

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: P158053

Luminaire Tested: **VST-F09-LED-E-U-RW-8030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P158053
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-F09-LED-E-U-RW-8030
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(9) LIGHTBARS WITH AccuLED OPTICS - RECTANGULAR WIDE
Light Source: (63) 3000K CCT, 80 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 19535.6 lumens
Efficiency: N/A
Efficacy: 83.2 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')
IES Classification: Type I - Medium - Full Cutoff
BUG Rating: B4 - U0 - G4

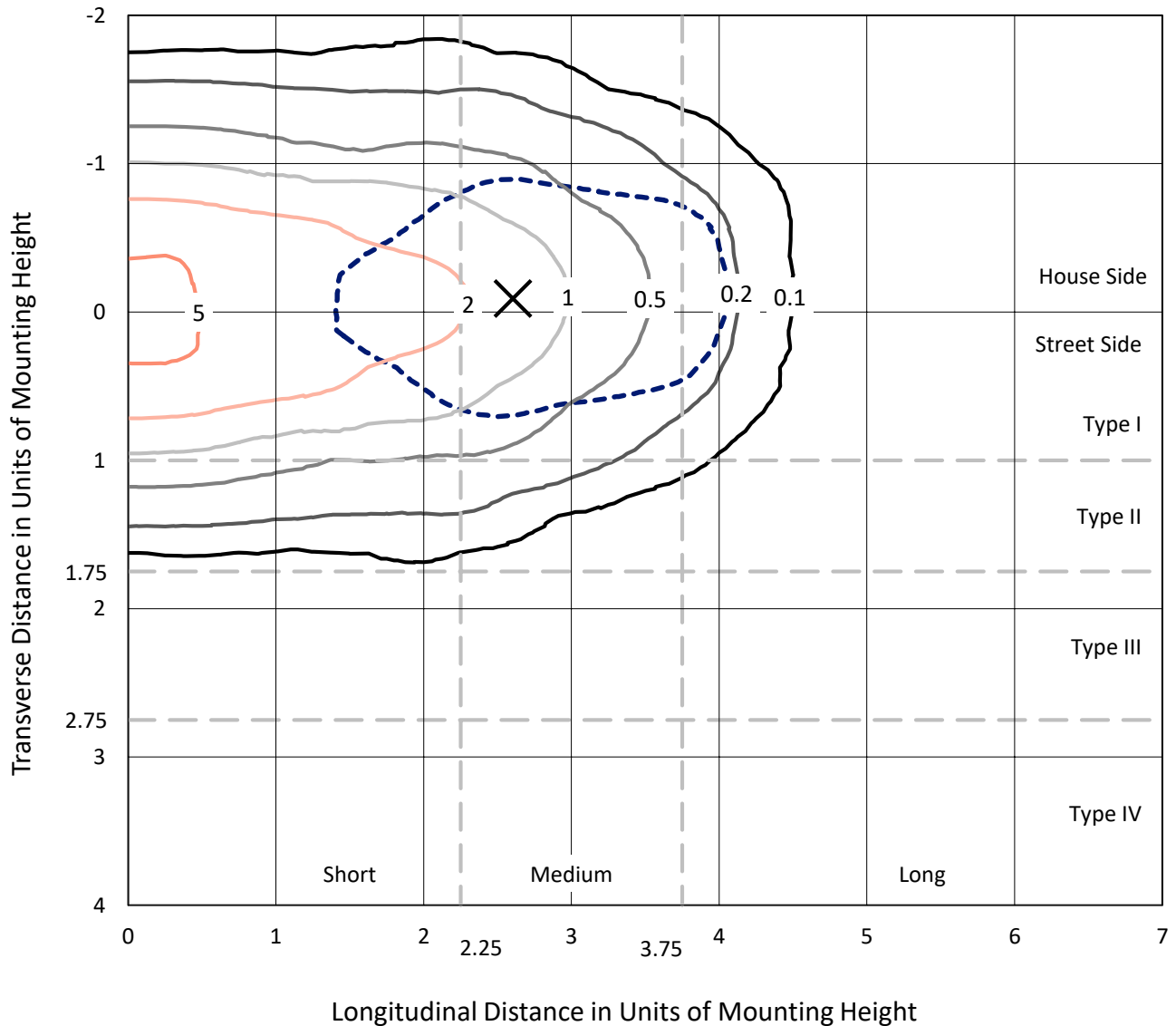
Input Watts (W): 234.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

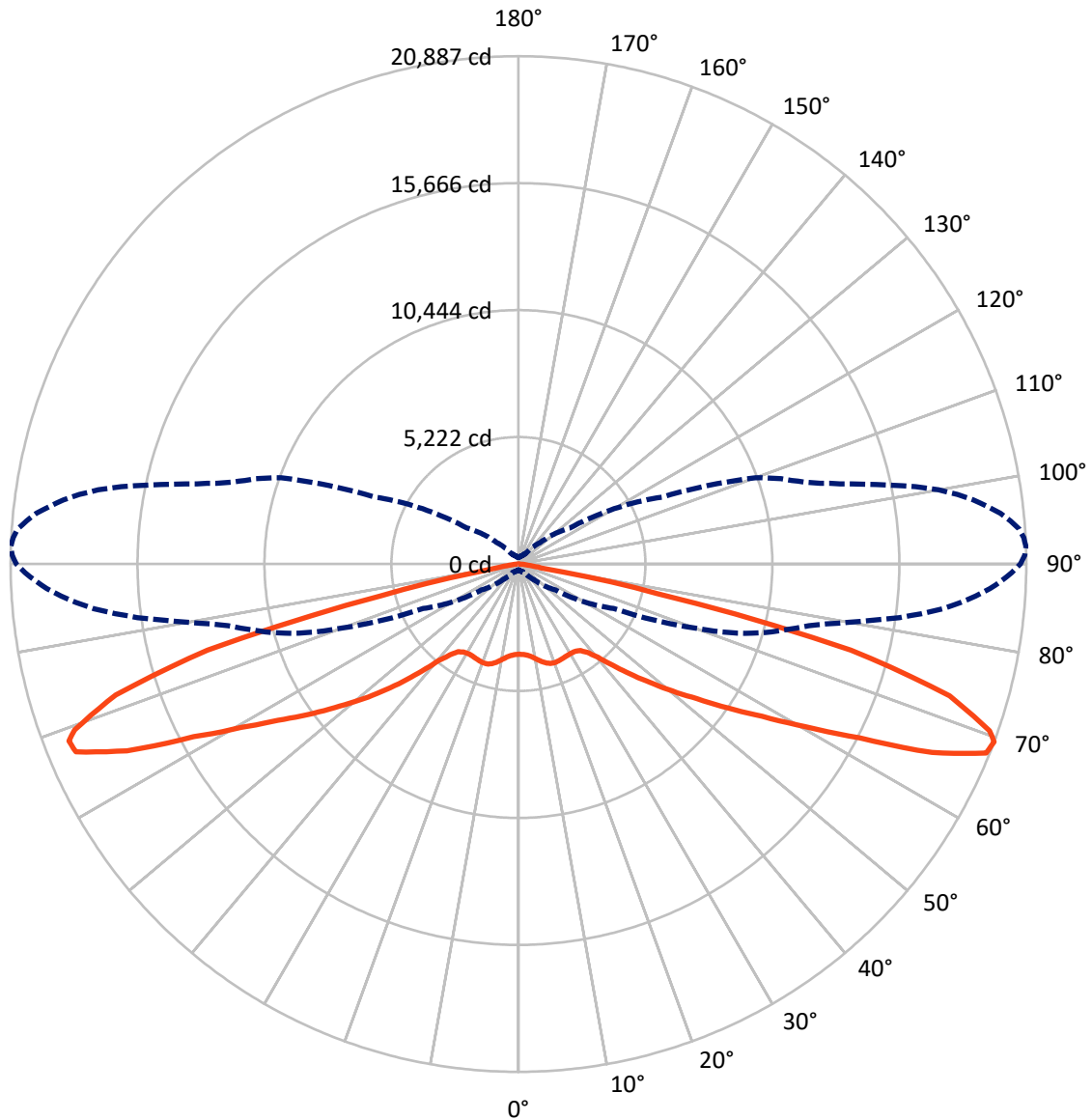
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6.1 fc
 Type I - Medium - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 92-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical



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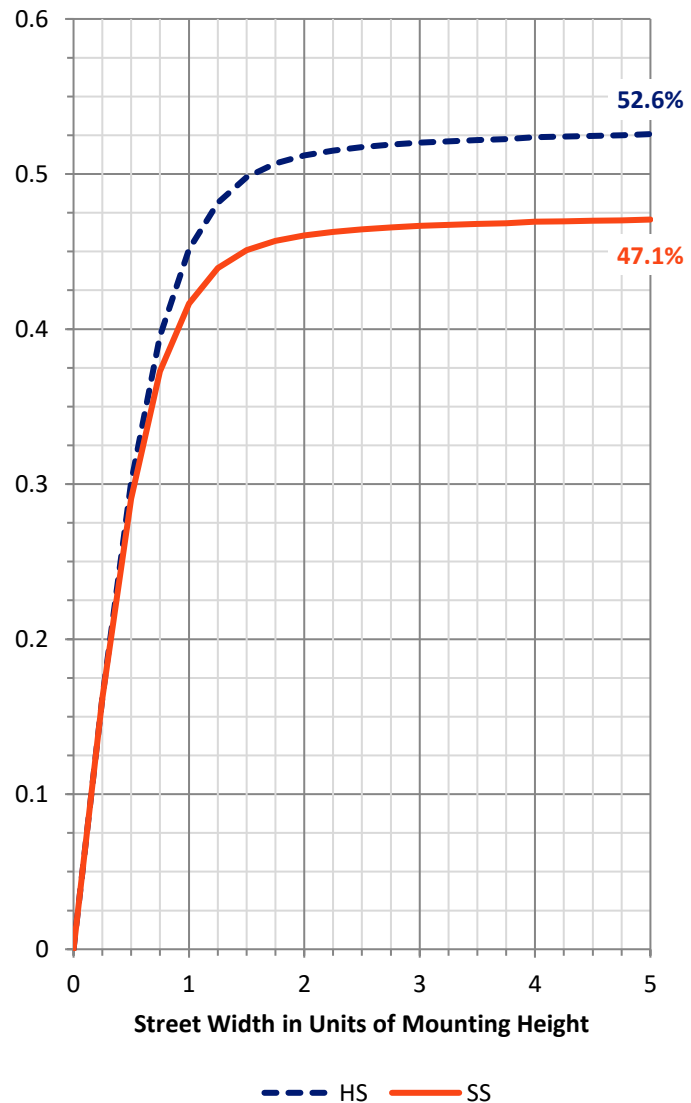
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	10360.7	0.0	10360.7
	% Fixture	53.0	0.0	53.0
Street Side	Lumens	9174.9	0.0	9174.9
	% Fixture	47.0	0.0	47.0
Total	Lumens	19535.6	0.0	19535.6
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	363.1	1.9
10°-20°	1147.1	5.9
20°-30°	1861.1	9.5
30°-40°	2319.4	11.9
40°-50°	2887.9	14.8
50°-60°	3561.5	18.2
60°-70°	4423.1	22.6
70°-80°	2717.8	13.9
80°-90°	254.7	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°	19535.6	100.0
0°-180°	19535.6	100.0



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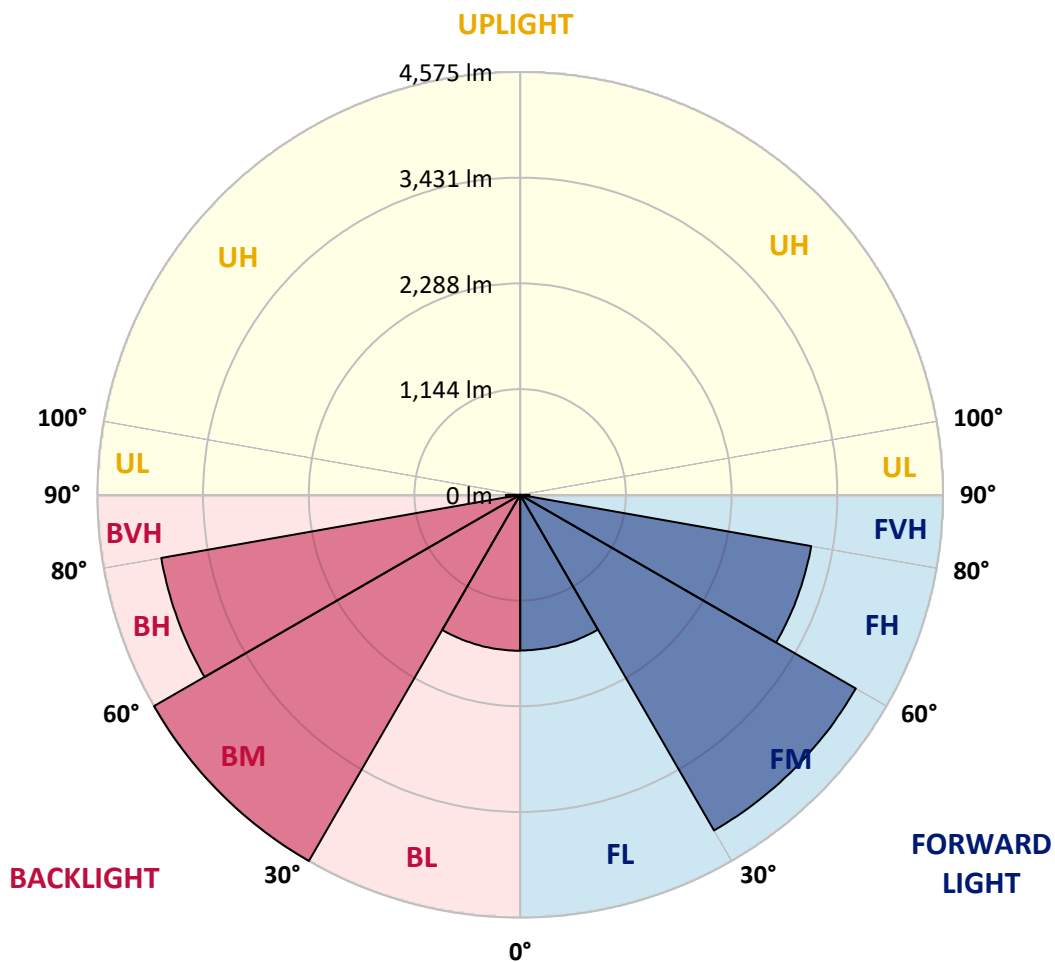
CATALOG NUMBER: VST-F09-LED-E-U-RW-8030

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1683.9	8.6			
FM (30°-60°)	4193.5	21.5			
FH (60°-80°)	3197.7	16.4			G2/5000
FVH (80°-90°)	99.7	0.5			G1/100
BL (0°-30°)	1687.4	8.6	B3/2500		
BM (30°-60°)	4575.2	23.4	B3/5000		
BH (60°-80°)	3943.1	20.2	B4/5000		G4/5000
BVH (80°-90°)	155.0	0.8			G2/225
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B4-U0-G4

Type I Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	70°	71°	72°
0°	3711.0	3711.0	3711.0	3711.0	3711.0	3711.0	3711.0	3711.0	3711.0	3711.0	3711.0
2.5°	3769.9	3759.9	3768.6	3769.9	3768.6	3768.6	3757.4	3754.8	3739.8	3743.6	3742.3
5°	3821.3	3817.6	3823.8	3826.3	3828.8	3823.8	3815.0	3811.3	3801.2	3797.5	3796.2
7.5°	3869.0	3862.7	3872.7	3881.5	3887.8	3889.0	3890.3	3884.0	3884.0	3879.0	3879.0
10°	3909.1	3904.1	3920.4	3931.7	3951.7	3963.0	3975.6	3984.4	3989.4	3990.6	3989.4
12.5°	3926.7	3922.9	3949.2	3983.1	4020.7	4047.1	4078.4	4101.0	4107.3	4106.0	4112.3
15°	3896.6	3899.1	3939.2	4005.7	4085.9	4152.4	4196.3	4215.1	4220.1	4222.6	4223.9
17.5°	3815.0	3820.1	3877.8	3985.6	4126.1	4246.5	4311.7	4311.7	4301.6	4301.6	4300.4
20°	3684.6	3689.6	3764.9	3920.4	4127.3	4311.7	4404.5	4385.7	4348.0	4340.5	4333.0
22.5°	3504.0	3524.1	3606.9	3787.5	4073.4	4330.5	4462.2	4434.6	4375.6	4359.3	4348.0
25°	3299.6	3297.1	3396.2	3599.3	3943.0	4285.3	4478.5	4473.5	4410.8	4393.2	4373.1
27.5°	3066.3	3073.9	3165.4	3371.1	3743.6	4154.9	4450.9	4517.4	4465.9	4448.4	4429.6
30°	2826.8	2834.3	2920.9	3160.4	3516.6	3968.0	4394.5	4560.0	4539.9	4526.1	4513.6
32.5°	2586.0	2588.5	2691.4	2948.4	3324.7	3744.8	4309.2	4598.9	4626.5	4620.2	4615.2
35°	2360.3	2362.8	2474.4	2735.2	3135.3	3554.2	4206.3	4655.3	4744.4	4751.9	4756.9
37.5°	2140.8	2144.6	2258.7	2532.1	2948.4	3410.0	4092.2	4741.8	4909.9	4937.5	4942.5
40°	1922.6	1926.3	2035.4	2325.1	2759.1	3283.3	4004.4	4863.5	5133.1	5170.8	5209.6
42.5°	1714.4	1728.2	1821.0	2098.1	2548.4	3126.5	3966.8	5011.5	5397.7	5456.7	5500.6
45°	1520.0	1521.3	1626.6	1886.2	2298.8	2914.6	3941.7	5179.5	5693.7	5782.8	5843.0
47.5°	1311.8	1326.9	1437.2	1689.3	2065.5	2652.5	3861.4	5376.4	6016.0	6120.1	6241.8
50°	1109.9	1131.2	1237.8	1487.4	1852.3	2381.6	3645.7	5607.2	6378.5	6513.9	6654.4
52.5°	915.5	914.3	1027.1	1286.7	1637.9	2152.1	3295.8	5849.2	6797.4	6942.8	7094.6
55°	692.3	692.3	803.9	1040.9	1405.9	1947.7	2920.9	5999.7	7186.1	7361.7	7527.3
57.5°	475.3	487.9	593.2	797.6	1163.8	1760.8	2633.7	5913.2	7483.4	7701.6	7898.5
60°	352.4	365.0	442.7	573.1	910.5	1540.1	2418.0	5505.6	7662.7	7952.4	8208.2
62.5°	304.8	313.5	387.5	459.0	655.9	1305.5	2227.3	4987.7	7921.0	8317.4	8673.5
65°	272.1	280.9	354.9	396.3	512.9	1049.7	2120.7	4691.7	8229.6	8835.3	9352.0
67.5°	252.1	262.1	324.8	354.9	447.7	949.4	2038.0	4622.7	8227.1	8962.0	9621.6
69°	242.0	249.6	301.0	333.6	432.7	919.3	1858.6	4323.0	7684.0	8472.9	9135.0
70°	235.8	243.3	287.2	319.8	427.7	865.3	1693.1	3926.7	7065.7	7859.6	8531.8
72.5°	215.7	223.2	255.8	285.9	356.2	578.2	1180.1	2513.3	5049.1	5616.0	6384.7
75°	190.6	199.4	224.5	249.6	269.6	334.9	681.0	1304.3	2887.0	3317.2	4001.9
77.5°	155.5	164.3	190.6	230.8	228.3	254.6	442.7	801.4	1351.9	1676.8	1930.1
80°	127.9	134.2	156.8	233.3	186.9	213.2	358.7	657.2	951.9	1052.2	1112.4
82.5°	85.3	94.1	121.7	183.1	143.0	151.7	268.4	614.5	805.1	882.9	955.6
85°	40.1	43.9	74.0	97.8	86.5	81.5	153.0	433.9	599.5	635.8	663.4
87.5°	0.0	0.0	3.8	7.5	11.3	11.3	27.6	91.6	168.1	203.2	200.7
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):

	73°	74°	75°	76°	77°	78°	79°	80°	81°	82°	83°
0°	3711.0	3711.0	3711.0	3711.0	3711.0	3711.0	3711.0	3711.0	3711.0	3711.0	3711.0
2.5°	3737.3	3738.5	3737.3	3737.3	3736.0	3733.5	3733.5	3731.0	3732.3	3731.0	3733.5
5°	3795.0	3795.0	3791.2	3788.7	3792.5	3788.7	3790.0	3783.7	3783.7	3779.9	3774.9
7.5°	3877.8	3877.8	3879.0	3871.5	3876.5	3877.8	3874.0	3871.5	3869.0	3862.7	3864.0
10°	3988.1	3988.1	3991.9	3981.8	3986.9	3989.4	3990.6	3990.6	3988.1	3976.8	3978.1
12.5°	4111.0	4108.5	4109.8	4104.7	4109.8	4112.3	4114.8	4112.3	4112.3	4109.8	4108.5
15°	4222.6	4221.4	4223.9	4220.1	4221.4	4223.9	4231.4	4230.2	4228.9	4221.4	4221.4
17.5°	4299.1	4295.4	4292.9	4291.6	4291.6	4290.4	4291.6	4291.6	4287.8	4286.6	4286.6
20°	4328.0	4317.9	4311.7	4307.9	4302.9	4300.4	4297.9	4299.1	4296.6	4292.9	4294.1
22.5°	4333.0	4319.2	4306.7	4295.4	4285.3	4279.1	4272.8	4270.3	4264.0	4260.3	4260.3
25°	4356.8	4335.5	4315.4	4296.6	4281.6	4267.8	4254.0	4244.0	4236.4	4227.7	4225.1
27.5°	4409.5	4386.9	4363.1	4339.3	4319.2	4291.6	4272.8	4252.7	4235.2	4221.4	4211.3
30°	4491.0	4468.4	4444.6	4417.0	4390.7	4361.8	4330.5	4306.7	4281.6	4254.0	4238.9
32.5°	4598.9	4583.8	4560.0	4533.7	4509.8	4479.7	4442.1	4405.7	4381.9	4349.3	4325.5
35°	4753.1	4735.6	4728.0	4716.8	4692.9	4674.1	4632.7	4598.9	4576.3	4531.1	4513.6
37.5°	4963.8	4962.6	4968.8	4965.1	4968.8	4945.0	4926.2	4924.9	4892.3	4848.4	4805.8
40°	5251.0	5266.1	5299.9	5323.8	5346.3	5348.8	5375.2	5347.6	5351.3	5345.1	5301.2
42.5°	5578.3	5629.8	5669.9	5740.1	5794.1	5844.2	5878.1	5924.5	5959.6	5991.0	5998.5
45°	5943.3	6019.8	6112.6	6175.3	6280.7	6364.7	6480.1	6569.1	6661.9	6753.5	6786.1
47.5°	6339.6	6434.9	6537.7	6654.4	6787.3	6919.0	7097.1	7233.8	7383.0	7507.2	7617.5
50°	6777.3	6876.4	7014.3	7148.5	7331.6	7483.4	7716.6	7896.0	8136.8	8302.3	8445.3
52.5°	7233.8	7357.9	7512.2	7660.2	7847.1	8041.4	8301.0	8565.7	8855.4	9106.2	9314.4
55°	7680.3	7833.3	7981.2	8154.3	8361.2	8587.0	8880.5	9229.1	9590.3	9877.5	10153.4
57.5°	8077.8	8254.6	8429.0	8604.5	8816.5	9078.6	9408.4	9784.7	10198.5	10581.0	10959.8
60°	8446.5	8658.5	8871.7	9091.1	9334.4	9658.0	10054.3	10517.1	11052.6	11575.6	12070.9
62.5°	9029.7	9308.1	9572.7	9856.2	10149.6	10529.6	10997.4	11604.4	12218.9	12872.3	13380.2
65°	9819.8	10211.1	10557.2	10924.7	11304.7	11812.6	12371.9	13098.1	13978.5	14648.2	15463.3
67.5°	10212.3	10727.8	11173.0	11581.8	12052.1	12565.1	13229.8	14088.8	15028.2	15998.9	16908.1
69°	9750.8	10282.6	10775.4	11233.2	11708.5	12206.4	12901.2	13782.8	14776.1	15825.8	16713.7
70°	9152.6	9684.3	10209.8	10731.5	11165.5	11650.8	12348.1	13257.3	14249.4	15340.4	16220.8
72.5°	7011.8	7651.4	8126.7	8615.8	9118.7	9530.1	10335.2	11101.5	12134.9	13242.3	14211.7
75°	4486.0	5074.2	5593.4	6009.8	6501.4	6994.2	7588.7	8440.3	9087.4	9996.6	10783.0
77.5°	2305.1	2479.4	2979.8	3129.0	3470.2	3738.5	4065.9	4279.1	4805.8	4917.4	5381.4
80°	1092.3	984.5	926.8	874.1	889.2	882.9	856.6	821.5	865.3	846.5	839.0
82.5°	951.9	849.0	677.2	575.6	497.9	422.6	363.7	333.6	337.4	347.4	351.2
85°	667.2	627.1	489.1	371.2	289.7	224.5	180.6	173.1	178.1	191.9	186.9
87.5°	193.1	201.9	178.1	124.2	86.5	62.7	48.9	55.2	52.7	51.4	53.9
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°	3711.0	3711.0	3711.0	3711.0	3711.0	3711.0	3711.0	3711.0	3711.0	3711.0	3711.0
2.5°	3733.5	3732.3	3728.5	3724.7	3724.7	3722.2	3724.7	3726.0	3724.7	3724.7	3722.2
5°	3776.2	3777.4	3781.2	3773.7	3772.4	3773.7	3768.6	3767.4	3763.6	3767.4	3762.4
7.5°	3857.7	3861.4	3861.4	3856.4	3855.2	3858.9	3851.4	3848.9	3845.1	3843.9	3842.6
10°	3979.3	3983.1	3976.8	3973.1	3969.3	3974.3	3968.0	3968.0	3964.3	3960.5	3959.3
12.5°	4114.8	4112.3	4109.8	4112.3	4108.5	4108.5	4104.7	4102.2	4101.0	4099.7	4097.2
15°	4220.1	4228.9	4228.9	4231.4	4228.9	4228.9	4223.9	4225.1	4222.6	4221.4	4222.6
17.5°	4287.8	4290.4	4296.6	4300.4	4300.4	4301.6	4299.1	4301.6	4299.1	4299.1	4304.2
20°	4296.6	4299.1	4305.4	4311.7	4315.4	4317.9	4317.9	4321.7	4324.2	4326.7	4333.0
22.5°	4261.5	4265.3	4272.8	4284.1	4290.4	4292.9	4297.9	4304.2	4310.4	4315.4	4324.2
25°	4225.1	4226.4	4233.9	4245.2	4252.7	4259.0	4267.8	4275.3	4284.1	4294.1	4304.2
27.5°	4205.1	4203.8	4210.1	4221.4	4227.7	4236.4	4244.0	4255.2	4265.3	4277.8	4286.6
30°	4222.6	4212.6	4213.9	4218.9	4223.9	4230.2	4238.9	4249.0	4260.3	4271.5	4281.6
32.5°	4300.4	4277.8	4262.8	4259.0	4260.3	4261.5	4266.5	4272.8	4281.6	4290.4	4294.1
35°	4468.4	4429.6	4409.5	4393.2	4379.4	4368.1	4370.6	4369.4	4369.4	4376.9	4368.1
37.5°	4788.2	4739.3	4718.0	4689.2	4672.9	4631.5	4620.2	4617.7	4601.4	4601.4	4582.6
40°	5289.9	5261.1	5244.7	5218.4	5139.4	5149.4	5093.0	5094.3	5047.8	5052.9	5020.3
42.5°	6003.5	6007.3	5987.2	5969.6	5908.2	5880.6	5827.9	5752.7	5693.7	5692.5	5627.3
45°	6828.7	6873.9	6809.9	6832.5	6778.5	6704.5	6643.1	6546.5	6455.0	6426.1	6359.7
47.5°	7691.5	7765.5	7716.6	7725.4	7699.1	7593.7	7510.9	7391.8	7272.7	7192.4	7152.3
50°	8613.3	8662.2	8661.0	8637.2	8624.6	8521.8	8388.8	8298.5	8210.7	8102.9	8067.8
52.5°	9448.6	9562.7	9639.2	9621.6	9585.3	9523.8	9405.9	9328.2	9199.0	9183.9	9199.0
55°	10342.8	10490.7	10568.5	10662.6	10663.8	10652.5	10603.6	10574.8	10454.4	10468.2	10450.6
57.5°	11189.3	11406.3	11525.4	11726.1	11795.0	11886.6	11852.7	11890.3	11817.6	11865.3	11851.5
60°	12336.8	12637.8	12836.0	13110.6	13238.5	13468.0	13513.2	13540.8	13580.9	13678.7	13623.5
62.5°	13780.3	14221.8	14633.1	15006.8	15129.8	15474.6	15531.1	15746.8	15758.1	15824.5	15702.9
65°	16143.1	16681.1	17133.8	17581.6	17839.9	18243.7	18406.8	18825.7	18697.7	18751.7	18492.1
67.5°	17690.7	18316.5	18923.5	19347.4	19776.3	20188.9	20486.1	20757.0	20754.5	20701.8	20471.1
69°	17554.0	18251.3	18849.5	19417.6	19869.1	20293.0	20650.4	20826.0	20887.4	20810.9	20646.6
70°	17081.2	17797.3	18529.7	18997.5	19489.1	19954.4	20323.1	20515.0	20557.6	20503.7	20362.0
72.5°	14896.5	15583.7	16391.4	16816.5	17411.0	17747.1	18255.0	18503.3	18547.2	18478.3	18385.5
75°	11625.7	11749.9	12572.6	12843.5	13274.9	13662.4	13978.5	13898.2	14122.7	14078.8	14043.7
77.5°	5476.8	5145.7	5678.7	5927.0	5796.6	5449.2	5954.6	5589.6	5831.7	6146.5	6066.2
80°	903.0	900.5	924.3	977.0	914.3	970.7	969.4	941.8	944.4	1012.1	977.0
82.5°	347.4	354.9	358.7	368.7	368.7	370.0	376.2	383.8	377.5	390.0	387.5
85°	188.1	200.7	189.4	180.6	186.9	190.6	195.6	201.9	195.6	214.5	204.4
87.5°	48.9	51.4	45.1	45.1	43.9	40.1	40.1	42.6	46.4	55.2	60.2
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):

	95°	96°	97°	98°	99°	100°	101°	102°	103°	104°	105°
0°	3711.0	3711.0	3711.0	3711.0	3711.0	3711.0	3711.0	3711.0	3711.0	3711.0	3711.0
2.5°	3717.2	3718.5	3719.7	3716.0	3713.5	3713.5	3712.2	3709.7	3708.4	3708.4	3708.4
5°	3759.9	3762.4	3756.1	3754.8	3752.3	3749.8	3749.8	3747.3	3748.6	3748.6	3742.3
7.5°	3845.1	3841.4	3833.9	3828.8	3833.9	3825.1	3821.3	3823.8	3821.3	3822.6	3820.1
10°	3959.3	3959.3	3950.5	3955.5	3949.2	3939.2	3943.0	3939.2	3936.7	3927.9	3932.9
12.5°	4101.0	4097.2	4092.2	4080.9	4077.2	4075.9	4064.6	4065.9	4062.1	4059.6	4055.8
15°	4225.1	4223.9	4212.6	4206.3	4205.1	4200.1	4195.0	4192.5	4186.3	4185.0	4182.5
17.5°	4307.9	4304.2	4299.1	4292.9	4292.9	4285.3	4282.8	4276.6	4275.3	4271.5	4267.8
20°	4335.5	4336.8	4331.7	4326.7	4324.2	4319.2	4315.4	4310.4	4307.9	4302.9	4299.1
22.5°	4329.2	4329.2	4324.2	4323.0	4317.9	4310.4	4305.4	4299.1	4292.9	4286.6	4279.1
25°	4309.2	4307.9	4304.2	4297.9	4291.6	4280.3	4270.3	4260.3	4251.5	4244.0	4232.7
27.5°	4291.6	4289.1	4281.6	4272.8	4260.3	4247.7	4228.9	4215.1	4203.8	4193.8	4181.2
30°	4285.3	4276.6	4265.3	4251.5	4236.4	4217.6	4197.6	4180.0	4167.5	4157.4	4152.4
32.5°	4292.9	4281.6	4264.0	4246.5	4227.7	4205.1	4185.0	4170.0	4158.7	4156.2	4156.2
35°	4361.8	4343.0	4319.2	4294.1	4270.3	4251.5	4237.7	4236.4	4228.9	4237.7	4251.5
37.5°	4563.8	4547.5	4511.1	4478.5	4462.2	4453.4	4440.9	4443.4	4425.8	4453.4	4476.0
40°	4992.7	4972.6	4930.0	4903.6	4871.0	4839.7	4864.7	4857.2	4869.8	4864.7	4888.6
42.5°	5618.5	5598.4	5530.7	5520.7	5506.9	5494.3	5494.3	5484.3	5479.3	5496.8	5476.8
45°	6379.7	6339.6	6314.5	6344.6	6303.2	6315.8	6359.7	6300.7	6314.5	6233.0	6157.7
47.5°	7169.8	7166.1	7159.8	7196.2	7202.4	7221.2	7245.1	7184.9	7075.8	7014.3	6861.3
50°	8079.1	8117.9	8133.0	8168.1	8183.2	8197.0	8159.3	8070.3	7885.9	7722.9	7542.3
52.5°	9183.9	9116.2	9209.0	9242.9	9227.8	9172.7	9037.2	8928.1	8673.5	8439.0	8159.3
55°	10470.7	10487.0	10421.8	10395.4	10344.0	10191.0	10004.1	9758.3	9436.0	9130.0	8776.4
57.5°	11781.2	11775.0	11673.4	11530.4	11356.1	11171.7	10893.3	10540.9	10164.7	9753.3	9325.7
60°	13375.2	13369.0	13163.3	12918.7	12670.4	12373.2	11936.8	11512.9	11008.7	10468.2	9959.0
62.5°	15469.6	15200.0	14998.1	14633.1	14249.4	13860.6	13269.9	12706.8	12033.3	11351.1	10756.6
65°	18153.4	17709.5	17480.0	16950.7	16356.3	15749.3	15148.6	14408.6	13501.9	12676.7	11950.5
67.5°	20138.7	19732.4	19312.3	18784.3	18132.1	17454.9	16632.2	15700.4	14670.7	13745.2	12953.8
69°	20313.0	19933.0	19428.9	18899.6	18282.6	17546.4	16648.5	15605.1	14561.6	13624.8	12846.0
70°	20048.4	19644.6	19114.1	18563.5	17873.8	17179.0	16238.4	15151.1	14106.4	13167.0	12407.0
72.5°	18074.4	17680.6	17116.3	16457.9	15750.5	15156.1	14263.2	13129.4	11993.2	11125.3	10533.4
75°	13743.9	13657.4	13257.3	12873.6	12316.8	11653.3	10836.9	10074.4	9142.6	8224.5	7672.7
77.5°	5864.3	6063.7	6271.9	6302.0	6322.0	6117.6	5991.0	5799.1	5175.8	4892.3	4600.1
80°	1083.6	968.2	1033.4	1040.9	1083.6	1106.1	1188.9	1409.6	1434.7	1488.6	1555.1
82.5°	385.0	391.3	401.3	405.1	408.8	423.9	480.3	575.6	662.2	775.0	925.5
85°	218.2	222.0	230.8	238.3	243.3	258.3	289.7	346.1	431.4	560.6	760.0
87.5°	66.5	75.2	80.3	90.3	94.1	96.6	110.4	148.0	190.6	282.2	411.4
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-F09-LED-E-U-RW-8030

CANDELA DISTRIBUTION (continued):

	106°	107°	108°	109°	110°	115°	125°	135°	145°	155°	165°
0°	3711.0	3711.0	3711.0	3711.0	3711.0	3711.0	3711.0	3711.0	3711.0	3711.0	3711.0
2.5°	3708.4	3707.2	3704.7	3702.2	3703.4	3700.9	3693.4	3690.9	3682.1	3675.8	3670.8
5°	3742.3	3741.1	3736.0	3737.3	3736.0	3723.5	3714.7	3699.7	3690.9	3677.1	3672.1
7.5°	3812.5	3811.3	3802.5	3806.3	3803.8	3784.9	3769.9	3746.1	3733.5	3716.0	3702.2
10°	3917.9	3917.9	3907.9	3909.1	3909.1	3884.0	3857.7	3817.6	3788.7	3761.1	3737.3
12.5°	4045.8	4040.8	4039.5	4033.3	4028.2	4000.7	3960.5	3906.6	3852.7	3807.5	3774.9
15°	4175.0	4167.5	4163.7	4156.2	4149.9	4124.8	4070.9	4004.4	3931.7	3858.9	3805.0
17.5°	4259.0	4254.0	4246.5	4244.0	4235.2	4210.1	4172.5	4106.0	4015.7	3914.1	3832.6
20°	4290.4	4281.6	4276.6	4271.5	4266.5	4249.0	4249.0	4206.3	4106.0	3963.0	3838.9
22.5°	4270.3	4265.3	4257.8	4254.0	4249.0	4251.5	4300.4	4294.1	4178.7	3974.3	3793.7
25°	4223.9	4217.6	4211.3	4211.3	4210.1	4236.4	4354.3	4370.6	4200.1	3919.1	3694.6
27.5°	4176.2	4167.5	4170.0	4171.2	4177.5	4233.9	4413.3	4390.7	4142.4	3786.2	3524.1
30°	4147.4	4147.4	4153.7	4163.7	4176.2	4275.3	4459.7	4345.5	3993.1	3585.5	3298.3
32.5°	4159.9	4172.5	4186.3	4211.3	4230.2	4366.9	4476.0	4228.9	3776.2	3337.2	3062.6
35°	4271.5	4286.6	4312.9	4351.8	4374.4	4498.5	4476.0	4058.3	3524.1	3124.0	2819.3
37.5°	4514.8	4529.9	4561.2	4591.3	4613.9	4664.1	4457.2	3841.4	3313.4	2903.3	2601.1
40°	4906.1	4927.5	4950.0	4945.0	4930.0	4881.1	4419.5	3639.5	3119.0	2710.2	2386.6
42.5°	5456.7	5436.6	5434.1	5385.2	5335.0	5125.6	4391.9	3507.8	2952.2	2507.0	2173.4
45°	6092.5	6011.0	5927.0	5861.8	5785.3	5394.0	4384.4	3401.2	2767.9	2281.3	1941.4
47.5°	6732.1	6601.7	6438.7	6337.1	6212.9	5679.9	4407.0	3258.2	2530.8	2035.4	1724.4
50°	7359.2	7146.0	6944.1	6822.4	6682.0	6008.5	4443.4	3017.4	2247.4	1812.2	1526.3
52.5°	7939.9	7665.2	7458.3	7315.3	7143.5	6391.0	4410.8	2701.4	2001.6	1597.8	1338.2
55°	8491.7	8188.2	7973.7	7823.2	7621.3	6774.8	4175.0	2414.2	1767.1	1388.3	1126.2
57.5°	8974.5	8683.6	8460.3	8255.9	8085.3	7108.4	3709.7	2177.2	1541.3	1148.8	896.7
60°	9538.9	9211.5	8946.9	8728.7	8528.0	7280.2	3188.0	1966.5	1300.5	889.2	648.4
62.5°	10300.1	9923.9	9617.9	9368.3	9106.2	7317.8	2831.8	1755.8	1032.1	643.4	471.6
65°	11428.8	10964.8	10582.3	10238.7	9883.8	7162.3	2656.2	1526.3	767.5	477.8	395.0
67.5°	12325.5	11843.9	11401.2	10959.8	10505.8	6873.9	2617.4	1314.3	589.4	406.3	354.9
69°	12216.4	11757.4	11351.1	10873.3	10370.4	6511.4	2578.5	1232.8	538.0	377.5	336.1
70°	11796.3	11361.1	10948.5	10559.7	9943.9	6107.6	2475.6	1187.7	518.0	363.7	322.3
72.5°	9967.8	9463.6	9063.6	8579.5	7931.1	4538.7	1877.4	960.7	475.3	332.3	291.0
75°	7270.2	6852.5	6453.7	5918.2	5287.4	2626.1	1168.8	549.3	348.6	301.0	263.4
77.5°	4245.2	4151.2	3766.1	3413.7	2789.2	1336.9	671.0	328.6	270.9	273.4	232.0
80°	1597.8	1701.8	1740.7	1619.1	1496.2	923.0	487.9	267.1	235.8	269.6	196.9
82.5°	1165.1	1351.9	1374.5	1316.8	1225.3	860.3	390.0	214.5	191.9	289.7	169.3
85°	971.9	1076.0	1092.3	1032.1	1002.0	728.6	272.1	150.5	140.5	208.2	126.7
87.5°	491.6	518.0	531.7	481.6	484.1	339.9	109.1	64.0	76.5	89.0	70.2
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: P158053

CATALOG NUMBER: VST-F09-LED-E-U-RW-8030

CANDELA DISTRIBUTION (continued):

	175°	180°
0°	3711.0	3711.0
2.5°	3659.5	3667.1
5°	3664.6	3664.6
7.5°	3693.4	3693.4
10°	3724.7	3726.0
12.5°	3753.6	3752.3
15°	3776.2	3772.4
17.5°	3790.0	3786.2
20°	3776.2	3769.9
22.5°	3705.9	3688.4
25°	3578.0	3555.4
27.5°	3408.7	3393.7
30°	3188.0	3165.4
32.5°	2929.6	2918.3
35°	2682.6	2668.8
37.5°	2456.8	2453.1
40°	2266.2	2246.1
42.5°	2043.0	2034.2
45°	1816.0	1811.0
47.5°	1602.8	1597.8
50°	1405.9	1395.8
52.5°	1212.7	1196.4
55°	998.3	987.0
57.5°	766.3	756.2
60°	539.3	528.0
62.5°	383.8	371.2
65°	319.8	309.8
67.5°	289.7	278.4
69°	275.9	265.9
70°	267.1	259.6
72.5°	248.3	243.3
75°	227.0	223.2
77.5°	199.4	193.1
80°	166.8	160.5
82.5°	140.5	134.2
85°	94.1	85.3
87.5°	42.6	37.6
90°	0.0	0.0

(END OF REPORT)