

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: P158071

Luminaire Tested: **VST-E11-LED-E-U-RW-7050**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P158071
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33711)
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-RW-7050
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(11) LIGHTBARS WITH AccuLED OPTICS - RECTANGULAR WIDE
Light Source: (231) 5000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 35164.2 lumens
Efficiency: N/A
Efficacy: 130.4 lumens/watt
Luminous Opening: Rectangular (W 1.83' x L: 1' x H: 0')
IES Classification: Type I - Medium - Full Cutoff
BUG Rating: B5 - 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

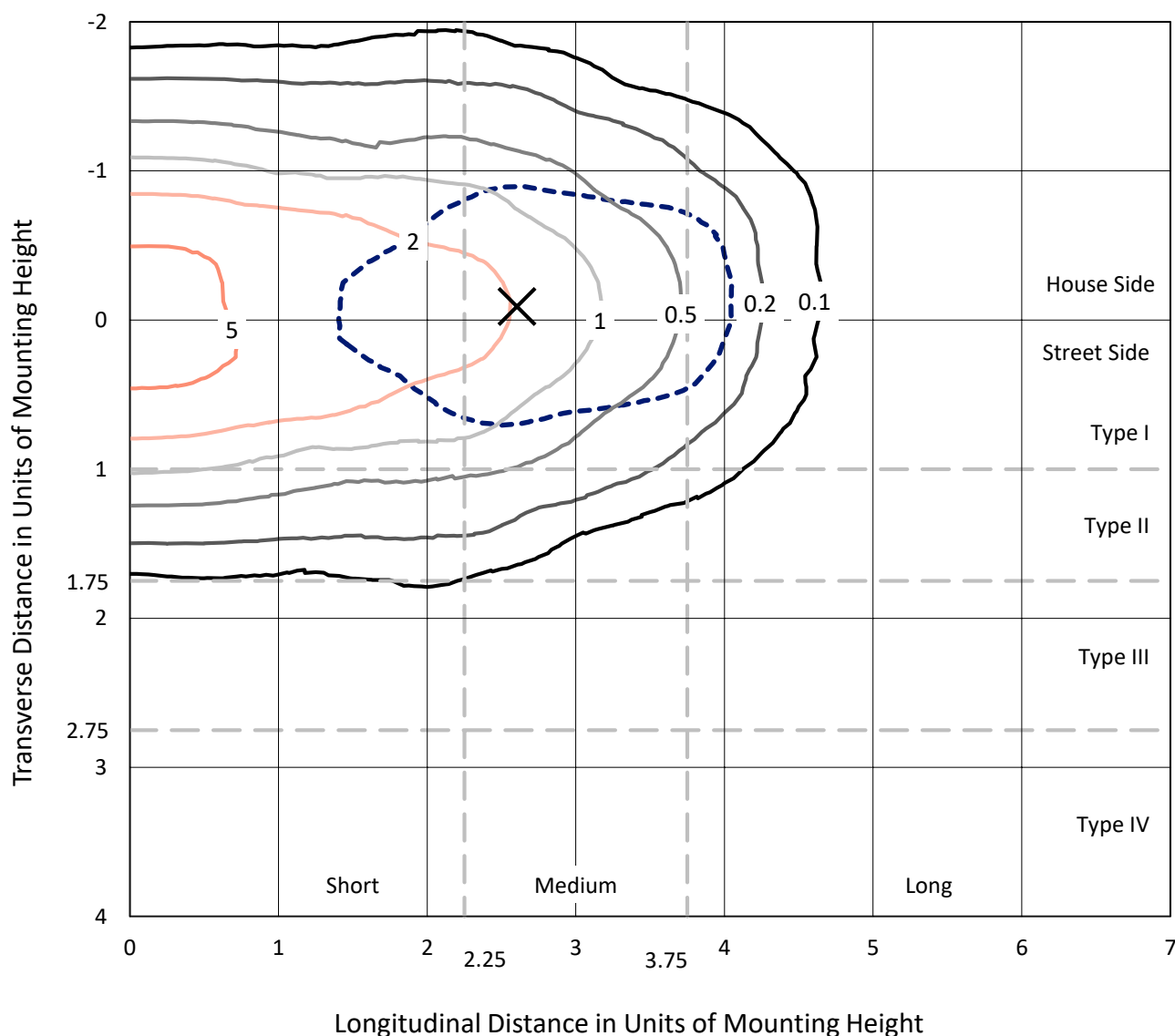


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

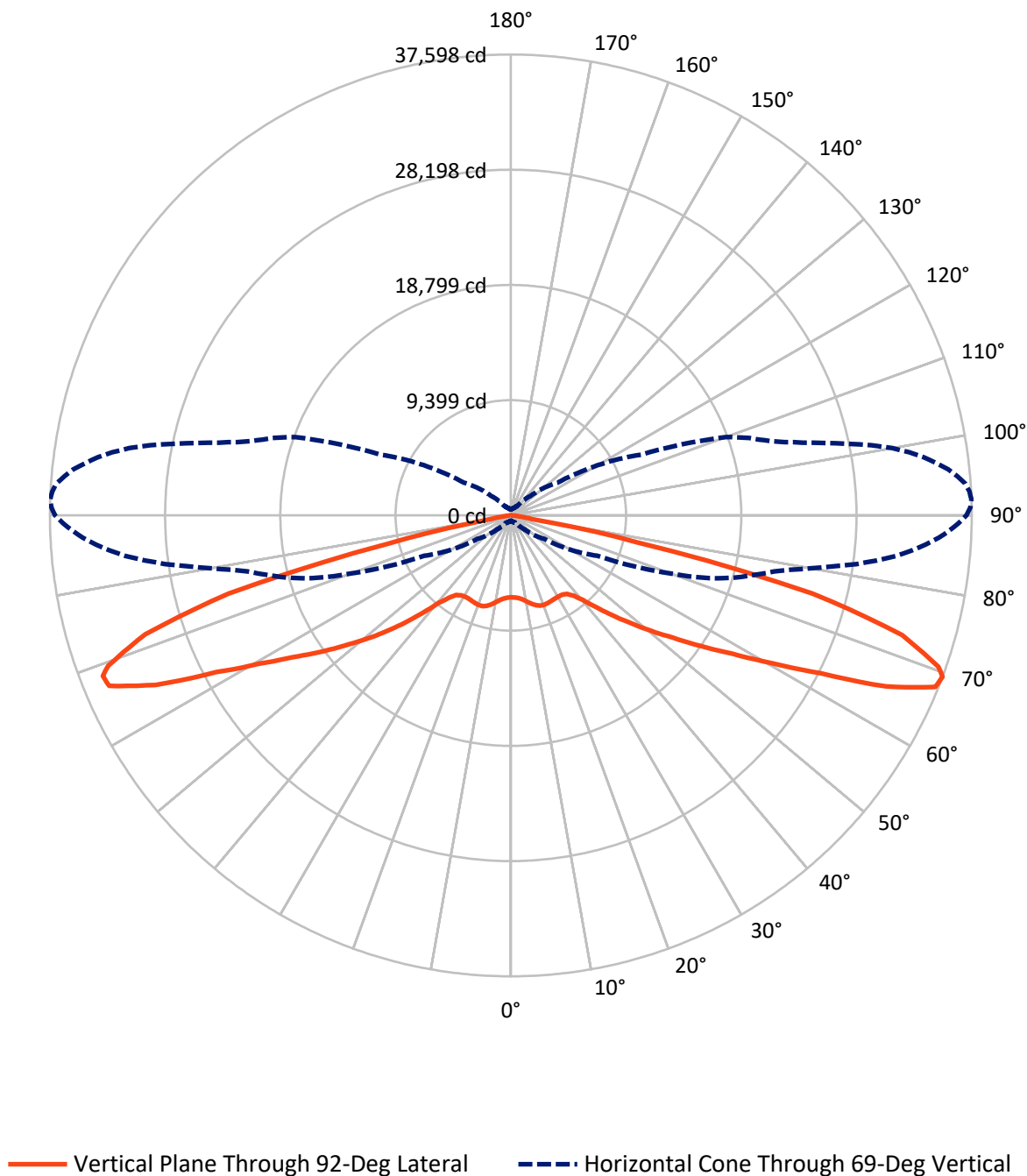


Based on 30 foot mounting height. Maximum calculated value = 7.6 fc
 Type I - Medium - Full Cutoff

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Luminous Intensity Polar Plot



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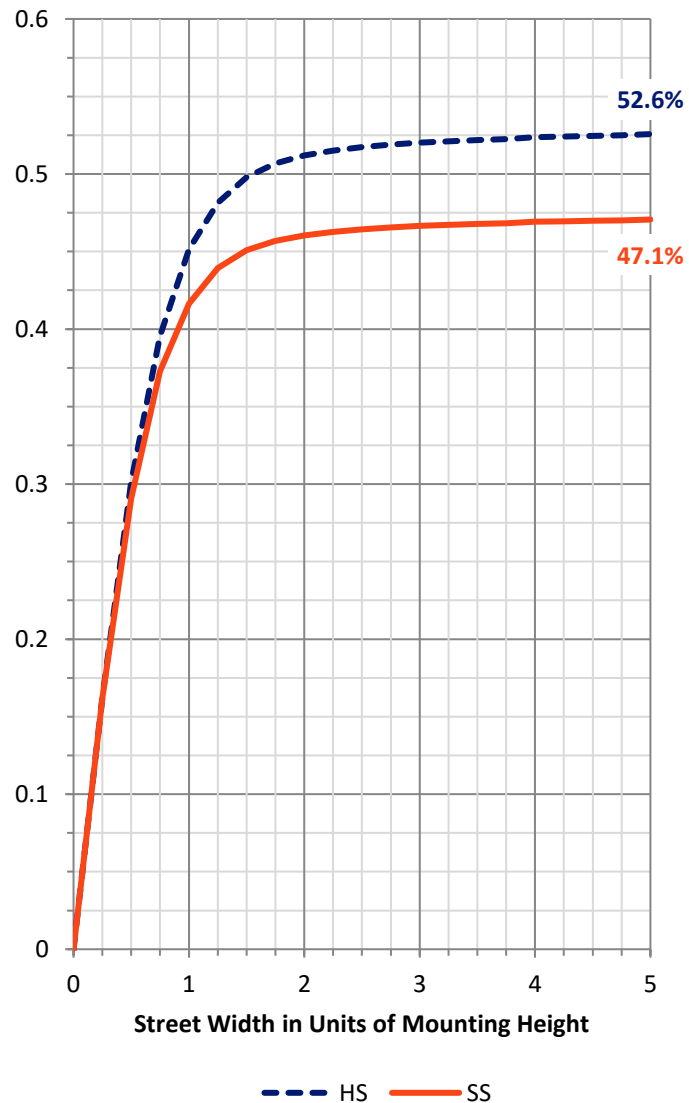
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	18649.4	0.0	18649.4
	% Fixture	53.0	0.0	53.0
Street Side	Lumens	16514.8	0.0	16514.8
	% Fixture	47.0	0.0	47.0
Total	Lumens	35164.2	0.0	35164.2
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	653.6	1.9
10°-20°	2064.8	5.9
20°-30°	3349.9	9.5
30°-40°	4174.9	11.9
40°-50°	5198.2	14.8
50°-60°	6410.7	18.2
60°-70°	7961.6	22.6
70°-80°	4892.0	13.9
80°-90°	458.5	1.3
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°	35164.2	100.0
0°-180°	35164.2	100.0

Coefficient of Utilization



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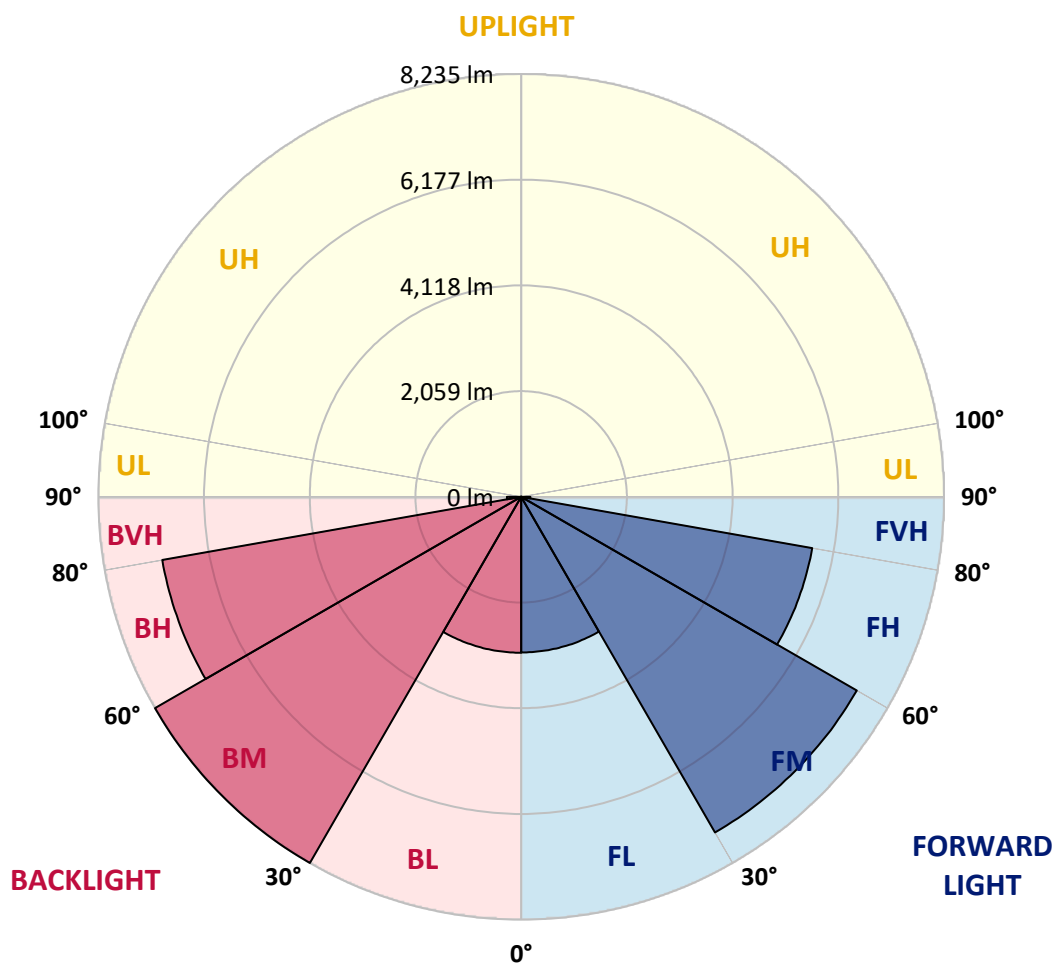
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	3031.0	8.6			
FM	(30°-60°)	7548.4	21.5			
FH	(60°-80°)	5755.9	16.4			G3/7500
FVH	(80°-90°)	179.5	0.5			G2/225
BL	(0°-30°)	3037.4	8.6	B4/5000		
BM	(30°-60°)	8235.4	23.4	B4/8500		
BH	(60°-80°)	7097.7	20.2	B5		G5
BVH	(80°-90°)	279.0	0.8			G3/500
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B5-U0-G5

Type I Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	70°	71°	72°
0°	6679.7	6679.7	6679.7	6679.7	6679.7	6679.7	6679.7	6679.7	6679.7	6679.7	6679.7
2.5°	6785.8	6767.8	6783.6	6785.8	6783.6	6783.6	6763.3	6758.8	6731.7	6738.4	6736.2
5°	6878.4	6871.6	6882.9	6887.4	6891.9	6882.9	6867.1	6860.3	6842.3	6835.5	6833.2
7.5°	6964.2	6952.9	6970.9	6986.8	6998.0	7000.3	7002.6	6991.3	6991.3	6982.2	6982.2
10°	7036.4	7027.4	7056.7	7077.0	7113.2	7133.5	7156.1	7171.9	7180.9	7183.1	7180.9
12.5°	7068.0	7061.2	7108.7	7169.6	7237.3	7284.7	7341.2	7381.8	7393.1	7390.8	7402.1
15°	7013.8	7018.4	7090.6	7210.2	7354.7	7474.4	7553.4	7587.2	7596.3	7600.8	7603.0
17.5°	6867.1	6876.1	6980.0	7174.1	7427.0	7643.7	7761.1	7761.1	7743.0	7743.0	7740.7
20°	6632.3	6641.4	6776.8	7056.7	7429.2	7761.1	7928.1	7894.2	7826.5	7813.0	7799.4
22.5°	6307.3	6343.4	6492.4	6817.4	7332.1	7794.9	8031.9	7982.3	7876.2	7846.8	7826.5
25°	5939.3	5934.8	6113.1	6478.8	7097.4	7713.6	8061.3	8052.3	7939.4	7907.8	7871.7
27.5°	5519.4	5533.0	5697.8	6068.0	6738.4	7478.9	8011.6	8131.3	8038.7	8007.1	7973.2
30°	5088.3	5101.8	5257.6	5688.7	6329.8	7142.5	7910.0	8208.0	8171.9	8147.1	8124.5
32.5°	4654.8	4659.3	4844.4	5307.2	5984.5	6740.7	7756.5	8278.0	8327.7	8316.4	8307.3
35°	4248.5	4253.0	4453.9	4923.5	5643.6	6397.6	7571.4	8379.6	8539.9	8553.4	8562.4
37.5°	3853.4	3860.2	4065.6	4557.8	5307.2	6138.0	7366.0	8535.4	8837.8	8887.5	8896.5
40°	3460.6	3467.4	3663.8	4185.3	4966.4	5910.0	7208.0	8754.3	9239.7	9307.4	9377.4
42.5°	3085.9	3110.7	3277.8	3776.7	4587.1	5627.8	7140.3	9020.7	9716.0	9822.1	9901.1
45°	2736.0	2738.3	2927.9	3395.2	4137.9	5246.3	7095.1	9323.2	10248.7	10409.0	10517.4
47.5°	2361.3	2388.4	2587.0	3040.8	3718.0	4774.5	6950.6	9677.6	10828.9	11016.3	11235.2
50°	1997.8	2036.2	2228.1	2677.3	3334.2	4286.9	6562.4	10093.0	11481.3	11725.1	11977.9
52.5°	1647.9	1645.7	1848.8	2316.1	2948.2	3873.8	5932.5	10528.7	12235.3	12497.1	12770.3
55°	1246.1	1246.1	1447.0	1873.7	2530.6	3505.8	5257.6	10799.6	12935.1	13251.1	13549.1
57.5°	855.6	878.1	1067.8	1435.7	2094.9	3169.4	4740.6	10643.8	13470.1	13862.9	14217.3
60°	634.3	656.9	796.9	1031.6	1638.9	2772.1	4352.3	9910.1	13792.9	14314.4	14774.9
62.5°	548.6	564.4	697.5	826.2	1180.6	2350.0	4009.2	8977.8	14257.9	14971.3	15612.4
65°	489.9	505.7	638.9	713.3	923.3	1889.5	3817.3	8445.1	14813.3	15903.6	16833.7
67.5°	453.7	471.8	584.7	638.9	805.9	1708.9	3668.3	8320.9	14808.8	16131.6	17319.0
69°	435.7	449.2	541.8	600.5	778.8	1654.7	3345.5	7781.4	13831.3	15251.2	16443.1
70°	424.4	437.9	517.0	575.6	769.8	1557.6	3047.5	7068.0	12718.4	14147.3	15357.3
72.5°	388.3	401.8	460.5	514.7	641.1	1040.7	2124.2	4523.9	9088.4	10108.8	11492.6
75°	343.1	358.9	404.1	449.2	485.3	602.7	1225.8	2347.7	5196.6	5970.9	7203.5
77.5°	279.9	295.7	343.1	415.4	410.9	458.3	796.9	1442.5	2433.5	3018.2	3474.2
80°	230.3	241.5	282.2	419.9	336.4	383.8	645.6	1182.9	1713.4	1894.0	2002.3
82.5°	153.5	169.3	219.0	329.6	257.3	273.1	483.1	1106.1	1449.3	1589.2	1720.2
85°	72.2	79.0	133.2	176.1	155.8	146.7	275.4	781.1	1079.1	1144.5	1194.2
87.5°	0.0	0.0	6.8	13.5	20.3	20.3	49.7	164.8	302.5	365.7	361.2
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):

	73°	74°	75°	76°	77°	78°	79°	80°	81°	82°	83°
0°	6679.7	6679.7	6679.7	6679.7	6679.7	6679.7	6679.7	6679.7	6679.7	6679.7	6679.7
2.5°	6727.1	6729.4	6727.1	6727.1	6724.9	6720.4	6720.4	6715.9	6718.1	6715.9	6720.4
5°	6831.0	6831.0	6824.2	6819.7	6826.5	6819.7	6822.0	6810.7	6810.7	6803.9	6794.9
7.5°	6980.0	6980.0	6982.2	6968.7	6977.7	6980.0	6973.2	6968.7	6964.2	6952.9	6955.1
10°	7178.6	7178.6	7185.4	7167.3	7176.4	7180.9	7183.1	7183.1	7178.6	7158.3	7160.6
12.5°	7399.9	7395.3	7397.6	7388.6	7397.6	7402.1	7406.6	7402.1	7402.1	7397.6	7395.3
15°	7600.8	7598.5	7603.0	7596.3	7598.5	7603.0	7616.6	7614.3	7612.1	7598.5	7598.5
17.5°	7738.5	7731.7	7727.2	7724.9	7724.9	7722.7	7724.9	7724.9	7718.2	7715.9	7715.9
20°	7790.4	7772.3	7761.1	7754.3	7745.2	7740.7	7736.2	7738.5	7734.0	7727.2	7729.4
22.5°	7799.4	7774.6	7752.0	7731.7	7713.6	7702.4	7691.1	7686.6	7675.3	7668.5	7668.5
25°	7842.3	7803.9	7767.8	7734.0	7706.9	7682.0	7657.2	7639.1	7625.6	7609.8	7605.3
27.5°	7937.1	7896.5	7853.6	7810.7	7774.6	7724.9	7691.1	7655.0	7623.3	7598.5	7580.5
30°	8083.9	8043.2	8000.3	7950.7	7903.3	7851.3	7794.9	7752.0	7706.9	7657.2	7630.1
32.5°	8278.0	8250.9	8208.0	8160.6	8117.7	8063.5	7995.8	7930.4	7887.5	7828.8	7785.9
35°	8555.7	8524.1	8510.5	8490.2	8447.3	8413.4	8339.0	8278.0	8237.4	8156.1	8124.5
37.5°	8934.9	8932.7	8943.9	8937.2	8943.9	8901.1	8867.2	8864.9	8806.2	8727.2	8650.5
40°	9451.9	9479.0	9539.9	9582.8	9623.4	9627.9	9675.4	9625.7	9632.5	9621.2	9542.2
42.5°	10041.1	10133.6	10205.8	10332.3	10429.3	10519.6	10580.6	10664.1	10727.3	10783.8	10797.3
45°	10698.0	10835.7	11002.7	11115.6	11305.2	11456.5	11664.2	11824.4	11991.5	12156.3	12215.0
47.5°	11411.3	11582.9	11768.0	11977.9	12217.2	12454.3	12774.8	13020.9	13289.5	13513.0	13711.6
50°	12199.2	12377.5	12625.8	12867.4	13196.9	13470.1	13890.0	14212.8	14646.2	14944.2	15201.5
52.5°	13020.9	13244.4	13522.0	13788.4	14124.8	14474.7	14941.9	15418.3	15939.7	16391.2	16765.9
55°	13824.5	14099.9	14366.3	14677.8	15050.3	15456.6	15984.9	16612.4	17262.6	17779.5	18276.2
57.5°	14540.1	14858.4	15172.2	15488.2	15869.7	16341.6	16935.3	17612.5	18357.4	19046.0	19727.7
60°	15203.8	15585.3	15969.1	16364.1	16802.1	17384.5	18097.8	18930.8	19894.7	20836.1	21727.8
62.5°	16253.5	16754.7	17231.0	17741.2	18269.4	18953.4	19795.4	20888.0	21994.2	23170.3	24084.5
65°	17675.7	18380.0	19003.1	19664.5	20348.5	21262.8	22269.6	23576.6	25161.3	26366.8	27834.1
67.5°	18382.3	19310.1	20111.5	20847.4	21693.9	22617.2	23813.6	25360.0	27050.8	28798.1	30434.7
69°	17551.5	18508.7	19395.9	20219.8	21075.4	21971.6	23222.2	24809.2	26597.1	28486.5	30084.8
70°	16474.7	17431.9	18377.8	19316.8	20097.9	20971.5	22226.7	23863.3	25648.9	27612.9	29197.6
72.5°	12621.3	13772.6	14628.2	15508.6	16413.8	17154.2	18603.5	19982.8	21842.9	23836.2	25581.2
75°	8074.8	9133.6	10068.1	10817.6	11702.5	12589.7	13659.7	15192.5	16357.4	17994.0	19409.4
77.5°	4149.2	4462.9	5363.7	5632.3	6246.3	6729.4	7318.6	7702.4	8650.5	8851.4	9686.6
80°	1966.2	1772.1	1668.2	1573.4	1600.5	1589.2	1541.8	1478.6	1557.6	1523.8	1510.2
82.5°	1713.4	1528.3	1219.0	1036.2	896.2	760.8	654.7	600.5	607.2	625.3	632.1
85°	1201.0	1128.7	880.4	668.2	521.5	404.1	325.1	311.5	320.6	345.4	336.4
87.5°	347.6	363.4	320.6	223.5	155.8	112.9	88.0	99.3	94.8	92.6	97.1
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):

	84°	85°	86°	87°	88°	89°	90°	91°	92°	93°	94°
0°	6679.7	6679.7	6679.7	6679.7	6679.7	6679.7	6679.7	6679.7	6679.7	6679.7	6679.7
2.5°	6720.4	6718.1	6711.3	6704.6	6704.6	6700.1	6704.6	6706.8	6704.6	6704.6	6700.1
5°	6797.1	6799.4	6806.2	6792.6	6790.4	6792.6	6783.6	6781.3	6774.6	6781.3	6772.3
7.5°	6943.9	6950.6	6950.6	6941.6	6939.3	6946.1	6932.6	6928.1	6921.3	6919.0	6916.8
10°	7162.8	7169.6	7158.3	7151.5	7144.8	7153.8	7142.5	7142.5	7135.7	7129.0	7126.7
12.5°	7406.6	7402.1	7397.6	7402.1	7395.3	7395.3	7388.6	7384.1	7381.8	7379.5	7375.0
15°	7596.3	7612.1	7612.1	7616.6	7612.1	7612.1	7603.0	7605.3	7600.8	7598.5	7600.8
17.5°	7718.2	7722.7	7734.0	7740.7	7740.7	7743.0	7738.5	7743.0	7738.5	7738.5	7747.5
20°	7734.0	7738.5	7749.8	7761.1	7767.8	7772.3	7772.3	7779.1	7783.6	7788.1	7799.4
22.5°	7670.8	7677.5	7691.1	7711.4	7722.7	7727.2	7736.2	7747.5	7758.8	7767.8	7783.6
25°	7605.3	7607.5	7621.1	7641.4	7655.0	7666.2	7682.0	7695.6	7711.4	7729.4	7747.5
27.5°	7569.2	7566.9	7578.2	7598.5	7609.8	7625.6	7639.1	7659.5	7677.5	7700.1	7715.9
30°	7600.8	7582.7	7585.0	7594.0	7603.0	7614.3	7630.1	7648.2	7668.5	7688.8	7706.9
32.5°	7740.7	7700.1	7673.0	7666.2	7668.5	7670.8	7679.8	7691.1	7706.9	7722.7	7729.4
35°	8043.2	7973.2	7937.1	7907.8	7883.0	7862.6	7867.2	7864.9	7864.9	7878.4	7862.6
37.5°	8618.9	8530.8	8492.5	8440.5	8411.2	8336.7	8316.4	8311.9	8282.5	8282.5	8248.7
40°	9521.8	9469.9	9440.6	9393.2	9251.0	9269.0	9167.4	9169.7	9086.2	9095.2	9036.5
42.5°	10806.3	10813.1	10777.0	10745.4	10634.8	10585.1	10490.3	10354.8	10248.7	10246.5	10129.1
45°	12291.7	12373.0	12257.9	12298.5	12201.4	12068.2	11957.6	11783.8	11619.0	11567.1	11447.4
47.5°	13844.8	13978.0	13890.0	13905.8	13858.4	13668.8	13519.8	13305.3	13090.8	12946.4	12874.1
50°	15504.0	15592.1	15589.8	15546.9	15524.4	15339.3	15100.0	14937.4	14779.4	14585.3	14522.1
52.5°	17007.5	17212.9	17350.6	17319.0	17253.6	17142.9	16930.7	16790.8	16558.3	16531.2	16558.3
55°	18617.0	18883.4	19023.4	19192.7	19194.9	19174.6	19086.6	19034.7	18818.0	18842.8	18811.2
57.5°	20140.8	20531.3	20745.8	21107.0	21231.1	21395.9	21335.0	21402.7	21271.8	21357.6	21332.7
60°	22206.4	22748.1	23104.8	23599.2	23829.5	24242.6	24323.8	24373.5	24445.7	24621.8	24522.5
62.5°	24804.7	25599.3	26339.7	27012.4	27233.7	27854.5	27956.0	28344.3	28364.6	28484.3	28265.3
65°	29057.7	30026.1	30841.0	31646.9	32112.0	32838.9	33132.3	33886.3	33656.1	33753.1	33285.8
67.5°	31843.3	32969.8	34062.4	34825.4	35597.4	36340.1	36875.2	37362.8	37358.2	37263.4	36848.1
69°	31597.3	32852.4	33929.2	34951.8	35764.5	36527.5	37170.9	37486.9	37597.5	37459.8	37164.1
70°	30746.2	32035.2	33353.6	34195.6	35080.5	35918.0	36581.7	36927.1	37003.8	36906.8	36651.7
72.5°	26813.8	28050.8	29504.6	30269.9	31339.9	31944.9	32859.2	33306.2	33385.2	33261.0	33094.0
75°	20926.4	21149.9	22630.8	23118.4	23894.9	24592.5	25161.3	25016.9	25420.9	25341.9	25278.7
77.5°	9858.2	9262.2	10221.7	10668.6	10433.9	9808.5	10718.3	10061.4	10497.1	11063.7	10919.2
80°	1625.4	1620.8	1663.7	1758.5	1645.7	1747.3	1745.0	1695.3	1699.8	1821.7	1758.5
82.5°	625.3	638.9	645.6	663.7	663.7	665.9	677.2	690.8	679.5	702.1	697.5
85°	338.6	361.2	340.9	325.1	336.4	343.1	352.2	363.4	352.2	386.0	368.0
87.5°	88.0	92.6	81.3	81.3	79.0	72.2	72.2	76.8	83.5	99.3	108.4
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-E11-LED-E-U-RW-7050

CANDELA DISTRIBUTION (continued):

	95°	96°	97°	98°	99°	100°	101°	102°	103°	104°	105°
0°	6679.7	6679.7	6679.7	6679.7	6679.7	6679.7	6679.7	6679.7	6679.7	6679.7	6679.7
2.5°	6691.0	6693.3	6695.5	6688.8	6684.3	6684.3	6682.0	6677.5	6675.2	6675.2	6675.2
5°	6767.8	6772.3	6761.0	6758.8	6754.2	6749.7	6749.7	6745.2	6747.5	6747.5	6736.2
7.5°	6921.3	6914.5	6901.0	6891.9	6901.0	6885.2	6878.4	6882.9	6878.4	6880.7	6876.1
10°	7126.7	7126.7	7110.9	7119.9	7108.7	7090.6	7097.4	7090.6	7086.1	7070.3	7079.3
12.5°	7381.8	7375.0	7366.0	7345.7	7338.9	7336.7	7316.3	7318.6	7311.8	7307.3	7300.5
15°	7605.3	7603.0	7582.7	7571.4	7569.2	7560.1	7551.1	7546.6	7535.3	7533.1	7528.5
17.5°	7754.3	7747.5	7738.5	7727.2	7727.2	7713.6	7709.1	7697.8	7695.6	7688.8	7682.0
20°	7803.9	7806.2	7797.2	7788.1	7783.6	7774.6	7767.8	7758.8	7754.3	7745.2	7738.5
22.5°	7792.7	7792.7	7783.6	7781.4	7772.3	7758.8	7749.8	7738.5	7727.2	7715.9	7702.4
25°	7756.5	7754.3	7747.5	7736.2	7724.9	7704.6	7686.6	7668.5	7652.7	7639.1	7618.8
27.5°	7724.9	7720.4	7706.9	7691.1	7668.5	7645.9	7612.1	7587.2	7566.9	7548.9	7526.3
30°	7713.6	7697.8	7677.5	7652.7	7625.6	7591.7	7555.6	7524.0	7501.4	7483.4	7474.4
32.5°	7727.2	7706.9	7675.3	7643.7	7609.8	7569.2	7533.1	7506.0	7485.6	7481.1	7481.1
35°	7851.3	7817.5	7774.6	7729.4	7686.6	7652.7	7627.9	7625.6	7612.1	7627.9	7652.7
37.5°	8214.8	8185.4	8120.0	8061.3	8031.9	8016.1	7993.6	7998.1	7966.5	8016.1	8056.8
40°	8986.8	8950.7	8874.0	8826.6	8767.9	8711.4	8756.6	8743.0	8765.6	8756.6	8799.5
42.5°	10113.3	10077.2	9955.3	9937.2	9912.4	9889.8	9889.8	9871.8	9862.7	9894.3	9858.2
45°	11483.6	11411.3	11366.2	11420.3	11345.9	11368.4	11447.4	11341.3	11366.2	11219.4	11084.0
47.5°	12905.7	12899.0	12887.7	12953.1	12964.4	12998.3	13041.2	12932.8	12736.4	12625.8	12350.4
50°	14542.4	14612.4	14639.4	14702.7	14729.7	14754.6	14686.9	14526.6	14194.7	13901.3	13576.2
52.5°	16531.2	16409.3	16576.3	16637.3	16610.2	16510.9	16267.1	16070.7	15612.4	15190.3	14686.9
55°	18847.3	18876.6	18759.3	18711.9	18619.3	18343.9	18007.5	17565.1	16984.9	16434.1	15797.5
57.5°	21206.3	21195.0	21012.2	20754.8	20441.0	20109.2	19608.1	18973.7	18296.5	17556.0	16786.3
60°	24075.5	24064.2	23694.0	23253.8	22806.8	22271.8	21486.2	20723.2	19815.7	18842.8	17926.3
62.5°	27845.4	27360.1	26996.6	26339.7	25648.9	24949.1	23885.9	22872.3	21660.1	20432.0	19362.0
65°	32676.3	31877.2	31464.1	30511.5	29441.4	28348.8	27267.5	25935.6	24303.5	22818.1	21511.1
67.5°	36249.8	35518.4	34762.2	33811.8	32638.0	31418.9	29938.1	28260.8	26407.4	24741.5	23317.0
69°	36563.6	35879.6	34972.1	34019.5	32908.8	31583.7	29967.4	28089.2	26211.0	24524.7	23122.9
70°	36087.3	35360.4	34405.5	33414.5	32172.9	30922.3	29229.2	27272.0	25391.6	23700.8	22332.8
72.5°	32534.1	31825.3	30809.4	29624.3	28351.1	27281.1	25673.8	23633.1	21587.8	20025.7	18960.2
75°	24739.2	24583.4	23863.3	23172.5	22170.2	20976.1	19506.5	18134.0	16456.7	14804.2	13811.0
77.5°	10555.8	10914.7	11289.4	11343.6	11379.7	11011.8	10783.8	10438.4	9316.4	8806.2	8280.3
80°	1950.4	1742.7	1860.1	1873.7	1950.4	1991.1	2140.0	2537.4	2582.5	2679.6	2799.2
82.5°	693.0	704.3	722.4	729.2	735.9	763.0	864.6	1036.2	1191.9	1395.1	1666.0
85°	392.8	399.6	415.4	428.9	437.9	465.0	521.5	623.1	776.6	1009.1	1368.0
87.5°	119.6	135.4	144.5	162.5	169.3	173.8	198.7	266.4	343.1	507.9	740.4
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-E11-LED-E-U-RW-7050

CANDELA DISTRIBUTION (continued):

	106°	107°	108°	109°	110°	115°	125°	135°	145°	155°	165°
0°	6679.7	6679.7	6679.7	6679.7	6679.7	6679.7	6679.7	6679.7	6679.7	6679.7	6679.7
2.5°	6675.2	6673.0	6668.5	6663.9	6666.2	6661.7	6648.1	6643.6	6627.8	6616.5	6607.5
5°	6736.2	6733.9	6724.9	6727.1	6724.9	6702.3	6686.5	6659.4	6643.6	6618.8	6609.8
7.5°	6862.6	6860.3	6844.5	6851.3	6846.8	6812.9	6785.8	6742.9	6720.4	6688.8	6663.9
10°	7052.2	7052.2	7034.2	7036.4	7036.4	6991.3	6943.9	6871.6	6819.7	6770.0	6727.1
12.5°	7282.5	7273.4	7271.2	7259.9	7250.9	7201.2	7129.0	7031.9	6934.8	6853.6	6794.9
15°	7515.0	7501.4	7494.7	7481.1	7469.8	7424.7	7327.6	7208.0	7077.0	6946.1	6849.0
17.5°	7666.2	7657.2	7643.7	7639.1	7623.3	7578.2	7510.5	7390.8	7228.3	7045.4	6898.7
20°	7722.7	7706.9	7697.8	7688.8	7679.8	7648.2	7648.2	7571.4	7390.8	7133.5	6910.0
22.5°	7686.6	7677.5	7664.0	7657.2	7648.2	7652.7	7740.7	7729.4	7521.8	7153.8	6828.7
25°	7603.0	7591.7	7580.5	7580.5	7578.2	7625.6	7837.8	7867.2	7560.1	7054.5	6650.4
27.5°	7517.2	7501.4	7506.0	7508.2	7519.5	7621.1	7943.9	7903.3	7456.3	6815.2	6343.4
30°	7465.3	7465.3	7476.6	7494.7	7517.2	7695.6	8027.4	7822.0	7187.7	6454.0	5937.0
32.5°	7487.9	7510.5	7535.3	7580.5	7614.3	7860.4	8056.8	7612.1	6797.1	6007.0	5512.6
35°	7688.8	7715.9	7763.3	7833.3	7873.9	8097.4	8056.8	7305.0	6343.4	5623.3	5074.7
37.5°	8126.8	8153.8	8210.3	8264.5	8305.1	8395.4	8022.9	6914.5	5964.1	5226.0	4681.9
40°	8831.1	8869.5	8910.1	8901.1	8874.0	8785.9	7955.2	6551.1	5614.2	4878.3	4295.9
42.5°	9822.1	9786.0	9781.5	9693.4	9603.1	9226.1	7905.5	6314.0	5314.0	4512.6	3912.1
45°	10966.6	10819.9	10668.6	10551.2	10413.5	9709.2	7892.0	6122.2	4982.2	4106.3	3494.5
47.5°	12117.9	11883.1	11589.7	11406.8	11183.3	10223.9	7932.6	5864.8	4555.5	3663.8	3104.0
50°	13246.6	12862.8	12499.4	12280.4	12027.6	10815.4	7998.1	5431.4	4045.3	3262.0	2747.3
52.5°	14291.8	13797.4	13424.9	13167.6	12858.3	11503.9	7939.4	4862.5	3602.9	2876.0	2408.7
55°	15285.1	14738.8	14352.8	14081.9	13718.4	12194.6	7515.0	4345.6	3180.7	2499.0	2027.2
57.5°	16154.2	15630.5	15228.6	14860.7	14553.7	12795.1	6677.5	3918.9	2774.4	2067.8	1614.1
60°	17170.0	16580.8	16104.5	15711.7	15350.5	13104.4	5738.4	3539.7	2341.0	1600.5	1167.1
62.5°	18540.3	17863.1	17312.2	16863.0	16391.2	13172.1	5097.3	3160.4	1857.9	1158.1	848.8
65°	20572.0	19736.7	19048.2	18429.7	17790.8	12892.2	4781.2	2747.3	1381.5	860.1	711.1
67.5°	22186.0	21319.2	20522.3	19727.7	18910.5	12373.0	4711.3	2365.8	1061.0	731.4	638.9
69°	21989.6	21163.4	20432.0	19571.9	18666.7	11720.6	4641.3	2219.1	968.4	679.5	605.0
70°	21233.4	20450.1	19707.4	19007.6	17899.2	10993.7	4456.2	2137.8	932.3	654.7	580.2
72.5°	17942.1	17034.6	16314.5	15443.1	14276.0	8169.6	3379.4	1729.2	855.6	598.2	523.7
75°	13086.3	12334.6	11616.7	10652.8	9517.3	4727.1	2103.9	988.8	627.6	541.8	474.1
77.5°	7641.4	7472.1	6779.1	6144.7	5020.5	2406.4	1207.7	591.4	487.6	492.1	417.6
80°	2876.0	3063.3	3133.3	2914.3	2693.1	1661.5	878.1	480.8	424.4	485.3	354.4
82.5°	2097.2	2433.5	2474.1	2370.3	2205.5	1548.6	702.1	386.0	345.4	521.5	304.8
85°	1749.5	1936.9	1966.2	1857.9	1803.7	1311.6	489.9	270.9	252.8	374.7	228.0
87.5°	884.9	932.3	957.2	866.9	871.4	611.8	196.4	115.1	137.7	160.3	126.4
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-E11-LED-E-U-RW-7050

CANDELA DISTRIBUTION (continued):

	175°	180°
0°	6679.7	6679.7
2.5°	6587.2	6600.7
5°	6596.2	6596.2
7.5°	6648.1	6648.1
10°	6704.6	6706.8
12.5°	6756.5	6754.2
15°	6797.1	6790.4
17.5°	6822.0	6815.2
20°	6797.1	6785.8
22.5°	6670.7	6639.1
25°	6440.5	6399.8
27.5°	6135.7	6108.6
30°	5738.4	5697.8
32.5°	5273.4	5253.0
35°	4828.6	4803.8
37.5°	4422.3	4415.5
40°	4079.2	4043.1
42.5°	3677.4	3661.6
45°	3268.8	3259.7
47.5°	2885.0	2876.0
50°	2530.6	2512.5
52.5°	2182.9	2153.6
55°	1796.9	1776.6
57.5°	1379.3	1361.2
60°	970.7	950.4
62.5°	690.8	668.2
65°	575.6	557.6
67.5°	521.5	501.1
69°	496.6	478.6
70°	480.8	467.3
72.5°	447.0	437.9
75°	408.6	401.8
77.5°	358.9	347.6
80°	300.2	289.0
82.5°	252.8	241.5
85°	169.3	153.5
87.5°	76.8	67.7
90°	0.0	0.0

(END OF REPORT)