8
77.5°	446.4	482.4	542.4	588.0	652.8	765.6	1020.0	1586.4	2378.4	3249.6	4492.8
80°	398.4	420.0	475.2	520.8	571.2	636.0	732.0	996.0	1365.6	1924.8	2649.6
82.5°	340.8	357.6	398.4	460.8	499.2	525.6	554.4	660.0	818.4	1044.0	1471.2
85°	264.0	276.0	312.0	357.6	374.4	376.8	381.6	410.4	508.8	782.4	1267.2
87.5°	134.4	148.8	187.2	201.6	170.4	184.8	187.2	199.2	264.0	429.6	436.8
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: P159180
CATALOG NUMBER: VST-E12-LED-E-U-SLR

REPORT N
CATALOG

CANDELA DISTRIBUTION (continued):

CANDELA

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°	
0°	4010.4	4010.4	4010.4	4010.4	4010.4	4010.4	4010.4	4010.4	4010.4	4010.4	4010.4	0°
2.5°	4183.2	4190.4	4207.2	4204.8	4216.8	4216.8	4216.8	4228.8	4221.6	4228.8	4240.8	2.5°
5°	4303.2	4315.2	4339.2	4339.2	4341.6	4334.4	4348.8	4358.4	4346.4	4341.6	4344.0	5°
7.5°	4478.4	4497.6	4516.8	4536.0	4550.4	4543.2	4545.6	4524.0	4519.2	4502.4	4480.8	7.5°
10°	4648.8	4701.6	4737.6	4771.2	4773.6	4766.4	4768.8	4732.8	4725.6	4692.0	4670.4	10°
12.5°	4824.0	4891.2	4948.8	4984.8	5006.4	5011.2	5013.6	5013.6	4980.0	4951.2	4900.8	12.5°
15°	5083.2	5200.8	5289.6	5328.0	5359.2	5388.0	5395.2	5404.8	5378.4	5340.0	5332.8	15°
17.5°	5493.6	5604.0	5721.6	5824.8	5894.4	5899.2	5959.2	5954.4	6009.6	5966.4	5954.4	17.5°
20°	5980.8	6220.8	6343.2	6480.0	6559.2	6597.6	6736.8	6693.6	6734.4	6804.0	6734.4	20°
22.5°	6590.4	6895.2	7072.8	7260.0	7389.6	7483.2	7584.0	7663.2	7773.6	7826.4	7778.4	22.5°
25°	7399.2	7747.2	7958.4	8217.6	8424.0	8592.0	8767.2	8978.4	8976.0	9103.2	9192.0	25°
27.5°	8328.0	8772.0	9079.2	9535.2	9712.8	9996.0	10296.0	10622.4	10680.0	10845.6	10929.6	27.5°
30°	9201.6	9751.2	10360.8	10903.2	11517.6	11937.6	12285.6	12516.0	12864.0	12777.6	12729.6	30°
32.5°	10008.0	10740.0	11608.8	12499.2	13473.6	14138.4	14752.8	15038.4	15254.4	14796.0	14188.8	32.5°
35°	11054.4	11930.4	12924.0	14023.2	15261.6	16204.8	16838.4	16927.2	16804.8	16216.8	15211.2	35°
37.5°	12350.4	13269.6	14400.0	15561.6	16876.8	17762.4	18484.8	18614.4	18290.4	17241.6	16185.6	37.5°
40°	13629.6	14707.2	15933.6	17308.8	18672.0	19646.4	20371.2	20409.6	19881.6	18655.2	17419.2	40°
42.5°	15028.8	16207.2	17572.8	19096.8	20505.6	21492.0	22015.2	22180.8	21434.4	19862.4	18676.8	42.5°
45°	16236.0	17644.8	19166.4	20786.4	22260.0	23196.0	23728.8	23676.0	22773.6	21220.8	19831.2	45°
47.5°	17412.0	18962.4	20565.6	22286.4	23750.4	24696.0	25243.2	25195.2	24050.4	22262.4	20733.6	47.5°
50°	18458.4	20140.8	21854.4	23692.8	25152.0	26018.4	26688.0	26476.8	25029.6	23100.0	21314.4	50°
52.5°	19185.6	21062.4	22852.8	24840.0	26342.4	27163.2	28015.2	27336.0	25608.0	23613.6	21626.4	52.5°
55°	19646.4	21696.0	23563.2	25761.6	27237.6	28219.2	28768.8	27804.0	25831.2	23755.2	21734.4	55°
57.5°	19958.4	22044.0	23980.8	26294.4	28044.0	28867.2	29001.6	27820.8	25687.2	23532.0	21626.4	57.5°
60°	20112.0	22147.2	24170.4	26668.8	28610.4	29061.6	28816.8	27432.0	25190.4	22876.8	20930.4	60°
62.5°	20095.2	22017.6	24072.0	26793.6	28723.2	28780.8	28224.0	26769.6	24276.0	21501.6	19773.6	62.5°
65°	19668.0	21544.8	23517.6	26330.4	28197.6	27950.4	27249.6	25526.4	22497.6	19706.4	18832.8	65°
67.5°	18436.8	20236.8	22068.0	24813.6	26716.8	26476.8	25416.0	23083.2	20431.2	18117.6	17647.2	67.5°
70°	16377.6	17904.0	19512.0	21924.0	23920.8	23596.8	21741.6	20323.2	18384.0	16281.6	16118.4	70°
72.5°	13692.0	14848.8	16015.2	17810.4	19185.6	18523.2	17356.8	17282.4	15715.2	14109.6	14143.2	72.5°
75°	10708.8	11577.6	12122.4	13178.4	14092.8	13500.0	13569.6	13982.4	13466.4	12201.6	11791.2	75°
77.5°	7759.2	8592.0	8764.8	9391.2	10034.4	10708.8	11601.6	12573.6	12736.8	12026.4	10538.4	77.5°
80°	5078.4	5995.2	5654.4	5877.6	6782.4	8013.6	9643.2	11244.0	11793.6	11155.2	9324.0	80°
82.5°	2995.2	4279.2	3736.8	4118.4	4692.0	5764.8	6890.4	8097.6	9016.8	8337.6	7788.0	82.5°
85°	2275.2	3374.4	3573.6	4036.8	4224.0	4269.6	4466.4	4860.0	5335.2	5512.8	5498.4	85°
87.5°	1185.6	2623.2	2944.8	2724.0	2541.6	2203.2	1718.4	1850.4	1692.0	2313.6	2191.2	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: P159180

NUMBER: VST-E12-LED-E-U-SLR

DISTRIBUTION (continued):

330°	335°	340°	345°	350°	355°	360°
4010.4	4010.4	4010.4	4010.4	4010.4	4010.4	4010.4
4243.2	4236.0	4240.8	4243.2	4243.2	4243.2	4248.0
4341.6	4322.4	4315.2	4315.2	4312.8	4305.6	4303.2
4447.2	4413.6	4401.6	4387.2	4375.2	4368.0	4356.0
4636.8	4608.0	4548.0	4514.4	4483.2	4461.6	4442.4
4891.2	4850.4	4792.8	4749.6	4701.6	4687.2	4663.2
5284.8	5248.8	5198.4	5150.4	5121.6	5071.2	5035.2
5899.2	5827.2	5776.8	5714.4	5644.8	5541.6	5491.2
6708.0	6564.0	6463.2	6408.0	6268.8	6252.0	6129.6
7636.8	7593.6	7440.0	7372.8	7238.4	7185.6	6993.6
9026.4	8992.8	8678.4	8644.8	8438.4	8284.8	7987.2
10852.8	10576.8	10221.6	9974.4	9621.6	9225.6	8719.2
12448.8	11884.8	11342.4	10766.4	10279.2	9710.4	9136.8
13466.4	12710.4	12012.0	11421.6	10819.2	10142.4	9405.6
14359.2	13596.0	12835.2	12136.8	11407.2	10540.8	9631.2
15427.2	14668.8	13812.0	12830.4	11894.4	10833.6	9722.4
16521.6	15633.6	14563.2	13360.8	12184.8	10977.6	9705.6
17642.4	16507.2	15084.0	13713.6	12369.6	10999.2	9592.8
18552.0	17116.8	15470.4	13893.6	12408.0	10924.8	9451.2
19195.2	17508.0	15643.2	13956.0	12360.0	10807.2	9259.2
19562.4	17721.6	15686.4	13910.4	12261.6	10639.2	9050.4
19696.8	17786.4	15643.2	13816.8	12172.8	10459.2	8904.0
19682.4	17750.4	15484.8	13598.4	11935.2	10219.2	8724.0
19411.2	17416.8	15160.8	13336.8	11733.6	10108.8	8736.0
18950.4	17205.6	15064.8	13389.6	11839.2	10346.4	9115.2
18741.6	17628.0	15604.8	13917.6	12381.6	11025.6	9897.6
18624.0	18314.4	16377.6	14486.4	13024.8	11848.8	10831.2
18144.0	18511.2	16816.8	14810.4	13598.4	12674.4	11764.8
17368.8	18052.8	16483.2	14748.0	13915.2	13308.0	12100.8
15751.2	16473.6	14997.6	13828.8	13519.2	13317.6	11596.8
12760.8	13135.2	12295.2	12031.2	12146.4	12148.8	9727.2
9410.4	9184.8	8805.6	8824.8	9600.0	9480.0	6933.6
7682.4	6288.0	5750.4	5954.4	6912.0	6396.0	4356.0
7149.6	5608.8	4629.6	4677.6	5220.0	4120.8	2623.2
5781.6	5112.0	4099.2	3679.2	3571.2	2745.6	1780.8
2419.2	2224.8	1656.0	1492.8	1224.0	748.8	340.8
0.0	0.0	0.0	0.0	0.0	0.0	0.0

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