

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: P158709

Luminaire Tested: **VST-E09-LED-E-U-SL4-7030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P158709
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33714)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: VST-E09-LED-E-U-SL4-7030
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(9) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 W/ SPILL LIGHT CONTROL
Light Source: (189) 3000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 23846.1 lumens
Efficiency: N/A
Efficacy: 105.7 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')
IES Classification: Type IV - Short - Full Cutoff
BUG Rating: B3 - U0 - G4

Input Watts (W): 225.7
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



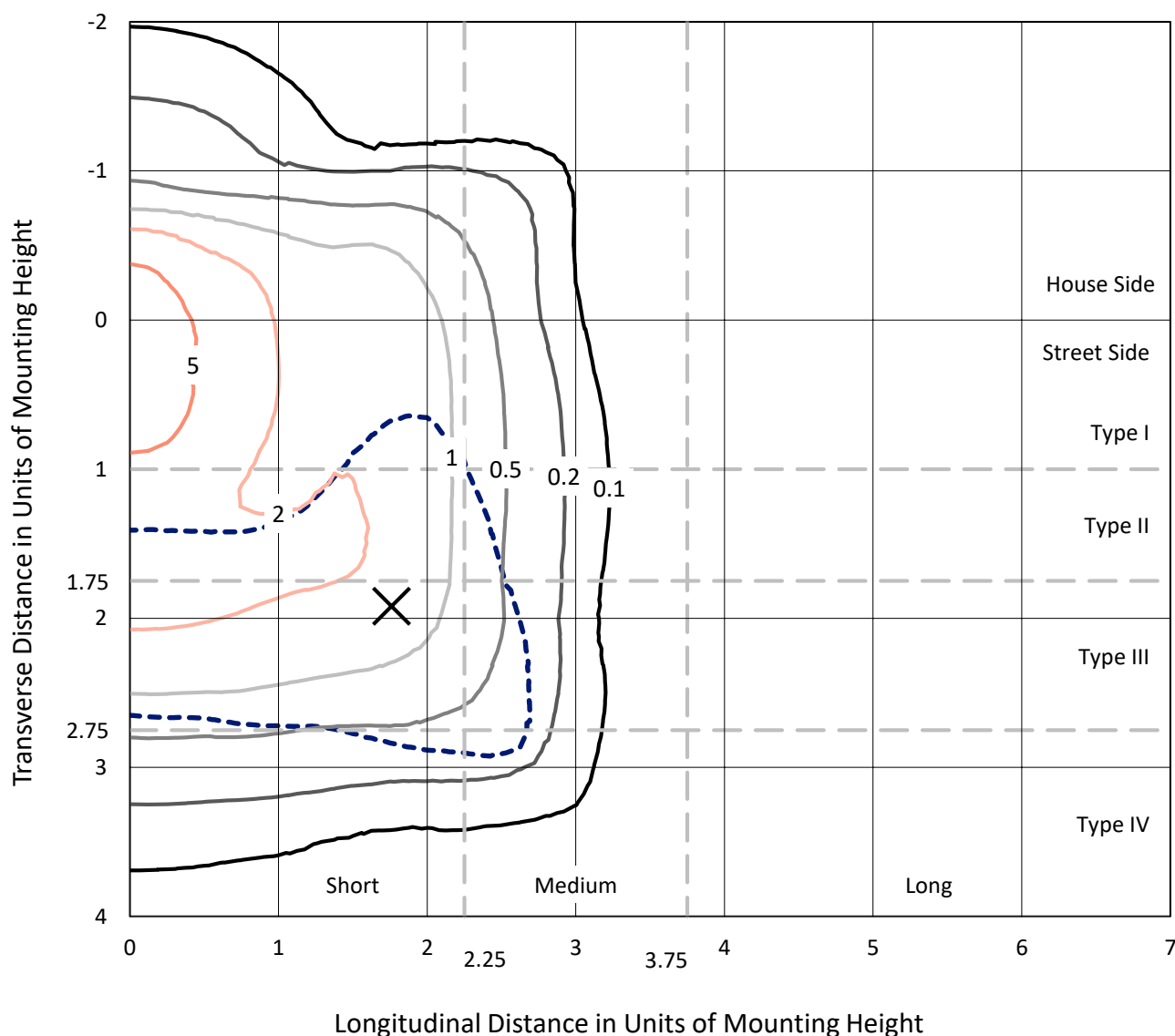
REPORT NUMBER: P158709

CATALOG NUMBER: VST-E09-LED-E-U-SL4-7030

Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

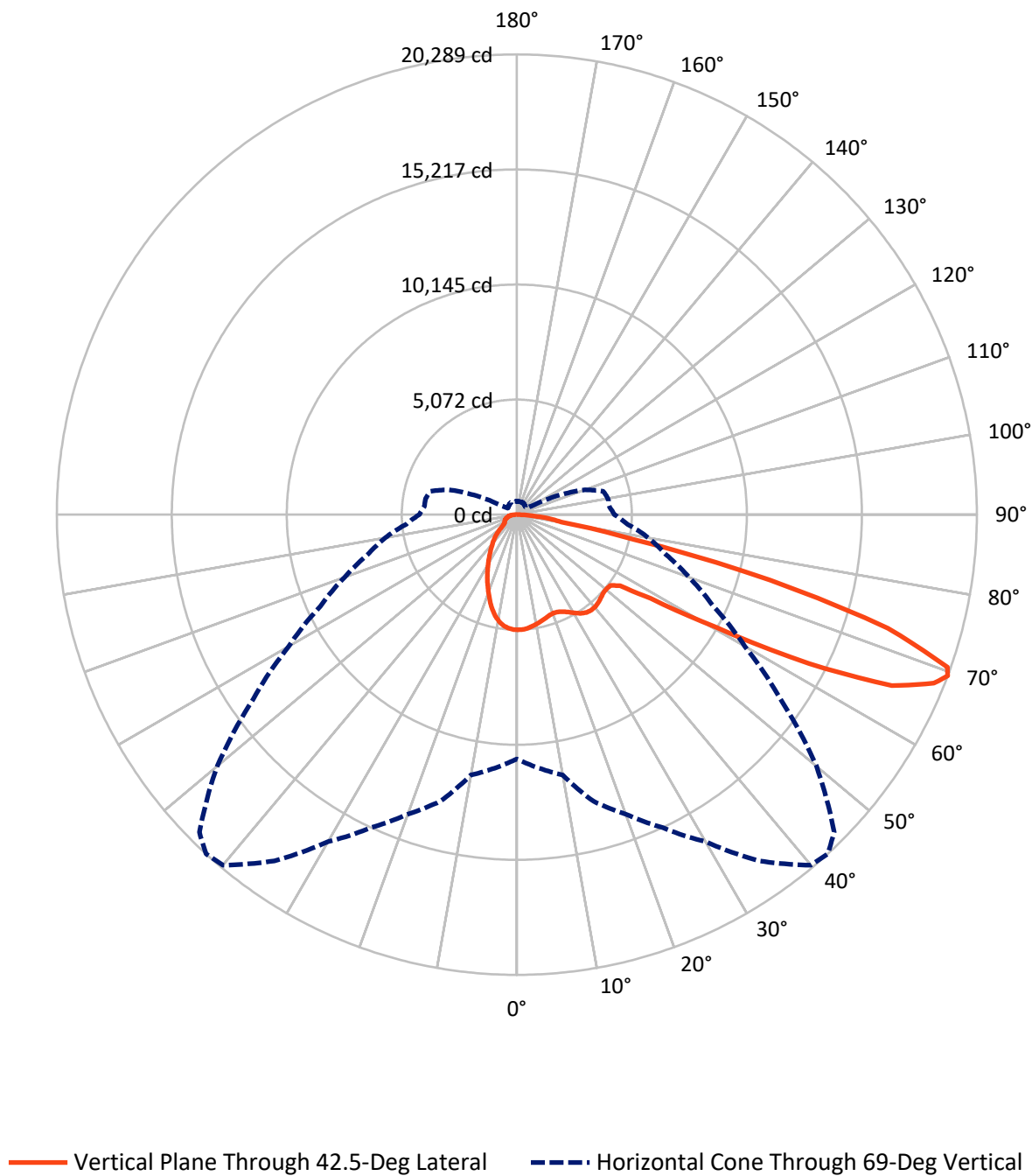


Based on 25 foot mounting height. Maximum calculated value = 8.1 fc
 Type IV - Short - Full Cutoff

REPORT NUMBER: P158709

CATALOG NUMBER: VST-E09-LED-E-U-SL4-7030

Luminous Intensity Polar Plot



REPORT NUMBER: P158709

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	5301.4	0.0	5301.4
	% Fixture	22.2	0.0	22.2
Street Side	Lumens	18544.8	0.0	18544.8
	% Fixture	77.8	0.0	77.8
Total	Lumens	23846.1	0.0	23846.1
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	472.7	2.0
10°-20°	1274.1	5.3
20°-30°	1857.9	7.8
30°-40°	2368.4	9.9
40°-50°	2755.7	11.6
50°-60°	4192.9	17.6
60°-70°	7406.5	31.1
70°-80°	3056.4	12.8
80°-90°	461.5	1.9
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°	23846.1	100.0
0°-180°	23846.1	100.0

Coefficient of Utilization



REPORT NUMBER: P158709

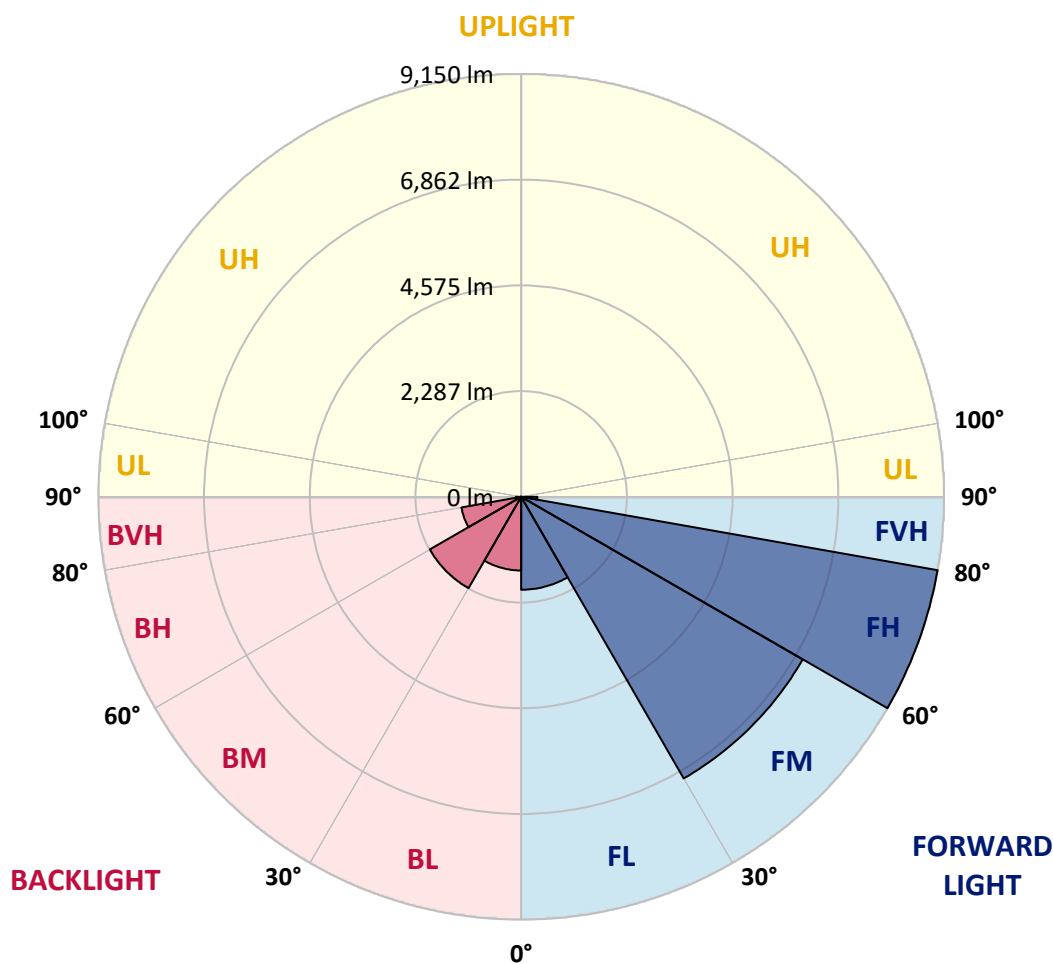
CATALOG NUMBER: VST-E09-LED-E-U-SL4-7030

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2010.8	8.4			
FM	(30°-60°)	7035.2	29.5			
FH	(60°-80°)	9149.7	38.4			G4/12000
FVH	(80°-90°)	349.0	1.5			G3/500
BL	(0°-30°)	1593.9	6.7	B3/2500		
BM	(30°-60°)	2281.8	9.6	B2/2500		
BH	(60°-80°)	1313.1	5.5	B3/2500		G3/2500
BVH	(80°-90°)	112.5	0.5			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G4

Type IV Short





REPORT NUMBER: P158709

CATALOG NUMBER: VST-E09-LED-E-U-SL4-7030

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	42.5°	45°
0°	5078.4	5078.4	5078.4	5078.4	5078.4	5078.4	5078.4	5078.4	5078.4	5078.4	5078.4
2.5°	5062.0	5080.1	5073.5	5073.5	5078.4	5070.2	5070.2	5073.5	5065.3	5070.2	5068.5
5°	5043.9	5053.8	5050.5	5050.5	5050.5	5043.9	5040.6	5039.0	5027.4	5027.4	5022.5
7.5°	5004.4	5007.7	5012.6	5006.1	5004.4	5002.8	4991.3	4984.7	4971.5	4960.0	4963.3
10°	4951.8	4950.2	4958.4	4953.5	4946.9	4942.0	4932.1	4920.6	4905.8	4891.0	4889.3
12.5°	4892.6	4891.0	4897.6	4894.3	4889.3	4879.5	4871.3	4851.5	4828.5	4810.4	4808.8
15°	4854.8	4849.9	4856.5	4849.9	4841.7	4831.8	4817.0	4792.3	4751.2	4733.2	4718.4
17.5°	4891.0	4882.8	4886.1	4877.8	4866.3	4840.0	4805.5	4752.9	4693.7	4662.5	4639.5
20°	5017.6	5002.8	5006.1	4997.9	4971.5	4937.0	4871.3	4779.2	4678.9	4627.9	4591.8
22.5°	5198.4	5186.9	5191.8	5183.6	5157.3	5104.7	5006.1	4874.6	4731.5	4657.5	4600.0
25°	5473.0	5482.8	5486.1	5448.3	5433.5	5336.5	5200.1	5017.6	4826.9	4739.7	4660.8
27.5°	5782.1	5782.1	5796.9	5782.1	5752.5	5639.0	5446.7	5226.4	4981.4	4863.0	4767.7
30°	6082.9	6079.6	6107.6	6104.3	6056.6	5928.4	5709.7	5441.7	5162.3	5029.1	4907.4
32.5°	6401.9	6411.7	6429.8	6423.2	6360.8	6183.2	5920.2	5629.2	5334.9	5188.6	5052.1
35°	6747.1	6752.0	6758.6	6755.3	6628.7	6405.1	6074.7	5749.2	5443.4	5298.7	5157.3
37.5°	7092.3	7087.4	7079.2	7008.5	6863.8	6553.1	6168.4	5818.2	5497.6	5341.5	5195.1
40°	7401.4	7373.5	7347.2	7237.0	7015.1	6637.0	6204.6	5834.7	5492.7	5331.6	5188.6
42.5°	7570.8	7539.5	7485.3	7347.2	7077.6	6645.2	6179.9	5785.3	5441.7	5282.3	5140.9
45°	7602.0	7579.0	7526.4	7371.8	7062.8	6592.6	6104.3	5704.8	5366.1	5206.6	5073.5
47.5°	7528.0	7509.9	7459.0	7306.1	6998.6	6513.6	6017.2	5619.3	5292.1	5142.5	5014.3
50°	7414.6	7398.1	7358.7	7218.9	6926.3	6459.4	5972.8	5574.9	5267.5	5131.0	5012.6
52.5°	7598.7	7611.9	7496.8	7343.9	7003.6	6507.1	6022.1	5620.9	5311.9	5177.1	5053.8
55°	10461.0	10442.9	9750.7	9170.4	8133.0	7192.6	6490.6	5985.9	5655.5	5520.7	5405.6
57.5°	13592.8	13530.4	13246.0	12703.4	11588.8	10100.9	8747.9	7597.1	7143.3	6949.3	6962.5
60°	14615.4	14638.4	14577.6	14385.3	13985.8	13211.4	12182.3	11317.5	10465.9	10050.0	10097.6
62.5°	15182.6	15223.7	15276.3	15233.6	15103.7	14924.5	14794.6	14873.5	14755.2	14456.0	14217.6
65°	15261.5	15345.4	15519.6	15657.7	15725.2	15894.5	16292.3	17245.9	18117.2	18174.8	17755.5
67.5°	13699.7	13931.5	14309.6	14949.2	15496.6	16098.3	17058.5	18508.5	19794.1	19836.9	19445.6
69°	10771.7	11217.2	11659.5	13088.1	14049.9	15228.7	16649.1	18630.2	20170.6	20289.0	19795.8
70°	8631.2	8895.8	9277.3	10712.5	12149.4	13652.0	15710.4	18229.0	19912.5	20150.9	19606.7
72.5°	5182.0	5283.9	5415.4	5930.0	6669.8	8008.1	10737.2	14862.0	16797.1	17116.0	16423.9
75°	3350.5	3344.0	3355.5	3498.5	3541.2	3797.7	4657.5	7646.4	10957.5	11536.2	10707.6
77.5°	2523.6	2546.6	2510.4	2523.6	2512.1	2581.1	2607.4	2737.3	4325.4	5328.3	4764.4
80°	2227.7	2239.2	2240.8	2234.2	2153.7	2147.1	2189.8	2115.9	1966.3	1995.9	1912.0
82.5°	1270.8	1269.2	1284.0	1395.8	1441.8	1593.1	1655.5	1690.1	1560.2	1463.2	1323.4
85°	823.7	830.2	846.7	881.2	846.7	859.8	845.0	874.6	802.3	744.7	665.8
87.5°	337.0	337.0	358.4	389.6	363.3	356.8	305.8	302.5	256.5	231.8	180.8
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: P158709

CATALOG NUMBER: VST-E09-LED-E-U-SL4-7030

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°
0°	5078.4	5078.4	5078.4	5078.4	5078.4	5078.4	5078.4	5078.4	5078.4	5078.4	5078.4
2.5°	5058.7	5068.5	5063.6	5070.2	5065.3	5065.3	5058.7	5057.0	5062.0	5055.4	5057.0
5°	5014.3	5015.9	5007.7	5011.0	5001.1	4997.9	4992.9	4979.8	4988.0	4979.8	4983.1
7.5°	4950.2	4945.2	4933.7	4917.3	4905.8	4900.9	4891.0	4872.9	4876.2	4861.4	4869.6
10°	4868.0	4851.5	4831.8	4807.1	4790.7	4775.9	4754.5	4733.2	4721.7	4708.5	4706.9
12.5°	4775.9	4756.2	4729.9	4692.1	4655.9	4631.2	4598.4	4560.5	4549.0	4527.7	4516.2
15°	4675.6	4644.4	4613.1	4570.4	4530.9	4493.1	4448.7	4401.1	4369.8	4337.0	4312.3
17.5°	4585.2	4549.0	4507.9	4466.8	4424.1	4378.1	4322.2	4263.0	4216.9	4156.1	4106.8
20°	4514.5	4468.5	4427.4	4384.6	4337.0	4281.1	4213.7	4138.0	4060.8	3993.4	3935.8
22.5°	4486.6	4414.2	4364.9	4322.2	4274.5	4208.7	4126.5	4037.7	3944.0	3850.3	3774.7
25°	4509.6	4402.7	4325.4	4274.5	4233.4	4166.0	4073.9	3965.4	3856.9	3745.1	3643.2
27.5°	4577.0	4440.5	4328.7	4248.2	4200.5	4133.1	4036.1	3921.0	3792.8	3667.8	3542.9
30°	4682.2	4504.6	4363.3	4249.8	4175.8	4098.6	3996.6	3863.5	3733.6	3590.6	3454.1
32.5°	4784.1	4572.0	4402.7	4256.4	4143.0	4042.7	3929.2	3797.7	3658.0	3508.4	3367.0
35°	4856.5	4616.4	4417.5	4241.6	4092.0	3967.0	3845.4	3713.9	3577.4	3424.5	3279.8
37.5°	4891.0	4641.1	4419.2	4202.1	4024.6	3886.5	3756.6	3626.7	3498.5	3353.8	3217.4
40°	4889.3	4639.5	4396.1	4151.2	3944.0	3797.7	3669.5	3542.9	3422.9	3296.3	3173.0
42.5°	4853.2	4613.1	4363.3	4101.9	3886.5	3723.7	3590.6	3468.9	3367.0	3255.2	3151.6
45°	4797.3	4568.8	4328.7	4078.8	3870.0	3707.3	3565.9	3447.5	3357.1	3255.2	3166.4
47.5°	4754.5	4544.1	4333.7	4119.9	3921.0	3751.7	3602.1	3472.2	3394.9	3312.7	3250.2
50°	4761.1	4555.6	4350.1	4144.6	3957.2	3786.2	3641.5	3523.2	3467.3	3445.9	3431.1
52.5°	4795.6	4573.7	4399.4	4276.1	4212.0	4083.8	3998.3	3924.3	3965.4	3884.8	3789.5
55°	5236.2	5163.9	5333.2	5492.7	5694.9	5770.5	5698.2	5685.1	5750.8	5477.9	4851.5
57.5°	7056.2	7243.6	7505.0	7643.1	7810.8	7766.4	7598.7	7459.0	7294.6	6975.6	6194.7
60°	10151.9	10010.5	9892.1	9558.4	9285.5	8966.5	8611.4	8307.3	8016.3	7557.6	6712.6
62.5°	13341.3	12359.8	11539.5	10747.0	10109.1	9579.8	9065.2	8608.1	8167.5	7528.0	6618.9
65°	16100.0	14033.4	12493.0	11330.7	10398.5	9594.6	8933.7	8302.4	7741.7	6992.1	6092.8
67.5°	17339.6	14750.2	12509.4	10844.0	9553.5	8461.8	7606.9	6653.4	6025.4	5545.3	5039.0
69°	17247.5	14202.8	11616.7	9566.6	8083.7	6811.2	5893.8	4899.2	4297.5	4093.6	4082.1
70°	16810.2	13275.5	10574.4	8529.2	6832.6	5568.3	4688.8	3796.1	3235.5	3095.7	3344.0
72.5°	13724.4	9380.8	6627.1	5060.3	3891.4	3076.0	2508.8	1990.9	1589.8	1377.7	1423.7
75°	7751.6	4343.5	2808.0	2122.4	1793.6	1482.9	1272.5	1085.1	981.5	797.4	631.3
77.5°	2817.9	1864.3	1482.9	1282.3	909.1	626.4	524.4	458.7	415.9	415.9	396.2
80°	1782.1	1404.0	979.8	670.8	496.5	432.4	378.1	332.1	305.8	299.2	305.8
82.5°	1113.0	859.8	549.1	420.9	353.5	317.3	276.2	241.7	220.3	215.4	225.2
85°	549.1	425.8	333.7	297.6	279.5	259.8	228.5	195.6	189.1	202.2	236.7
87.5°	164.4	146.3	120.0	124.9	131.5	128.2	101.9	88.8	83.8	110.2	172.6
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):

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	5078.4	5078.4	5078.4	5078.4	5078.4	5078.4	5078.4	5078.4	5078.4	5078.4	5078.4
2.5°	5060.3	5058.7	5062.0	5057.0	5060.3	5062.0	5058.7	5073.5	5063.6	5065.3	5071.8
5°	4986.3	4983.1	4996.2	4992.9	4999.5	5006.1	5002.8	5024.2	5015.9	5022.5	5035.7
7.5°	4863.0	4869.6	4871.3	4871.3	4884.4	4905.8	4910.7	4923.9	4923.9	4942.0	4955.1
10°	4698.6	4700.3	4710.1	4708.5	4724.9	4748.0	4751.2	4774.3	4782.5	4812.1	4830.2
12.5°	4507.9	4499.7	4498.1	4496.4	4517.8	4542.5	4545.7	4585.2	4601.6	4627.9	4657.5
15°	4294.2	4272.8	4266.3	4279.4	4274.5	4289.3	4304.1	4325.4	4348.5	4401.1	4427.4
17.5°	4085.4	4042.7	4031.2	4016.4	4001.6	4001.6	4008.1	4034.5	4082.1	4110.1	4169.3
20°	3871.7	3820.7	3779.6	3740.2	3705.6	3692.5	3694.1	3727.0	3761.5	3807.6	3863.5
22.5°	3692.5	3615.2	3544.5	3491.9	3421.2	3419.6	3409.7	3419.6	3457.4	3468.9	3500.1
25°	3538.0	3434.4	3339.0	3253.5	3184.5	3148.3	3138.5	3135.2	3117.1	3112.1	3089.1
27.5°	3417.9	3293.0	3169.7	3066.1	2980.6	2931.3	2868.8	2824.4	2760.3	2743.9	2702.8
30°	3319.3	3184.5	3049.7	2914.9	2817.9	2729.1	2623.9	2546.6	2448.0	2383.8	2327.9
32.5°	3223.9	3087.5	2951.0	2817.9	2668.3	2530.2	2392.1	2272.1	2161.9	2063.3	1981.1
35°	3145.0	3015.2	2877.1	2715.9	2525.2	2326.3	2160.3	2023.8	1872.6	1769.0	1665.4
37.5°	3094.1	2975.7	2837.6	2615.7	2370.7	2157.0	1967.9	1801.9	1647.3	1491.1	1374.4
40°	3071.0	2967.5	2794.9	2523.6	2235.9	1999.1	1790.3	1606.2	1408.9	1233.0	1108.1
42.5°	3069.4	2964.2	2735.7	2421.7	2124.1	1866.0	1634.2	1413.9	1195.2	1014.4	891.1
45°	3099.0	2959.3	2673.2	2336.2	2025.4	1755.8	1479.6	1211.7	966.7	831.9	766.1
47.5°	3177.9	2967.5	2622.2	2257.3	1931.7	1622.7	1302.1	989.7	787.5	725.0	725.0
50°	3319.3	3015.2	2609.1	2201.4	1838.0	1468.1	1085.1	799.0	697.1	697.1	716.8
52.5°	3536.3	3115.4	2632.1	2161.9	1721.3	1264.3	854.9	688.8	669.1	687.2	713.5
55°	4036.1	3293.0	2663.3	2094.5	1543.7	1002.9	705.3	651.0	659.3	680.6	705.3
57.5°	4953.5	3672.8	2696.2	1946.5	1257.7	772.7	639.5	636.2	651.0	670.8	692.1
60°	5556.8	4156.1	2780.1	1722.9	951.9	637.9	606.6	626.4	644.5	660.9	677.3
62.5°	5556.8	4292.6	2842.5	1473.1	715.2	580.3	585.3	616.5	637.9	646.1	656.0
65°	5201.7	4042.7	2630.4	1200.1	582.0	547.5	565.5	596.8	616.5	623.1	631.3
67.5°	4545.7	3570.8	2216.2	904.2	519.5	519.5	542.5	565.5	582.0	595.1	608.3
69°	3952.2	3204.2	1951.5	766.1	494.9	498.1	521.2	540.9	560.6	577.1	593.5
70°	3524.8	2929.7	1767.3	695.4	480.1	481.7	504.7	526.1	544.2	562.3	582.0
72.5°	1887.3	2023.8	1343.2	570.5	442.2	447.2	468.5	488.3	504.7	522.8	540.9
75°	642.8	869.7	854.9	466.9	399.5	412.7	425.8	443.9	465.3	476.8	486.6
77.5°	376.5	389.6	455.4	379.8	360.0	366.6	381.4	396.2	414.3	425.8	434.0
80°	315.7	314.0	315.7	309.1	314.0	328.8	338.7	358.4	374.8	378.1	376.5
82.5°	256.5	269.6	271.3	268.0	282.8	294.3	302.5	314.0	312.4	315.7	322.2
85°	228.5	226.9	238.4	240.0	240.0	231.8	233.5	233.5	233.5	238.4	240.0
87.5°	228.5	190.7	148.0	133.2	139.7	131.5	124.9	123.3	136.5	149.6	146.3
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: P158709

CATALOG NUMBER: VST-E09-LED-E-U-SL4-7030

CANDELA DISTRIBUTION (continued):

	160°	165°	170°	175°	180°
0°	5078.4	5078.4	5078.4	5078.4	5078.4
2.5°	5075.1	5080.1	5076.8	5076.8	5080.1
5°	5040.6	5048.8	5045.5	5048.8	5048.8
7.5°	4961.7	4973.2	4981.4	4989.6	4984.7
10°	4848.2	4868.0	4881.1	4891.0	4886.1
12.5°	4678.9	4697.0	4724.9	4741.4	4728.2
15°	4447.1	4498.1	4514.5	4537.5	4524.4
17.5°	4205.4	4236.7	4256.4	4277.8	4290.9
20°	3883.2	3907.9	3934.2	3944.0	3929.2
22.5°	3495.2	3508.4	3503.4	3518.2	3488.6
25°	3069.4	3077.6	3072.7	3085.8	3061.2
27.5°	2666.6	2665.0	2666.6	2650.2	2633.7
30°	2278.6	2263.8	2257.3	2232.6	2227.7
32.5°	1931.7	1880.8	1854.5	1818.3	1810.1
35°	1584.8	1512.5	1464.8	1423.7	1405.6
37.5°	1274.1	1187.0	1131.1	1094.9	1090.0
40°	1007.8	927.2	887.8	868.0	864.8
42.5°	822.0	787.5	777.6	777.6	777.6
45°	749.7	748.0	756.3	762.8	764.5
47.5°	734.9	744.7	756.3	766.1	769.4
50°	734.9	744.7	753.0	762.8	766.1
52.5°	731.6	739.8	743.1	749.7	753.0
55°	721.7	726.7	726.7	729.9	733.2
57.5°	705.3	708.6	703.6	706.9	715.2
60°	688.8	692.1	683.9	692.1	697.1
62.5°	670.8	672.4	669.1	675.7	675.7
65°	641.2	637.9	642.8	647.7	649.4
67.5°	611.6	603.4	608.3	609.9	613.2
69°	588.6	583.6	585.3	588.6	591.9
70°	572.1	568.8	572.1	577.1	582.0
72.5°	531.0	532.7	544.2	554.0	563.9
75°	493.2	504.7	519.5	540.9	552.4
77.5°	447.2	455.4	466.9	489.9	511.3
80°	386.3	391.3	392.9	401.1	399.5
82.5°	314.0	309.1	305.8	302.5	300.9
85°	225.2	223.6	210.4	200.6	200.6
87.5°	134.8	128.2	121.7	113.4	108.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)