

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: P158955

Luminaire Tested: **VST-F11-LED-E-U-SLL**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P158955
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-F11-LED-E-U-SLL
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(11) LIGHTBARS WITH AccuLED OPTICS - 90° SPILL LIGHT ELIMINATOR LEFT
Light Source: (77) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 24402.6 lumens
Efficiency: N/A
Efficacy: 86.3 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): 282.7
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

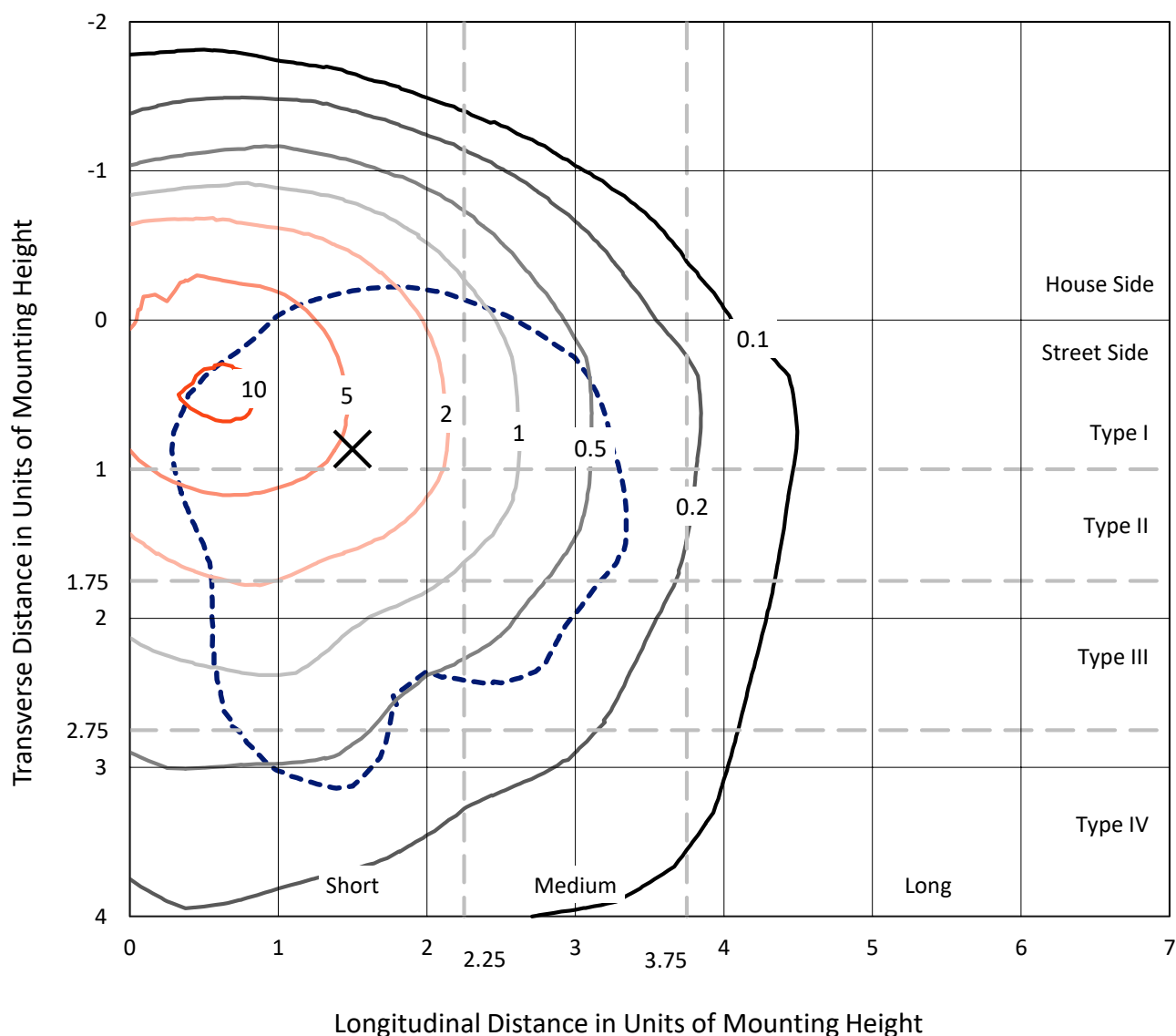


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
- - - 1/2 Max cd

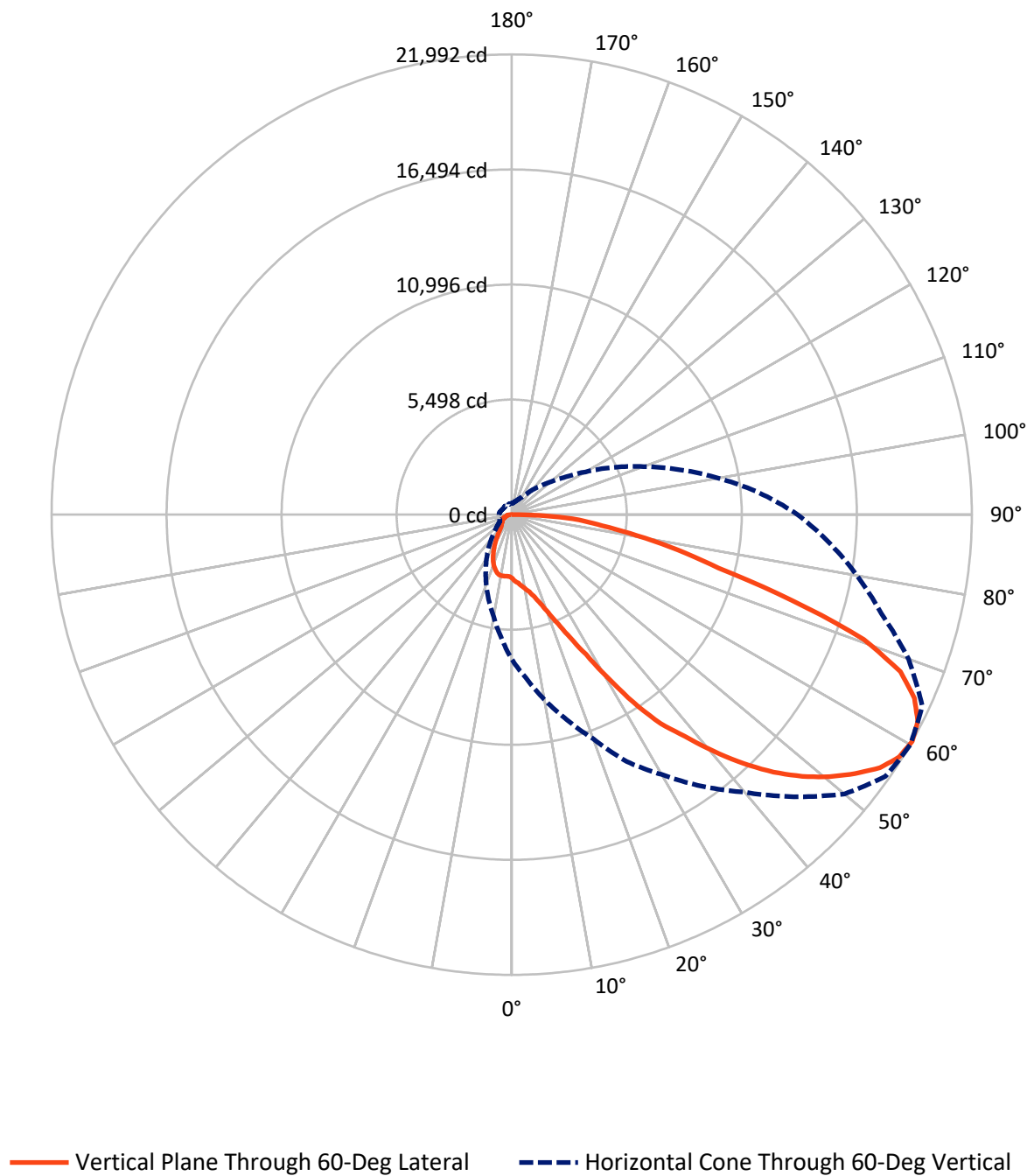


Based on 25 foot mounting height. Maximum calculated value = 11.2 fc
Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



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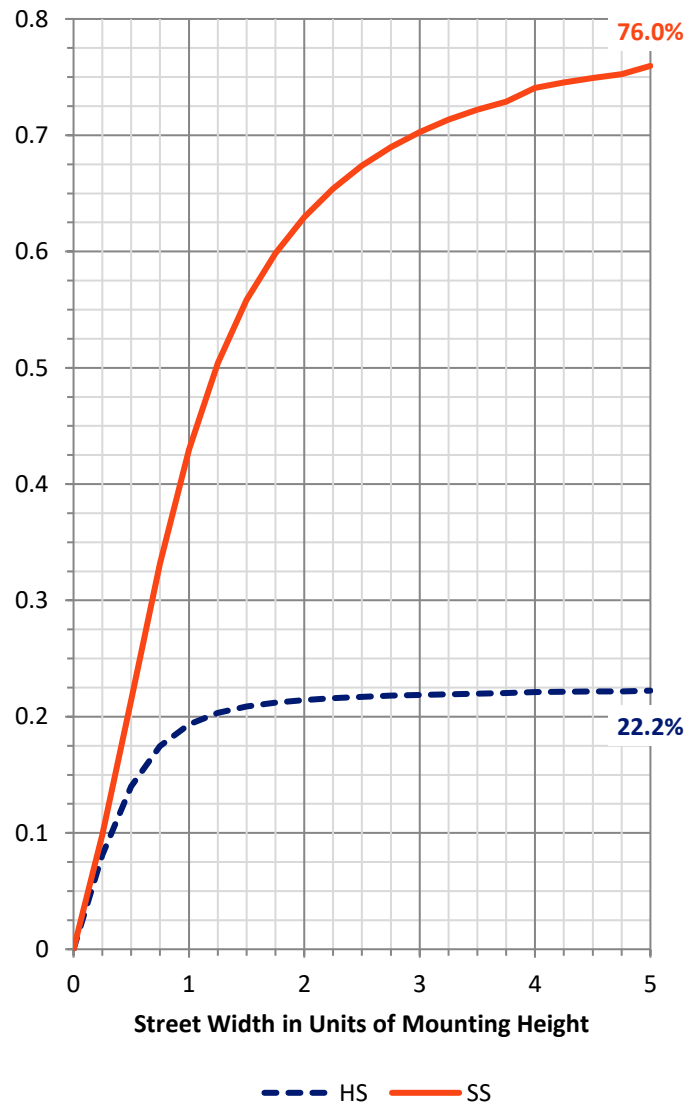
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	5494.7	0.0	5494.7
	% Fixture	22.5	0.0	22.5
Street Side	Lumens	18907.9	0.0	18907.9
	% Fixture	77.5	0.0	77.5
Total	Lumens	24402.6	0.0	24402.6
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	299.4	1.2
10°-20°	966.7	4.0
20°-30°	1834.4	7.5
30°-40°	2888.9	11.8
40°-50°	4032.2	16.5
50°-60°	4986.9	20.4
60°-70°	5169.2	21.2
70°-80°	3252.6	13.3
80°-90°	972.3	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°	24402.6	100.0
0°-180°	24402.6	100.0

Coefficient of Utilization



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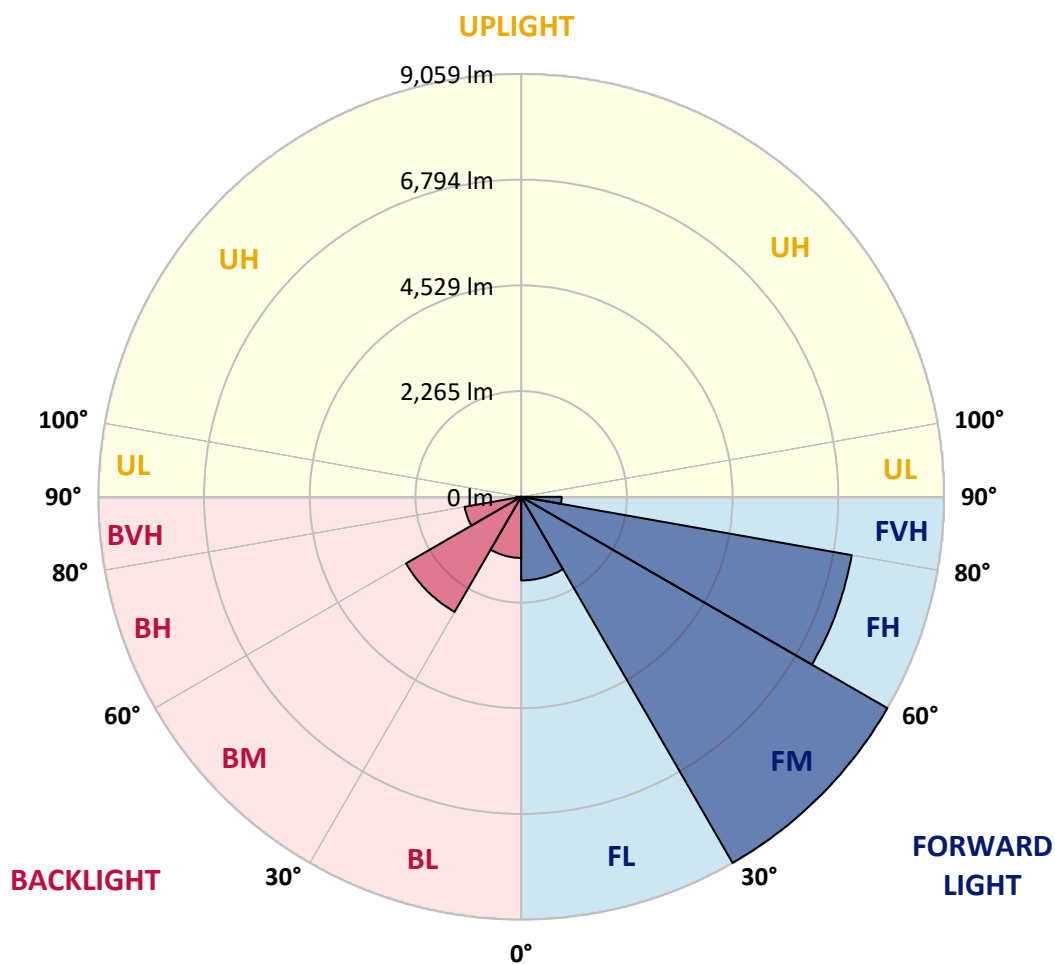
CATALOG NUMBER: VST-F11-LED-E-U-SLL

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1791.5	7.3			
FM	(30°-60°)	9058.6	37.1			
FH	(60°-80°)	7191.2	29.5			G3/7500
FVH	(80°-90°)	866.5	3.6			G5
BL	(0°-30°)	1309.0	5.4	B3/2500		
BM	(30°-60°)	2849.3	11.7	B3/5000		
BH	(60°-80°)	1230.6	5.0	B3/2500		G3/2500
BVH	(80°-90°)	105.8	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°	3034.8	3034.8	3034.8	3034.8	3034.8	3034.8	3034.8	3034.8	3034.8	3034.8	3034.8
2.5°	3214.6	3211.0	3211.0	3211.0	3209.1	3205.5	3211.0	3209.1	3200.1	3194.6	3200.1
5°	3256.4	3258.2	3263.6	3265.4	3265.4	3270.9	3285.4	3287.2	3285.4	3289.1	3298.1
7.5°	3296.3	3305.4	3310.9	3319.9	3330.8	3339.9	3365.3	3390.8	3407.1	3419.8	3423.5
10°	3361.7	3376.2	3392.6	3416.2	3441.6	3487.0	3508.8	3534.2	3550.6	3576.0	3581.5
12.5°	3528.8	3547.0	3557.8	3594.2	3626.9	3670.4	3701.3	3708.6	3746.7	3768.5	3793.9
15°	3810.3	3837.5	3875.7	3897.5	3933.8	3971.9	3999.2	4035.5	4040.9	4070.0	4090.0
17.5°	4155.4	4193.5	4271.6	4324.3	4371.5	4409.6	4464.1	4505.9	4515.0	4547.7	4505.9
20°	4638.5	4731.1	4743.8	4849.1	4890.9	4967.2	5076.2	5096.1	5148.8	5096.1	5065.3
22.5°	5292.3	5437.6	5477.5	5579.2	5630.1	5746.3	5779.0	5886.2	5922.5	5882.5	5799.0
25°	6044.2	6269.4	6385.6	6541.8	6567.2	6805.1	6830.6	6955.9	6888.7	6792.4	6794.2
27.5°	6598.1	6981.3	7281.0	7547.9	7735.0	8003.8	8212.7	8270.8	8207.2	8081.9	8038.3
30°	6914.1	7348.2	7778.6	8147.3	8583.1	8993.6	9420.4	9632.9	9669.2	9734.6	9471.2
32.5°	7117.5	7675.1	8187.2	8643.1	9089.9	9618.4	10190.4	10737.1	11196.6	11543.5	11380.0
35°	7288.2	7976.6	8632.2	9184.3	9712.8	10288.5	10866.1	11510.8	12271.8	12716.7	12809.3
37.5°	7357.2	8198.1	9000.9	9709.2	10452.0	11100.3	11674.2	12248.1	13047.3	13840.9	14086.1
40°	7344.5	8307.1	9220.6	10110.5	11020.4	11830.4	12502.4	13181.7	14117.0	15045.0	15444.6
42.5°	7259.2	8323.4	9360.5	10377.5	11414.5	12491.5	13350.6	14133.3	15030.5	16220.1	16784.9
45°	7152.0	8267.1	9389.5	10513.7	11706.9	12952.8	14038.9	15006.9	16058.4	17233.5	17916.4
47.5°	7006.7	8178.1	9353.2	10560.9	11837.7	13248.8	14525.6	15689.8	16846.7	18199.7	19066.0
50°	6848.7	8051.0	9278.7	10526.4	11870.4	13410.5	14803.5	16129.3	17480.5	18940.7	20035.8
52.5°	6737.9	7914.8	9211.5	10455.6	11837.7	13459.5	14905.2	16365.4	17869.1	19378.4	20686.0
55°	6601.7	7733.2	9031.7	10290.3	11717.8	13432.3	14894.3	16447.1	17976.3	19547.3	21040.2
57.5°	6610.8	7649.6	8879.2	10092.4	11472.7	13179.8	14689.1	16365.4	17807.4	19438.3	21052.9
60°	6897.8	7829.4	8959.1	10132.3	11400.0	13020.0	14340.4	15838.7	17311.6	19062.4	20758.6
62.5°	7489.8	8343.4	9369.5	10531.9	11808.6	13339.7	14182.4	14963.3	16270.9	18370.4	20257.4
65°	8196.3	8966.4	9856.3	10962.3	12393.4	13859.1	14093.4	14251.4	14912.4	17024.6	19316.6
67.5°	8902.8	9591.1	10290.3	11207.5	12725.8	14008.0	13730.1	13354.2	13710.2	15460.9	17467.8
70°	9157.1	10070.6	10530.1	11160.3	12473.4	13661.1	13143.5	12197.3	12320.8	13911.7	15379.2
72.5°	8775.7	10077.8	10230.4	10464.7	11349.2	12466.1	11919.4	10702.6	10677.2	11892.2	13078.1
75°	7360.9	9193.4	9191.6	9104.4	9304.2	9939.8	9656.5	8922.8	9233.3	10190.4	10580.9
77.5°	5246.9	7173.8	7264.6	6678.0	6663.5	6950.4	7121.1	7974.7	9100.8	9638.3	9514.8
80°	3296.3	4840.1	5230.5	4505.9	4351.5	4758.3	5813.5	7055.8	8441.5	8924.6	8508.7
82.5°	1985.1	3118.3	3950.1	3539.7	3503.4	4244.4	5410.3	5893.4	6309.3	6823.3	6127.7
85°	1347.6	2077.7	2702.4	2784.2	3102.0	3868.4	4375.1	4160.8	4171.7	4037.3	3677.7
87.5°	257.9	566.6	926.2	1129.6	1253.1	1683.6	1830.7	1658.1	1750.8	1280.4	1400.3
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):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	3034.8	3034.8	3034.8	3034.8	3034.8	3034.8	3034.8	3034.8	3034.8	3034.8	3034.8
2.5°	3191.0	3191.0	3191.0	3181.9	3183.7	3171.0	3165.6	3165.6	3160.1	3160.1	3158.3
5°	3290.9	3280.0	3285.4	3283.6	3283.6	3265.4	3256.4	3256.4	3232.8	3234.6	3227.3
7.5°	3439.8	3438.0	3443.4	3432.5	3418.0	3403.5	3388.9	3381.7	3349.0	3329.0	3316.3
10°	3608.7	3606.9	3612.3	3610.5	3585.1	3557.8	3517.9	3488.8	3448.9	3418.0	3387.1
12.5°	3793.9	3792.1	3788.5	3772.2	3744.9	3701.3	3650.5	3601.4	3541.5	3501.5	3456.1
15°	4082.7	4077.3	4055.5	4031.9	4002.8	3935.6	3846.6	3775.8	3695.9	3626.9	3552.4
17.5°	4509.5	4464.1	4460.5	4407.8	4329.7	4240.7	4157.2	4039.1	3924.7	3821.2	3719.5
20°	5097.9	4992.6	4963.6	4903.6	4800.1	4707.5	4525.9	4367.9	4211.7	4070.0	3941.1
22.5°	5739.0	5662.8	5591.9	5493.9	5352.2	5217.8	4987.2	4789.2	4589.4	4407.8	4264.3
25°	6634.4	6501.8	6374.7	6218.5	6022.4	5862.5	5599.2	5399.4	5137.9	4972.6	4765.6
27.5°	7791.3	7564.3	7350.0	7215.6	6870.5	6638.0	6302.1	6044.2	5728.2	5504.8	5259.6
30°	9296.9	9033.6	8715.7	8250.8	7840.3	7379.0	6963.1	6632.6	6296.6	5984.2	5700.9
32.5°	11163.9	10699.0	10195.9	9458.5	8784.7	8127.3	7573.4	7166.5	6823.3	6434.6	6035.1
35°	12742.1	12262.7	11548.9	10611.8	9780.0	9028.1	8365.2	7809.5	7360.9	6868.7	6340.2
37.5°	13988.0	13441.4	12771.2	11775.9	10896.9	10041.5	9345.9	8637.6	8049.2	7371.8	6703.4
40°	15415.5	14867.0	14129.7	13098.1	12057.5	11129.4	10313.9	9582.0	8859.2	8032.9	7173.8
42.5°	16659.6	16263.7	15517.2	14451.1	13297.9	12264.5	11372.8	10535.5	9591.1	8666.7	7649.6
45°	17956.3	17553.1	16844.8	15729.7	14503.8	13352.4	12286.3	11385.5	10270.4	9169.8	8005.6
47.5°	19102.3	18688.2	17972.7	16864.8	15562.6	14349.4	13176.2	12086.5	10791.6	9527.5	8238.1
50°	20195.6	19688.9	19033.3	17929.1	16537.9	15241.2	13968.0	12569.6	11196.6	9778.2	8396.1
52.5°	21200.0	20555.2	19934.1	18797.2	17293.4	15938.6	14518.3	12980.1	11445.4	9976.1	8503.2
55°	21770.2	21354.3	20611.5	19494.6	17831.0	16418.0	14867.0	13268.8	11692.4	10116.0	8548.6
57.5°	21946.4	21844.7	21221.8	19897.8	18147.0	16681.4	15103.1	13497.7	11857.7	10155.9	8485.1
60°	21806.6	21991.8	21650.4	20181.1	18290.5	16759.5	15219.4	13661.1	11886.7	10028.8	8292.6
62.5°	21358.0	21779.3	21735.7	20275.6	18216.0	16661.4	15206.7	13577.6	11614.3	9632.9	7860.3
65°	20620.6	21150.9	21338.0	19925.0	17796.5	16303.6	14883.4	13052.7	10857.0	8859.2	7135.7
67.5°	19233.1	20035.8	20217.4	18777.2	16699.5	15313.8	13951.7	11963.0	9454.9	7662.4	6004.2
70°	16452.5	17856.4	18101.6	16590.6	14765.3	13548.5	12393.4	10235.8	7873.0	6145.9	4607.6
72.5°	13134.4	14017.1	14518.3	13477.7	12119.2	11236.5	10361.2	7853.1	5940.6	4534.9	3171.0
75°	10268.5	10215.9	10664.5	9972.5	9173.4	8761.1	8103.7	5479.3	3979.2	3003.9	2006.9
77.5°	8779.3	8103.7	7593.3	7106.6	6632.6	6501.8	5871.6	3399.8	2459.1	1799.8	1200.5
80°	7297.3	6064.1	5132.5	4447.8	4278.9	4536.8	3843.0	2005.0	1456.6	1033.4	753.7
82.5°	5214.2	4362.4	3550.6	3116.5	2827.8	3238.2	2266.6	1113.3	790.0	619.3	499.4
85°	3379.9	3230.9	3196.4	3054.8	2704.3	2553.5	1721.7	958.9	592.1	385.0	310.6
87.5°	1300.4	1667.2	1923.3	2061.3	2228.4	1985.1	897.2	330.5	325.1	199.8	150.7
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°	3034.8	3034.8	3034.8	3034.8	3034.8	3034.8	3034.8	3034.8	3034.8	3034.8	3034.8
2.5°	3145.6	3138.3	3136.5	3131.1	3127.4	3127.4	3118.3	2953.1	2951.3	2951.3	2949.4
5°	3212.8	3203.7	3194.6	3192.8	3185.5	3185.5	3176.5	3011.2	3011.2	3011.2	3007.6
7.5°	3303.6	3285.4	3274.5	3269.1	3258.2	3263.6	3270.9	3103.8	3105.6	3103.8	3107.4
10°	3369.0	3358.1	3345.4	3341.7	3334.5	3339.9	3350.8	3185.5	3191.0	3192.8	3196.4
12.5°	3432.5	3414.4	3398.0	3392.6	3388.9	3403.5	3416.2	3256.4	3261.8	3267.3	3267.3
15°	3510.6	3479.8	3458.0	3445.2	3438.0	3452.5	3470.7	3312.7	3314.5	3319.9	3318.1
17.5°	3643.2	3597.8	3547.0	3537.9	3514.3	3519.7	3523.3	3347.2	3339.9	3327.2	3305.4
20°	3848.4	3779.4	3710.4	3681.3	3634.1	3614.1	3574.2	3349.0	3303.6	3265.4	3232.8
22.5°	4142.6	4040.9	3966.5	3917.4	3821.2	3754.0	3645.0	3339.9	3254.5	3189.2	3138.3
25°	4618.5	4496.8	4382.4	4258.9	4108.1	3973.7	3813.9	3419.8	3287.2	3174.6	3076.6
27.5°	5081.6	4889.1	4712.9	4527.7	4315.2	4113.6	3888.4	3445.2	3294.5	3149.2	2989.4
30°	5428.5	5148.8	4881.8	4611.2	4333.3	4071.8	3817.6	3358.1	3178.3	3014.8	2845.9
32.5°	5639.2	5275.9	4929.0	4593.1	4266.1	3971.9	3686.8	3207.3	3009.4	2816.9	2637.1
35°	5838.9	5388.5	4958.1	4562.2	4188.1	3861.1	3554.2	3031.2	2795.1	2589.8	2362.8
37.5°	6085.9	5506.6	4976.3	4505.9	4073.6	3699.5	3361.7	2809.6	2573.5	2321.0	2106.7
40°	6382.0	5628.3	4958.1	4393.3	3895.7	3487.0	3129.2	2577.1	2313.8	2068.6	1857.9
42.5°	6663.5	5735.4	4910.9	4242.5	3701.3	3265.4	2916.7	2370.1	2106.7	1856.1	1647.3
45°	6872.3	5826.2	4887.3	4137.2	3552.4	3114.7	2729.7	2203.0	1925.1	1672.7	1460.2
47.5°	7017.6	5880.7	4876.4	4079.1	3448.9	2958.5	2559.0	2035.9	1743.5	1489.2	1282.2
50°	7093.9	5878.9	4849.1	4015.5	3296.3	2771.5	2382.8	1867.0	1576.4	1327.6	1138.7
52.5°	7113.9	5846.2	4791.0	3899.3	3111.1	2584.4	2193.9	1690.8	1429.3	1191.4	1000.7
55°	7068.5	5766.3	4669.3	3705.0	2913.1	2386.4	2021.4	1552.8	1285.8	1060.6	911.7
57.5°	6939.5	5624.6	4440.5	3438.0	2704.3	2203.0	1823.4	1385.7	1129.6	940.8	817.3
60°	6699.8	5325.0	4082.7	3122.0	2439.1	1923.3	1551.0	1167.8	964.4	822.7	722.8
62.5°	6256.7	4854.6	3579.6	2686.1	2057.7	1560.1	1238.6	931.7	779.1	686.5	624.8
65°	5542.9	4146.3	2996.7	2115.8	1563.7	1135.1	920.8	701.0	590.3	533.9	515.8
67.5°	4524.0	3201.9	2179.4	1469.3	1058.8	795.5	641.1	512.2	459.5	437.7	430.4
70°	3289.1	2181.2	1411.2	928.1	699.2	555.7	484.9	412.3	383.2	377.8	377.8
72.5°	2065.0	1325.8	864.5	635.7	530.3	450.4	414.1	363.2	352.3	348.7	343.3
75°	1211.4	804.6	612.0	521.2	454.0	403.2	372.3	330.5	323.3	321.5	316.0
77.5°	771.9	579.4	494.0	445.0	410.5	365.0	337.8	294.2	292.4	290.6	288.8
80°	553.9	481.3	432.2	394.1	359.6	317.8	301.5	267.0	263.3	261.5	265.2
82.5°	419.5	397.7	377.8	348.7	301.5	270.6	257.9	234.3	236.1	227.0	225.2
85°	288.8	285.1	283.3	270.6	236.1	208.9	199.8	187.1	196.1	187.1	176.2
87.5°	141.7	139.8	128.9	152.6	141.7	112.6	101.7	112.6	125.3	121.7	112.6
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: P158955

CATALOG NUMBER: VST-F11-LED-E-U-SLL

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°
0°	3034.8	3034.8	3034.8	3034.8	3034.8	3034.8	3034.8	3034.8	3034.8	3034.8	3034.8
2.5°	2942.2	2934.9	2940.4	2936.7	2936.7	2934.9	2938.5	2933.1	2929.5	2933.1	2934.9
5°	3000.3	2991.2	2993.0	2980.3	2985.8	2973.0	2976.7	2967.6	2958.5	2954.9	2954.9
7.5°	3098.4	3089.3	3078.4	3076.6	3056.6	3049.3	3036.6	3029.3	3023.9	3011.2	3003.9
10°	3187.4	3172.8	3160.1	3158.3	3138.3	3120.2	3103.8	3089.3	3080.2	3062.0	3053.0
12.5°	3260.0	3245.5	3225.5	3214.6	3194.6	3172.8	3161.9	3140.1	3127.4	3107.4	3091.1
15°	3301.8	3276.3	3247.3	3227.3	3198.2	3174.6	3158.3	3141.9	3129.2	3103.8	3080.2
17.5°	3281.8	3240.0	3200.1	3163.7	3123.8	3102.0	3078.4	3058.4	3054.8	3025.7	2989.4
20°	3198.2	3149.2	3096.5	3047.5	2994.8	2964.0	2934.9	2904.0	2895.0	2860.4	2813.2
22.5°	3096.5	3040.2	2980.3	2920.4	2853.2	2809.6	2766.0	2727.9	2697.0	2646.1	2578.9
25°	2993.0	2909.5	2822.3	2746.0	2667.9	2613.4	2568.0	2526.3	2489.9	2408.2	2339.2
27.5°	2856.8	2726.0	2637.1	2549.9	2455.4	2384.6	2333.8	2275.6	2235.7	2141.2	2068.6
30°	2682.5	2551.7	2424.6	2337.4	2243.0	2166.7	2101.3	2017.7	1959.6	1890.6	1823.4
32.5°	2462.7	2331.9	2203.0	2104.9	2026.8	1932.4	1850.7	1770.8	1703.6	1636.4	1583.7
35°	2195.7	2068.6	1946.9	1848.8	1761.7	1687.2	1609.1	1540.1	1463.8	1391.2	1360.3
37.5°	1914.2	1778.0	1643.6	1558.3	1489.2	1436.6	1363.9	1307.6	1238.6	1195.0	1158.7
40°	1669.0	1523.8	1396.6	1324.0	1269.5	1209.6	1149.6	1106.0	1057.0	1013.4	986.2
42.5°	1462.0	1325.8	1216.8	1155.1	1089.7	1024.3	978.9	942.6	911.7	879.0	846.3
45°	1271.3	1140.5	1049.7	973.5	919.0	866.3	835.4	819.1	800.9	780.9	759.2
47.5°	1111.5	998.9	909.9	839.1	782.8	746.4	731.9	726.5	719.2	702.9	692.0
50°	989.8	897.2	806.4	742.8	695.6	677.4	661.1	655.6	646.6	641.1	633.8
52.5°	888.1	790.0	713.7	655.6	626.6	619.3	612.0	604.8	603.0	599.3	595.7
55°	804.6	719.2	648.4	604.8	590.3	584.8	583.0	575.7	573.9	573.9	568.5
57.5°	730.1	657.4	593.9	566.6	557.6	552.1	548.5	544.8	544.8	548.5	546.7
60°	653.8	592.1	553.9	539.4	533.9	524.9	515.8	512.2	514.0	523.1	523.1
62.5°	579.4	533.9	510.3	504.9	499.4	492.2	481.3	477.6	481.3	492.2	497.6
65°	497.6	477.6	470.4	466.8	463.1	457.7	450.4	446.8	448.6	454.0	461.3
67.5°	423.2	421.3	421.3	423.2	421.3	419.5	415.9	410.5	408.6	408.6	412.3
70°	377.8	377.8	383.2	383.2	381.4	381.4	375.9	370.5	366.9	363.2	365.0
72.5°	343.3	343.3	345.1	346.9	345.1	345.1	337.8	334.2	325.1	323.3	319.6
75°	314.2	310.6	310.6	308.7	306.9	308.7	301.5	292.4	288.8	287.0	283.3
77.5°	285.1	277.9	274.2	270.6	272.4	270.6	265.2	259.7	254.3	252.4	250.6
80°	252.4	241.5	236.1	227.0	232.5	234.3	230.7	225.2	223.4	221.6	219.8
82.5°	208.9	198.0	190.7	185.2	181.6	185.2	190.7	203.4	199.8	198.0	194.3
85°	163.5	145.3	136.2	138.0	128.9	130.8	147.1	154.4	154.4	158.0	154.4
87.5°	92.6	89.0	67.2	61.7	65.4	78.1	87.2	96.3	96.3	90.8	101.7
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-F11-LED-E-U-SLL

CANDELA DISTRIBUTION (continued):

	220°	225°	230°	235°	240°	245°	250°	255°	260°	265°	270°
0°	3034.8	3034.8	3034.8	3034.8	3034.8	3034.8	3034.8	3034.8	3034.8	3034.8	3034.8
2.5°	2934.9	2938.5	2940.4	2947.6	2951.3	2953.1	2954.9	2958.5	2960.3	2958.5	2967.6
5°	2949.4	2949.4	2945.8	2951.3	2953.1	2953.1	2949.4	2953.1	2953.1	2953.1	2962.1
7.5°	2987.6	2976.7	2971.2	2964.0	2958.5	2951.3	2942.2	2942.2	2940.4	2942.2	2947.6
10°	3027.5	3011.2	2991.2	2973.0	2956.7	2944.0	2927.6	2922.2	2920.4	2918.6	2933.1
12.5°	3058.4	3029.3	2998.5	2967.6	2934.9	2913.1	2885.9	2869.5	2867.7	2867.7	2885.9
15°	3036.6	2989.4	2929.5	2875.0	2845.9	2815.0	2784.2	2764.2	2762.4	2766.0	2776.9
17.5°	2927.6	2851.4	2798.7	2746.0	2707.9	2682.5	2662.5	2658.9	2666.1	2658.9	2673.4
20°	2742.4	2660.7	2624.3	2582.6	2568.0	2549.9	2520.8	2495.4	2495.4	2462.7	2471.8
22.5°	2502.7	2457.3	2410.0	2377.3	2366.4	2335.6	2304.7	2270.2	2266.6	2226.6	2221.2
25°	2252.0	2206.6	2168.5	2161.2	2128.5	2086.8	2057.7	2017.7	2008.7	1968.7	1963.3
27.5°	1996.0	1959.6	1921.5	1899.7	1881.5	1836.1	1810.7	1763.5	1745.3	1701.7	1696.3
30°	1752.6	1727.2	1681.8	1663.6	1629.1	1576.4	1521.9	1492.9	1478.4	1432.9	1418.4
32.5°	1523.8	1483.8	1449.3	1427.5	1383.9	1324.0	1274.9	1233.2	1205.9	1151.4	1136.9
35°	1305.8	1265.9	1249.5	1193.2	1155.1	1115.1	1047.9	1022.5	973.5	931.7	917.2
37.5°	1113.3	1075.2	1053.4	1006.1	968.0	928.1	888.1	855.4	831.8	822.7	822.7
40°	948.0	928.1	900.8	866.3	840.9	811.8	790.0	779.1	777.3	780.9	790.0
42.5°	830.0	808.2	790.0	771.9	753.7	750.1	744.6	751.9	761.0	770.0	779.1
45°	741.0	722.8	711.9	704.7	702.9	708.3	719.2	730.1	746.4	757.3	764.6
47.5°	677.4	662.9	659.3	657.4	666.5	682.9	697.4	713.7	726.5	737.4	744.6
50°	622.9	610.2	608.4	606.6	619.3	633.8	646.6	668.3	677.4	684.7	690.1
52.5°	584.8	573.9	568.5	570.3	583.0	595.7	613.9	630.2	642.9	648.4	653.8
55°	553.9	550.3	537.6	543.0	555.7	572.1	590.3	608.4	621.1	630.2	639.3
57.5°	530.3	521.2	512.2	521.2	533.9	550.3	572.1	588.4	604.8	617.5	626.6
60°	504.9	497.6	490.4	499.4	512.2	528.5	544.8	566.6	586.6	599.3	608.4
62.5°	483.1	477.6	470.4	472.2	477.6	488.5	497.6	517.6	535.8	552.1	563.0
65°	452.2	450.4	439.5	441.3	445.0	455.9	463.1	481.3	499.4	514.0	523.1
67.5°	406.8	403.2	403.2	408.6	410.5	415.9	421.3	439.5	454.0	464.9	475.8
70°	361.4	359.6	359.6	363.2	361.4	366.9	374.1	390.5	408.6	419.5	430.4
72.5°	317.8	317.8	316.0	319.6	319.6	321.5	330.5	345.1	361.4	370.5	377.8
75°	279.7	277.9	277.9	277.9	279.7	279.7	288.8	301.5	317.8	323.3	334.2
77.5°	245.2	245.2	245.2	245.2	247.0	245.2	250.6	259.7	265.2	274.2	274.2
80°	216.1	214.3	216.1	217.9	217.9	216.1	216.1	217.9	219.8	219.8	219.8
82.5°	190.7	185.2	188.9	198.0	198.0	198.0	196.1	183.4	174.4	174.4	178.0
85°	152.6	152.6	154.4	167.1	168.9	161.6	168.9	150.7	132.6	127.1	130.8
87.5°	94.4	74.5	90.8	103.5	103.5	98.1	109.0	101.7	85.4	69.0	65.4
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: P158955
CATALOG NUMBER: VST-F11-LED-E-U-SLL

REPORT N
CATALOG

CANDELA DISTRIBUTION (continued):

CANDELA

	275°	280°	285°	290°	295°	300°	305°	310°	315°	320°	325°	
0°	3034.8	3034.8	3034.8	3034.8	3034.8	3034.8	3034.8	3034.8	3034.8	3034.8	3034.8	0°
2.5°	2974.9	2976.7	2987.6	2993.0	2993.0	3000.3	3003.9	3014.8	3013.0	3013.0	3016.6	2.5°
5°	2971.2	2976.7	2987.6	2994.8	2998.5	3007.6	3014.8	3027.5	3025.7	3029.3	3031.2	5°
7.5°	2958.5	2973.0	2983.9	2998.5	3011.2	3018.4	3027.5	3038.4	3034.8	3036.6	3034.8	7.5°
10°	2947.6	2962.1	2983.9	3003.9	3022.1	3033.0	3038.4	3051.1	3049.3	3053.0	3053.0	10°
12.5°	2904.0	2929.5	2956.7	2987.6	3014.8	3043.9	3062.0	3089.3	3102.0	3118.3	3136.5	12.5°
15°	2793.2	2822.3	2865.9	2900.4	2953.1	2993.0	3045.7	3098.4	3145.6	3191.0	3243.7	15°
17.5°	2684.3	2697.0	2731.5	2778.7	2825.9	2885.9	2949.4	3043.9	3129.2	3221.9	3323.6	17.5°
20°	2482.7	2504.5	2528.1	2584.4	2640.7	2726.0	2804.1	2927.6	3053.0	3198.2	3354.4	20°
22.5°	2233.9	2255.7	2281.1	2344.7	2413.7	2500.8	2595.3	2733.3	2900.4	3089.3	3298.1	22.5°
25°	1965.1	1977.8	1997.8	2061.3	2103.1	2217.5	2331.9	2475.4	2657.0	2900.4	3143.8	25°
27.5°	1669.0	1692.7	1709.0	1738.1	1834.3	1932.4	2052.3	2206.6	2426.4	2675.2	2969.4	27.5°
30°	1385.7	1405.7	1396.6	1458.4	1521.9	1625.5	1754.4	1925.1	2135.8	2431.8	2771.5	30°
32.5°	1107.9	1122.4	1116.9	1160.5	1224.1	1327.6	1449.3	1634.5	1857.9	2173.9	2542.6	32.5°
35°	913.5	917.2	937.1	957.1	1011.6	1095.1	1198.7	1360.3	1589.1	1879.7	2270.2	35°
37.5°	822.7	830.0	842.7	869.9	909.9	969.8	1055.2	1180.5	1376.6	1632.7	1981.4	37.5°
40°	795.5	800.9	808.2	826.4	864.5	917.2	993.4	1098.8	1242.2	1458.4	1741.7	40°
42.5°	782.8	782.8	782.8	793.7	822.7	879.0	966.2	1069.7	1195.0	1358.5	1587.3	42.5°
45°	764.6	764.6	762.8	768.2	788.2	844.5	939.0	1055.2	1189.6	1345.8	1543.7	45°
47.5°	744.6	742.8	737.4	737.4	750.1	806.4	904.4	1029.8	1176.9	1356.7	1569.2	47.5°
50°	690.1	690.1	690.1	695.6	706.5	757.3	862.7	995.3	1164.2	1363.9	1609.1	50°
52.5°	659.3	661.1	666.5	666.5	677.4	730.1	840.9	988.0	1171.4	1391.2	1660.0	52.5°
55°	644.7	650.2	655.6	655.6	664.7	719.2	833.6	993.4	1198.7	1447.5	1747.1	55°
57.5°	632.0	637.5	641.1	641.1	648.4	695.6	813.6	984.4	1215.0	1502.0	1854.3	57.5°
60°	608.4	612.0	613.9	613.9	615.7	655.6	768.2	940.8	1178.7	1498.3	1912.4	60°
62.5°	564.8	572.1	573.9	575.7	575.7	613.9	710.1	869.9	1100.6	1443.8	1896.1	62.5°
65°	532.1	535.8	541.2	544.8	552.1	577.5	653.8	784.6	998.9	1334.9	1805.3	65°
67.5°	481.3	486.7	492.2	499.4	506.7	523.1	583.0	688.3	860.9	1149.6	1601.8	67.5°
70°	435.9	437.7	443.1	452.2	454.0	463.1	506.7	579.4	704.7	922.6	1289.5	70°
72.5°	379.6	383.2	390.5	401.4	401.4	408.6	434.1	472.2	552.1	704.7	951.7	72.5°
75°	330.5	334.2	339.6	339.6	330.5	332.4	350.5	377.8	437.7	530.3	693.8	75°
77.5°	274.2	281.5	287.0	276.1	272.4	277.9	287.0	306.9	350.5	421.3	521.2	77.5°
80°	227.0	230.7	232.5	234.3	230.7	236.1	243.4	256.1	285.1	339.6	412.3	80°
82.5°	181.6	185.2	190.7	198.0	198.0	217.9	219.8	219.8	236.1	270.6	323.3	82.5°
85°	134.4	141.7	148.9	158.0	159.8	170.7	165.3	163.5	168.9	201.6	223.4	85°
87.5°	69.0	74.5	78.1	85.4	76.3	79.9	79.9	74.5	65.4	81.7	90.8	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°

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NUMBER: VST-F11-LED-E-U-SLL

DISTRIBUTION (continued):

330°	335°	340°	345°	350°	355°	360°
3034.8	3034.8	3034.8	3034.8	3034.8	3034.8	3034.8
3020.3	3016.6	3020.3	3020.3	3025.7	3022.1	3214.6
3034.8	3031.2	3034.8	3038.4	3043.9	3043.9	3256.4
3036.6	3036.6	3033.0	3042.1	3049.3	3056.6	3296.3
3058.4	3058.4	3062.0	3063.9	3080.2	3098.4	3361.7
3147.4	3156.5	3172.8	3178.3	3207.3	3227.3	3528.8
3283.6	3334.5	3367.2	3378.0	3403.5	3441.6	3810.3
3421.6	3507.0	3596.0	3650.5	3683.2	3728.6	4155.4
3525.2	3685.0	3837.5	3973.7	4051.8	4140.8	4638.5
3534.2	3788.5	4046.4	4298.8	4507.7	4673.0	5292.3
3447.1	3781.2	4137.2	4524.0	4883.6	5181.5	6044.2
3336.3	3746.7	4200.8	4694.8	5167.0	5606.5	6598.1
3196.4	3688.6	4211.7	4767.4	5321.3	5849.8	6914.1
2983.9	3516.1	4080.9	4694.8	5337.7	5980.6	7117.5
2711.5	3254.5	3833.9	4533.1	5261.4	6033.3	7288.2
2433.6	2969.4	3592.4	4317.0	5139.7	6024.2	7357.2
2139.4	2671.6	3309.0	4086.3	4974.4	5940.6	7344.5
1939.7	2424.6	3049.3	3852.1	4791.0	5829.9	7259.2
1823.4	2248.4	2844.1	3637.8	4623.9	5697.3	7152.0
1821.6	2195.7	2735.1	3485.2	4455.0	5550.2	7006.7
1885.2	2228.4	2722.4	3419.8	4362.4	5443.0	6848.7
1959.6	2319.2	2789.6	3443.4	4360.6	5395.8	6737.9
2077.7	2473.6	2936.7	3545.1	4407.8	5388.5	6601.7
2228.4	2682.5	3201.9	3795.8	4591.2	5532.0	6610.8
2382.8	2927.6	3548.8	4224.4	4952.7	5866.2	6897.8
2439.1	3116.5	3901.1	4727.5	5493.9	6367.4	7489.8
2390.1	3160.1	4115.4	5117.9	6020.6	6954.1	8196.3
2208.4	2983.9	4028.2	5228.7	6323.9	7370.0	8902.8
1818.0	2546.2	3632.3	4979.9	6300.2	7455.3	9157.1
1333.1	1974.2	2953.1	4231.6	5601.0	6921.4	8775.7
962.6	1396.6	2132.2	3187.4	4427.8	5573.8	7360.9
690.1	968.0	1383.9	2094.0	3016.6	3881.1	5246.9
495.8	657.4	862.7	1256.8	1837.9	2382.8	3296.3
365.0	450.4	566.6	780.9	1082.4	1387.5	1985.1
248.8	265.2	341.4	461.3	710.1	1020.7	1347.6
94.4	107.2	125.3	188.9	317.8	365.0	257.9
0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)