

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: P159398

Luminaire Tested: **VST-E12-LED-E-U-T2-8030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P159398
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33705)
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-T2-8030
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(12) LIGHTBARS WITH AccuLED OPTICS - TYPE 2 AREA
Light Source: (252) 3000K CCT, 80 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 31261.9 lumens
Efficiency: N/A
Efficacy: 107.2 lumens/watt
Luminous Opening: Rectangular (W 2' x L: 1' x H: 0')
IES Classification: Type II - Short - Semi-Cutoff
BUG Rating: B4 - U0 - G4

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



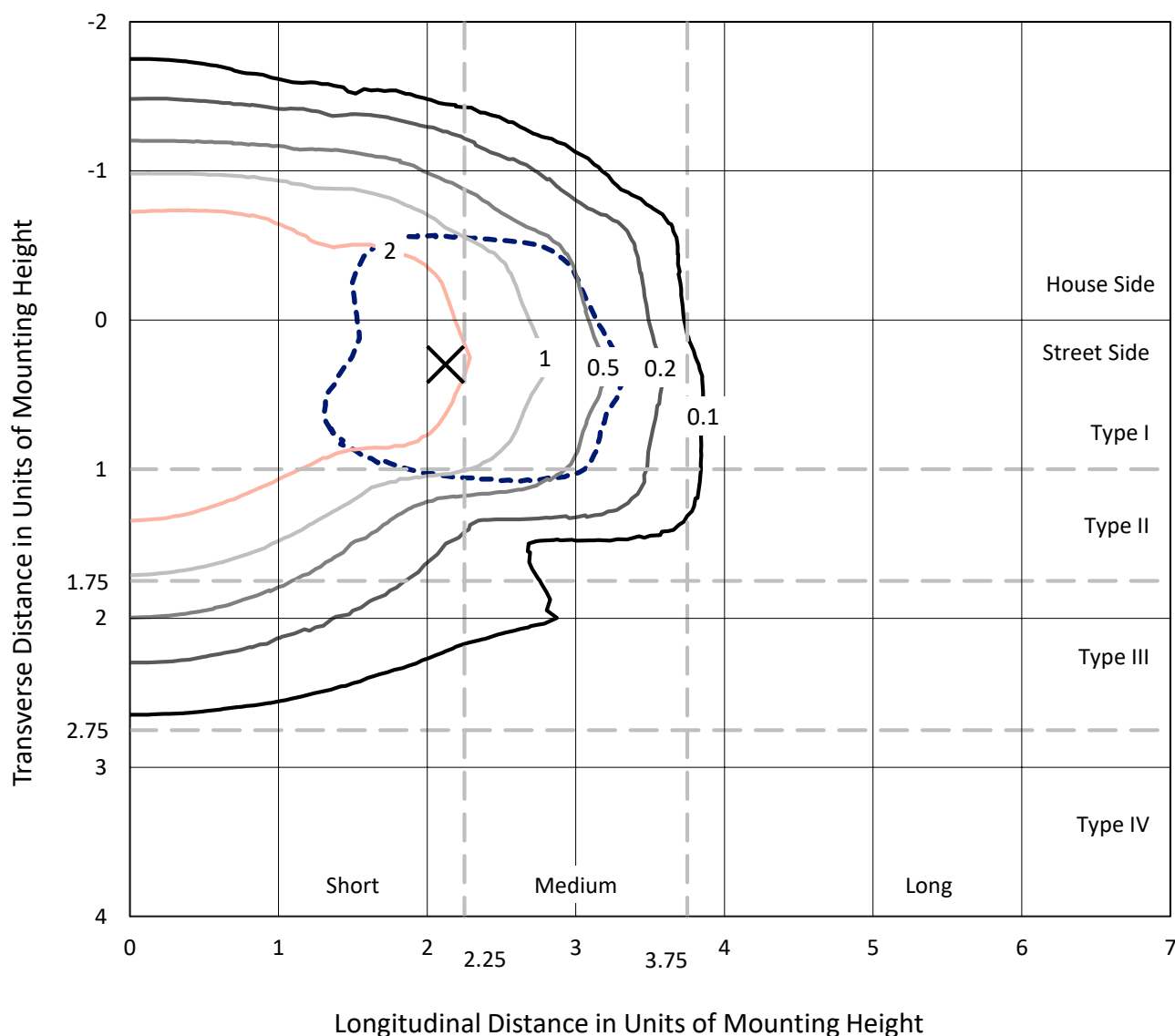
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Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

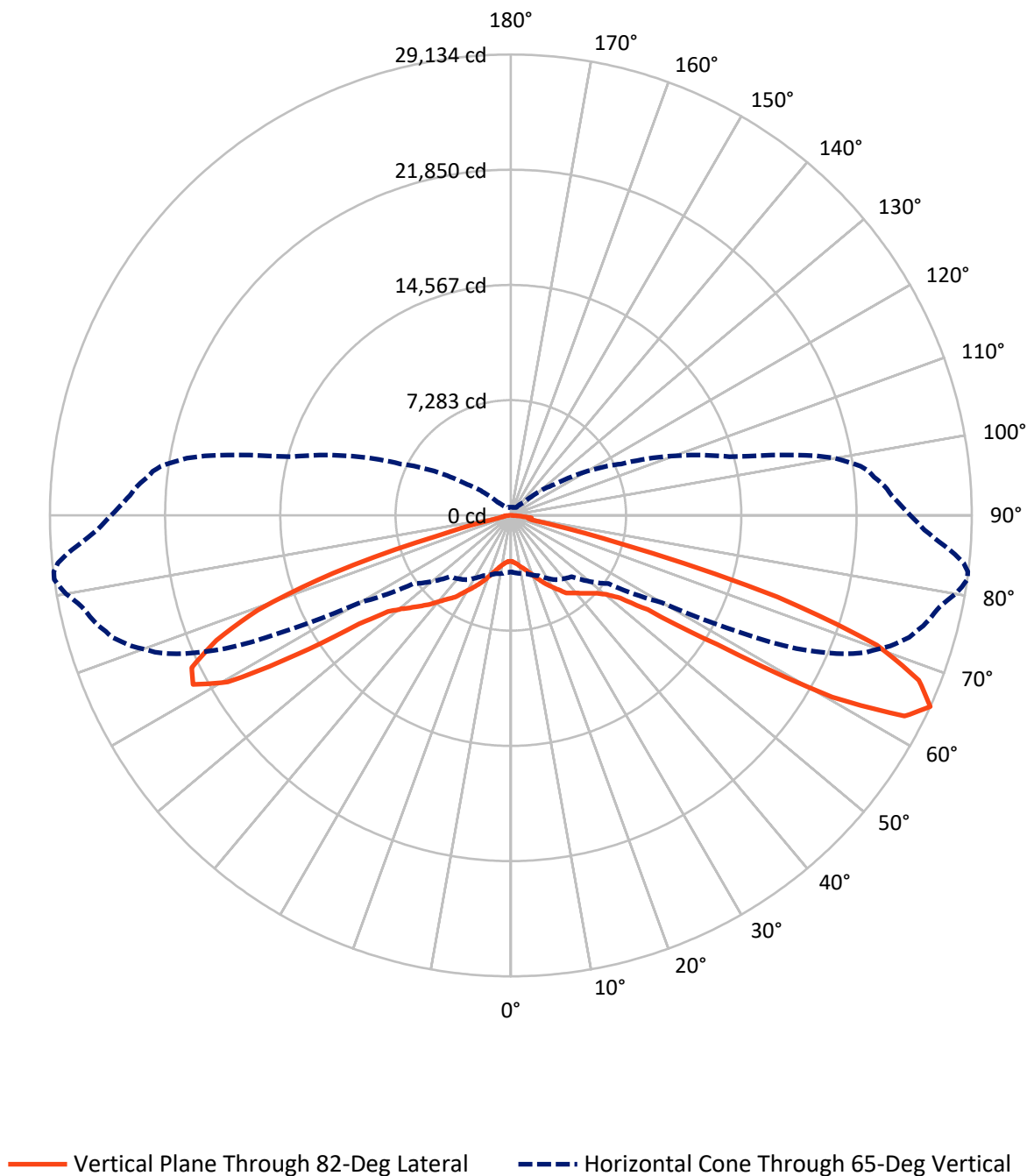


Based on 30 foot mounting height. Maximum calculated value = 4.1 fc
 Type II - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	11639.8	0.0	11639.8
	% Fixture	37.2	0.0	37.2
Street Side	Lumens	19622.1	0.0	19622.1
	% Fixture	62.8	0.0	62.8
Total	Lumens	31261.9	0.0	31261.9
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	294.5	0.9
10°-20°	1034.7	3.3
20°-30°	2050.2	6.6
30°-40°	3514.5	11.2
40°-50°	5279.6	16.9
50°-60°	7335.1	23.5
60°-70°	8368.2	26.8
70°-80°	2882.8	9.2
80°-90°	502.4	1.6
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°	31261.9	100.0
0°-180°	31261.9	100.0

Coefficient of Utilization



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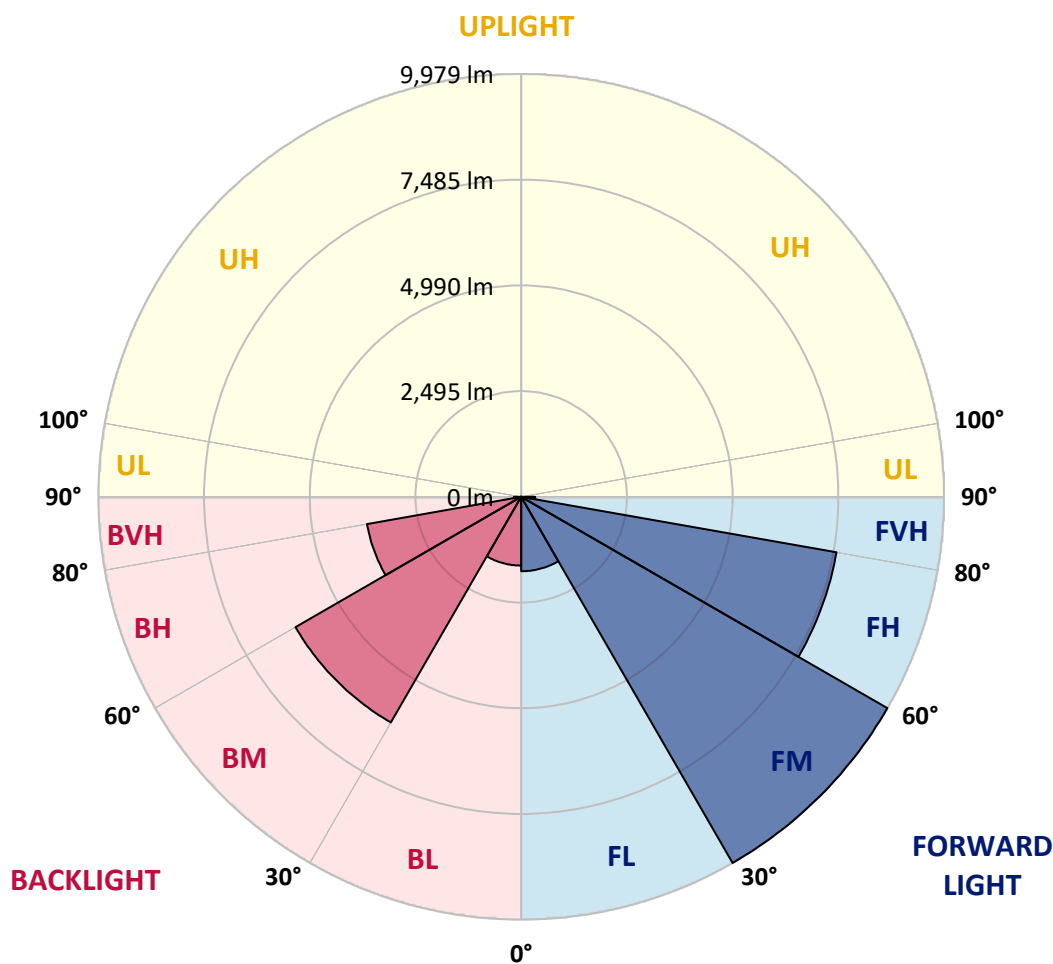
CATALOG NUMBER: VST-E12-LED-E-U-T2-8030

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1756.3	5.6			
FM	(30°-60°)	9979.4	31.9			
FH	(60°-80°)	7555.7	24.2			G4/12000
FVH	(80°-90°)	330.7	1.1			G3/500
BL	(0°-30°)	1623.1	5.2	B3/2500		
BM	(30°-60°)	6149.7	19.7	B4/8500		
BH	(60°-80°)	3695.3	11.8	B4/5000		G4/5000
BVH	(80°-90°)	171.7	0.5			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 II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	60°	61°	62°	64°
0°	2908.7	2908.7	2908.7	2908.7	2908.7	2908.7	2908.7	2908.7	2908.7	2908.7	2908.7
2.5°	3066.7	3068.8	3066.7	3060.6	3058.6	3040.4	3020.1	3010.0	3008.0	2999.9	3001.9
5°	3257.1	3251.1	3243.0	3232.8	3222.7	3192.3	3157.9	3139.6	3133.6	3127.5	3119.4
7.5°	3427.3	3431.3	3427.3	3413.1	3386.8	3348.3	3303.7	3275.4	3273.3	3267.3	3261.2
10°	3646.0	3656.2	3631.9	3607.6	3571.1	3512.4	3461.7	3425.3	3419.2	3411.1	3407.0
12.5°	3883.0	3885.1	3877.0	3822.3	3761.5	3680.5	3607.6	3571.1	3563.0	3552.9	3548.8
15°	4136.2	4138.3	4093.7	4041.0	3947.9	3850.6	3749.3	3708.8	3698.7	3700.7	3684.5
17.5°	4336.8	4340.8	4298.3	4231.4	4120.0	4004.6	3895.2	3862.8	3856.7	3858.7	3850.6
20°	4423.9	4429.9	4403.6	4353.0	4247.6	4146.4	4067.4	4047.1	4045.1	4041.0	4057.2
22.5°	4419.8	4421.8	4411.7	4391.5	4328.7	4269.9	4259.8	4271.9	4269.9	4274.0	4288.1
25°	4383.4	4389.4	4387.4	4395.5	4385.4	4407.7	4454.2	4496.8	4502.9	4511.0	4537.3
27.5°	4476.5	4488.7	4474.5	4482.6	4498.8	4573.8	4669.0	4733.8	4745.9	4768.2	4790.5
30°	4841.1	4824.9	4806.7	4786.4	4796.6	4843.2	4950.5	5007.2	5013.3	5029.5	5059.9
32.5°	5382.0	5363.7	5347.5	5315.1	5307.0	5286.8	5323.2	5337.4	5335.4	5351.6	5359.7
35°	5991.7	5993.7	5989.6	6013.9	6034.2	5930.9	5803.3	5768.8	5783.0	5764.8	5768.8
37.5°	6512.2	6518.3	6625.7	6759.4	6797.8	6733.0	6453.5	6315.8	6269.2	6263.1	6216.5
40°	7089.5	7089.5	7251.6	7415.6	7523.0	7604.0	7271.8	7028.8	6929.5	6901.1	6785.7
42.5°	7723.5	7691.1	7839.0	8019.3	8217.8	8402.1	8229.9	7956.5	7814.7	7764.0	7561.5
45°	8244.1	8223.8	8296.8	8464.9	8787.0	9147.5	9171.8	9032.1	8947.0	8841.6	8655.3
47.5°	8564.1	8554.0	8596.6	8778.9	9181.9	9765.3	10091.4	10162.3	10111.7	10030.7	9850.4
50°	8689.7	8675.6	8705.9	8908.5	9360.2	10129.9	10851.0	11185.2	11209.5	11227.8	11171.1
52.5°	8645.2	8626.9	8689.7	8859.9	9329.8	10257.5	11444.5	12086.6	12194.0	12285.1	12471.5
55°	8217.8	8189.4	8359.6	8679.6	9198.2	10210.9	11878.0	12953.6	13180.4	13423.5	13836.7
57.5°	7563.5	7539.2	7784.3	8223.8	8965.2	10083.3	12169.7	14049.4	14559.9	14997.4	16170.2
60°	6933.6	6913.3	7057.1	7482.5	8209.7	9461.5	11809.1	14418.1	15274.9	16218.8	18359.8
62.5°	5807.3	5752.6	5945.1	6303.6	6763.4	7826.8	10235.2	13597.7	14918.4	16305.9	19208.6
65°	3569.1	3648.1	3814.2	4211.2	4964.7	5471.1	7516.9	11000.9	12742.9	14482.9	18248.4
67.5°	2266.6	2288.9	2412.5	2687.9	3271.3	3779.7	4555.5	6903.2	8246.1	9957.7	14326.9
70°	1942.5	1956.7	2062.0	2349.7	2752.8	3378.7	3447.5	3605.5	4087.6	5177.4	8422.4
72.5°	1531.3	1555.6	1638.7	1887.8	2374.0	3046.5	4255.7	2850.0	2752.8	2843.9	4109.9
75°	911.5	939.9	1008.7	1144.5	1525.3	2329.4	4458.3	3315.9	3091.0	2914.8	2835.8
77.5°	482.1	461.8	508.4	587.4	783.9	1241.7	3350.3	4063.3	3905.3	3694.7	3247.0
80°	239.0	247.1	261.3	277.5	350.4	504.4	1675.2	4203.1	4658.8	4861.4	4464.4
82.5°	95.2	107.4	151.9	162.0	192.4	214.7	538.8	2329.4	3336.1	4525.1	5908.6
85°	48.6	46.6	81.0	97.2	113.4	101.3	190.4	869.0	1563.7	2436.8	3947.9
87.5°	6.1	8.1	18.2	24.3	34.4	32.4	54.7	188.4	299.8	425.4	597.5
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):

	65°	66°	67°	68°	69°	70°	71°	72°	73°	74°	75°
0°	2908.7	2908.7	2908.7	2908.7	2908.7	2908.7	2908.7	2908.7	2908.7	2908.7	2908.7
2.5°	2991.8	2989.8	2989.8	2981.7	2981.7	2983.7	2977.6	2973.5	2973.5	2975.6	2967.5
5°	3113.3	3107.2	3107.2	3099.1	3089.0	3089.0	3080.9	3078.9	3074.8	3066.7	3060.6
7.5°	3255.1	3249.0	3238.9	3232.8	3228.8	3222.7	3212.6	3208.5	3200.4	3192.3	3184.2
10°	3400.9	3392.8	3388.8	3378.7	3374.6	3362.5	3356.4	3358.4	3342.2	3336.1	3338.2
12.5°	3546.8	3538.7	3524.5	3520.5	3518.4	3506.3	3500.2	3496.1	3484.0	3482.0	3475.9
15°	3676.4	3680.5	3674.4	3664.3	3656.2	3654.1	3648.1	3644.0	3635.9	3627.8	3619.7
17.5°	3844.5	3850.6	3842.5	3828.3	3828.3	3826.3	3828.3	3826.3	3812.1	3818.2	3814.2
20°	4059.3	4063.3	4043.1	4049.1	4053.2	4051.2	4057.2	4063.3	4059.3	4059.3	4065.3
22.5°	4306.4	4312.5	4300.3	4308.4	4320.6	4310.4	4328.7	4326.6	4330.7	4336.8	4338.8
25°	4559.6	4571.7	4561.6	4583.9	4575.8	4583.9	4606.2	4600.1	4610.2	4626.4	4632.5
27.5°	4812.8	4820.9	4822.9	4837.1	4851.3	4863.4	4891.8	4891.8	4899.9	4928.2	4928.2
30°	5078.1	5086.2	5094.3	5114.6	5122.7	5145.0	5173.3	5181.4	5177.4	5217.9	5230.0
32.5°	5384.0	5392.1	5406.3	5430.6	5440.7	5463.0	5463.0	5485.3	5501.5	5535.9	5537.9
35°	5791.1	5797.2	5791.1	5789.1	5803.3	5833.7	5835.7	5868.1	5882.3	5916.7	5926.8
37.5°	6198.3	6196.2	6169.9	6141.6	6143.6	6131.4	6123.3	6137.5	6143.6	6145.6	6167.9
40°	6747.2	6694.5	6654.0	6583.1	6550.7	6500.1	6469.7	6467.7	6435.3	6431.2	6437.3
42.5°	7466.3	7405.5	7310.3	7190.8	7099.7	7006.5	6937.6	6897.1	6826.2	6789.7	6759.4
45°	8471.0	8321.1	8207.6	8065.9	7889.6	7727.6	7557.4	7480.5	7344.7	7261.7	7168.5
47.5°	9698.5	9550.6	9376.4	9230.6	8999.6	8774.8	8541.9	8337.3	8100.3	7911.9	7758.0
50°	11031.3	10944.2	10818.6	10682.9	10385.1	10237.3	9943.6	9666.1	9410.8	9074.6	8780.9
52.5°	12398.6	12449.2	12420.8	12372.2	12183.9	12127.1	11873.9	11535.7	11278.4	11047.5	10537.1
55°	14083.8	14144.6	14266.1	14337.0	14314.8	14458.6	14395.8	14132.5	14029.2	13921.8	13559.2
57.5°	16662.4	17095.9	17559.7	17966.9	18062.1	18572.5	18463.1	18726.5	18912.8	18779.1	18661.7
60°	19411.1	20286.2	21074.1	21898.5	22569.0	23071.3	23735.7	24183.4	24464.9	24971.3	25011.8
62.5°	20519.1	21708.1	22708.8	23664.8	24460.9	25157.7	25757.3	26375.1	26881.4	27339.2	27669.4
65°	19911.4	21153.1	22366.4	23336.7	24102.4	24701.9	25354.2	25844.4	26342.6	26636.4	26982.7
67.5°	16553.0	18197.8	19690.6	20784.5	21831.7	22441.4	23213.1	23695.2	24223.9	24533.8	24756.6
70°	10792.3	12933.3	14973.1	16632.0	18045.9	18756.9	19688.6	20346.9	20983.0	20999.2	21369.9
72.5°	5823.5	7614.1	9321.7	11017.1	12629.5	13575.4	14495.0	15295.1	15927.1	15657.7	16026.4
75°	3243.0	4081.5	5015.3	6034.2	7016.6	7557.4	8244.1	8248.2	8574.3	8061.8	8191.4
77.5°	3119.4	3080.9	3095.1	3123.4	3172.1	3068.8	3066.7	3003.9	2906.7	2730.5	2760.9
80°	4097.7	3607.6	3255.1	2702.1	2175.5	1774.4	1663.0	1689.3	1768.3	1926.3	2126.9
82.5°	5924.8	5511.6	4920.1	4049.1	3178.1	2450.9	2013.4	1786.6	1776.4	1934.4	2238.3
85°	4314.5	4563.6	4525.1	3777.7	3115.3	2529.9	1841.3	1555.6	1288.3	1225.5	1332.8
87.5°	636.0	526.7	593.5	496.3	360.6	279.5	245.1	196.5	188.4	192.4	210.7
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):

	76°	77°	78°	79°	80°	81°	82°	83°	84°	85°	86°
0°	2908.7	2908.7	2908.7	2908.7	2908.7	2908.7	2908.7	2908.7	2908.7	2908.7	2908.7
2.5°	2969.5	2961.4	2953.3	2959.4	2953.3	2951.3	2945.2	2941.1	2939.1	2939.1	2939.1
5°	3060.6	3050.5	3044.4	3042.4	3036.3	3030.3	3028.2	3018.1	3016.1	3016.1	3010.0
7.5°	3184.2	3176.1	3166.0	3159.9	3155.9	3145.7	3135.6	3133.6	3131.5	3123.4	3117.4
10°	3328.0	3315.9	3303.7	3303.7	3295.6	3293.6	3283.5	3269.3	3267.3	3255.1	3251.1
12.5°	3463.7	3459.7	3445.5	3441.5	3435.4	3429.3	3423.2	3417.2	3411.1	3400.9	3405.0
15°	3625.8	3615.7	3603.5	3605.5	3603.5	3595.4	3587.3	3581.2	3577.2	3573.1	3573.1
17.5°	3820.2	3816.2	3814.2	3804.0	3795.9	3802.0	3802.0	3802.0	3791.9	3793.9	3795.9
20°	4067.4	4071.4	4067.4	4059.3	4057.2	4063.3	4049.1	4071.4	4059.3	4051.2	4055.2
22.5°	4340.8	4355.0	4338.8	4340.8	4350.9	4355.0	4340.8	4359.0	4353.0	4340.8	4350.9
25°	4638.6	4648.7	4640.6	4638.6	4644.7	4658.8	4656.8	4654.8	4669.0	4656.8	4662.9
27.5°	4944.4	4950.5	4954.6	4960.6	4964.7	4962.7	4970.8	4970.8	4978.9	4964.7	4970.8
30°	5248.3	5248.3	5256.4	5264.5	5264.5	5264.5	5280.7	5282.7	5270.6	5274.6	5260.4
32.5°	5572.4	5574.4	5582.5	5582.5	5598.7	5600.7	5619.0	5594.6	5619.0	5598.7	5602.7
35°	5953.2	5979.5	5983.6	6003.8	6020.0	6026.1	6026.1	6028.1	6050.4	6034.2	6040.3
37.5°	6176.0	6182.1	6198.3	6208.4	6208.4	6216.5	6222.6	6216.5	6222.6	6220.6	6226.6
40°	6439.3	6433.2	6451.5	6455.5	6447.4	6457.5	6455.5	6449.4	6465.6	6453.5	6461.6
42.5°	6759.4	6724.9	6722.9	6739.1	6722.9	6731.0	6729.0	6714.8	6735.0	6741.1	6735.0
45°	7101.7	7083.4	7047.0	7047.0	7030.8	7024.7	7026.7	7024.7	7026.7	7051.0	7059.1
47.5°	7658.7	7547.3	7484.5	7425.8	7377.2	7375.1	7352.8	7365.0	7381.2	7421.7	7458.2
50°	8592.5	8335.3	8177.3	8031.4	7926.1	7889.6	7847.1	7843.0	7857.2	7903.8	7966.6
52.5°	10257.5	9901.0	9564.8	9252.8	8981.4	8772.8	8669.5	8614.8	8594.5	8641.1	8701.9
55°	13304.0	12631.5	12157.5	11841.5	11167.0	10881.4	10514.8	10346.7	10182.6	10198.8	10302.1
57.5°	18509.7	18147.2	17750.1	17197.2	16783.9	16285.6	15370.1	14859.6	14881.9	15001.4	14628.7
60°	25331.9	24965.3	24801.2	24298.8	24011.2	23810.7	23324.5	22477.8	22178.1	22121.3	21436.7
62.5°	27922.6	28009.7	28139.3	28281.1	28273.0	28360.1	27934.7	27659.3	27312.9	26863.2	26186.7
65°	27246.1	27466.8	27730.2	28111.0	28544.4	28864.5	29133.9	29101.5	28777.4	28177.8	27462.8
67.5°	24955.1	25173.9	25366.3	25876.8	26587.7	27238.0	27813.2	28204.2	27987.4	27491.1	26656.6
70°	21511.6	21669.6	21791.2	22234.8	23014.6	23808.6	24560.1	25216.4	25149.6	24548.0	23881.6
72.5°	15586.8	15969.7	16176.3	16145.9	16628.0	17517.2	17622.5	18183.6	18339.6	17691.4	16630.0
75°	7593.9	7600.0	7361.0	7282.0	7306.3	7460.2	7166.5	7184.7	7083.4	6623.6	6244.9
77.5°	2653.5	2580.6	2406.4	2199.8	1904.0	1626.5	1345.0	1223.4	1182.9	1063.4	980.4
80°	2286.9	2394.2	2359.8	2189.7	1877.7	1496.9	1118.1	828.5	706.9	664.4	623.9
82.5°	2596.8	3010.0	3273.3	3259.2	2831.8	2126.9	1326.8	761.6	542.9	476.0	437.5
85°	1448.3	1557.7	1588.1	1446.3	1201.2	820.4	457.8	322.1	273.5	249.1	224.8
87.5°	230.9	210.7	206.6	180.3	170.1	156.0	137.7	129.6	119.5	113.4	113.4
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: P159398

CATALOG NUMBER: VST-E12-LED-E-U-T2-8030

CANDELA DISTRIBUTION (continued):

	87°	88°	89°	90°	91°	92°	93°	94°	95°	96°	97°
0°	2908.7	2908.7	2908.7	2908.7	2908.7	2908.7	2908.7	2908.7	2908.7	2908.7	2908.7
2.5°	2937.1	2935.1	2929.0	2922.9	2918.9	2916.8	2914.8	2910.8	2908.7	2906.7	2902.7
5°	3006.0	3001.9	2991.8	2981.7	2977.6	2971.5	2965.4	2961.4	2957.3	2955.3	2947.2
7.5°	3113.3	3109.3	3097.1	3089.0	3087.0	3070.8	3068.8	3062.7	3052.5	3050.5	3038.4
10°	3243.0	3240.9	3230.8	3224.7	3220.7	3212.6	3200.4	3190.3	3180.2	3180.2	3172.1
12.5°	3392.8	3384.7	3390.8	3376.6	3372.6	3364.5	3358.4	3356.4	3344.2	3334.1	3332.1
15°	3569.1	3558.9	3558.9	3554.9	3550.8	3542.7	3540.7	3542.7	3530.6	3534.6	3522.5
17.5°	3787.8	3791.9	3789.9	3789.9	3779.7	3779.7	3763.5	3783.8	3769.6	3779.7	3775.7
20°	4061.3	4063.3	4059.3	4065.3	4069.4	4067.4	4065.3	4063.3	4069.4	4077.5	4071.4
22.5°	4353.0	4353.0	4350.9	4373.2	4348.9	4367.1	4373.2	4361.1	4393.5	4389.4	4395.5
25°	4669.0	4669.0	4685.2	4703.4	4707.4	4693.3	4701.4	4691.2	4711.5	4727.7	4731.8
27.5°	4962.7	4989.0	5001.2	4989.0	4999.1	5021.4	5019.4	5019.4	5033.6	5029.5	5068.0
30°	5264.5	5280.7	5296.9	5288.8	5292.8	5321.2	5323.2	5325.2	5343.5	5369.8	5398.2
32.5°	5608.8	5625.0	5616.9	5643.3	5641.2	5675.7	5681.7	5687.8	5744.5	5734.4	5793.2
35°	6032.2	6048.4	6040.3	6068.6	6064.6	6076.7	6099.0	6123.3	6133.5	6192.2	6238.8
37.5°	6230.7	6230.7	6248.9	6281.3	6293.5	6313.7	6348.2	6378.5	6429.2	6492.0	6564.9
40°	6469.7	6475.8	6500.1	6534.5	6556.8	6603.4	6666.2	6708.7	6785.7	6854.6	6939.6
42.5°	6759.4	6785.7	6814.0	6860.6	6909.2	6982.2	7071.3	7126.0	7227.3	7316.4	7421.7
45°	7097.6	7124.0	7190.8	7275.9	7346.8	7427.8	7500.7	7630.4	7721.5	7814.7	7905.8
47.5°	7506.8	7583.8	7638.5	7739.7	7826.8	7934.2	8025.3	8146.9	8246.1	8359.6	8436.5
50°	8031.4	8126.6	8197.5	8329.2	8414.3	8533.8	8649.2	8740.4	8841.6	8953.1	9015.8
52.5°	8784.9	8882.2	8971.3	9135.4	9240.7	9321.7	9475.7	9589.1	9682.3	9763.3	9832.2
55°	10417.5	10389.2	10636.3	10954.3	10990.8	11284.5	11339.2	11434.4	11606.6	11630.9	11823.3
57.5°	15082.5	14936.6	15295.1	15761.0	15680.0	15532.1	16149.9	16188.4	16101.3	16334.3	16070.9
60°	21538.0	21282.8	21380.0	21507.6	21323.3	21236.2	21266.5	21353.6	21268.6	21175.4	20920.2
62.5°	25848.4	25455.4	25173.9	24936.9	24637.1	24420.4	24177.3	23877.5	23796.5	23456.2	23170.6
65°	26768.0	26156.3	25710.7	25263.0	24849.8	24467.0	24100.3	23843.1	23502.8	23099.7	22801.9
67.5°	25757.3	24999.7	24347.5	23697.2	23229.3	22666.2	22390.7	21971.4	21552.2	21090.3	20816.9
70°	22820.2	22030.2	21209.8	20573.8	19937.8	19241.0	19105.3	18609.0	18367.9	17738.0	17628.6
72.5°	15750.9	15224.2	14857.6	14071.7	13684.8	13328.3	13214.9	12755.1	12803.7	12113.0	12364.1
75°	5600.7	5525.8	5418.4	4974.8	4895.8	4758.1	4721.6	4689.2	5017.4	4561.6	4891.8
77.5°	962.1	956.1	901.4	875.0	925.7	893.3	901.4	885.2	980.4	994.6	972.3
80°	597.5	581.3	563.1	551.0	553.0	540.8	542.9	546.9	553.0	551.0	557.0
82.5°	409.2	395.0	386.9	378.8	390.9	395.0	405.1	415.2	431.4	441.6	453.7
85°	222.8	204.6	204.6	202.6	218.8	230.9	247.1	267.4	295.7	320.0	346.4
87.5°	113.4	109.4	111.4	115.5	129.6	139.8	160.0	178.3	202.6	228.9	253.2
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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CATALOG NUMBER: VST-E12-LED-E-U-T2-8030

CANDELA DISTRIBUTION (continued):

	98°	99°	100°	101°	102°	103°	104°	105°	115°	125°	135°
0°	2908.7	2908.7	2908.7	2908.7	2908.7	2908.7	2908.7	2908.7	2908.7	2908.7	2908.7
2.5°	2900.6	2900.6	2898.6	2898.6	2896.6	2894.6	2892.5	2886.4	2864.2	2843.9	2829.7
5°	2945.2	2939.1	2937.1	2931.0	2929.0	2924.9	2918.9	2912.8	2872.3	2835.8	2809.5
7.5°	3036.3	3028.2	3024.2	3018.1	3012.0	3003.9	2995.8	2989.8	2941.1	2898.6	2866.2
10°	3155.9	3151.8	3149.8	3141.7	3141.7	3129.5	3127.5	3113.3	3060.6	3022.2	2993.8
12.5°	3321.9	3313.8	3311.8	3301.7	3305.7	3301.7	3297.6	3289.5	3251.1	3206.5	3168.0
15°	3528.6	3528.6	3518.4	3510.3	3512.4	3508.3	3516.4	3506.3	3482.0	3441.5	3378.7
17.5°	3777.7	3773.7	3777.7	3771.6	3775.7	3779.7	3769.6	3771.6	3759.5	3708.8	3615.7
20°	4067.4	4061.3	4085.6	4075.5	4097.7	4077.5	4081.5	4087.6	4087.6	4020.8	3895.2
22.5°	4399.6	4395.5	4395.5	4415.8	4423.9	4425.9	4434.0	4440.1	4456.3	4371.2	4170.7
25°	4731.8	4745.9	4748.0	4774.3	4786.4	4786.4	4792.5	4814.8	4863.4	4745.9	4486.7
27.5°	5070.0	5104.5	5112.6	5130.8	5149.0	5167.3	5181.4	5197.6	5276.6	5149.0	4810.7
30°	5408.3	5446.8	5475.1	5495.4	5517.7	5562.2	5570.3	5602.7	5734.4	5578.4	5118.6
32.5°	5805.3	5860.0	5896.5	5922.8	5957.2	5999.8	6024.1	6064.6	6192.2	5937.0	5343.5
35°	6279.3	6311.7	6364.4	6408.9	6429.2	6502.1	6540.6	6550.7	6647.9	6246.9	5509.6
37.5°	6607.4	6662.1	6753.3	6816.1	6852.5	6893.0	6957.9	7000.4	7093.6	6528.4	5592.6
40°	7024.7	7107.8	7180.7	7273.9	7332.6	7363.0	7427.8	7462.2	7474.4	6769.5	5566.3
42.5°	7533.1	7608.1	7705.3	7780.2	7824.8	7859.2	7911.9	7926.1	7768.1	6882.9	5424.5
45°	8011.2	8126.6	8209.7	8264.4	8296.8	8315.0	8347.4	8349.4	8011.2	6826.2	5181.4
47.5°	8525.7	8608.7	8685.7	8724.2	8720.1	8724.2	8712.0	8703.9	8132.7	6629.7	4869.5
50°	9094.8	9149.5	9181.9	9200.2	9210.3	9171.8	9117.1	9080.7	8142.8	6350.2	4553.5
52.5°	9858.5	9927.4	9921.3	9919.3	9838.2	9801.8	9655.9	9581.0	8084.1	6022.0	4197.0
55°	11792.9	11726.1	11594.4	11659.2	11329.1	11156.9	10930.0	10719.4	8161.1	5710.1	3783.8
57.5°	16176.3	16202.6	15827.9	15627.3	15070.3	14373.5	13812.4	13267.5	8853.8	5519.7	3245.0
60°	20750.0	20405.7	19929.7	19204.5	18487.5	17452.4	16453.8	15509.9	9544.5	5321.2	2606.9
62.5°	22747.2	22257.1	21538.0	20600.1	19473.9	18207.9	16964.2	15813.7	9210.3	4679.1	1895.9
65°	22342.1	21592.7	20798.6	19700.8	18331.5	16944.0	15491.6	14316.8	7705.3	3490.1	1168.8
67.5°	20223.4	19587.3	18748.8	17446.3	15981.8	14537.6	13206.8	11890.1	5724.3	2175.5	654.3
70°	17069.5	16447.7	15597.0	14264.1	12801.7	11420.2	10010.4	8936.9	3648.1	1049.2	472.0
72.5°	11841.5	11337.2	10735.6	9785.6	8503.4	7247.5	6293.5	5469.1	2021.5	557.0	431.4
75°	4808.7	4810.7	4701.4	4300.3	3633.9	3133.6	2671.7	2266.6	844.7	474.0	425.4
77.5°	1089.8	1108.0	1211.3	1148.5	1035.1	968.2	866.9	765.7	514.5	488.2	429.4
80°	551.0	553.0	546.9	548.9	542.9	544.9	536.8	530.7	482.1	502.3	429.4
82.5°	459.8	469.9	467.9	467.9	469.9	469.9	469.9	467.9	500.3	528.7	415.2
85°	364.6	384.9	401.1	417.3	435.5	447.7	453.7	459.8	486.1	520.6	376.8
87.5°	275.5	299.8	320.0	336.2	364.6	364.6	384.9	399.0	399.0	407.1	198.5
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: P159398

CATALOG NUMBER: VST-E12-LED-E-U-T2-8030

CANDELA DISTRIBUTION (continued):

	145°	155°	165°	175°	180°
0°	2908.7	2908.7	2908.7	2908.7	2908.7
2.5°	2809.5	2801.4	2793.3	2789.2	2781.1
5°	2789.2	2773.0	2762.9	2762.9	2754.8
7.5°	2848.0	2841.9	2827.7	2819.6	2827.7
10°	2973.5	2963.4	2947.2	2935.1	2941.1
12.5°	3141.7	3101.2	3068.8	3054.6	3044.4
15°	3315.9	3234.8	3170.0	3133.6	3123.4
17.5°	3502.2	3360.4	3263.2	3208.5	3198.4
20°	3692.6	3516.4	3378.7	3307.8	3305.7
22.5°	3921.5	3686.6	3510.3	3417.2	3411.1
25°	4162.6	3838.5	3605.5	3486.0	3473.9
27.5°	4371.2	3960.0	3664.3	3522.5	3510.3
30°	4545.4	4051.2	3712.9	3548.8	3532.6
32.5°	4671.0	4103.8	3733.1	3556.9	3538.7
35°	4711.5	4083.6	3676.4	3484.0	3463.7
37.5°	4656.8	3951.9	3518.4	3305.7	3281.4
40°	4492.7	3721.0	3261.2	3042.4	3012.0
42.5°	4241.6	3437.4	2951.3	2742.6	2704.1
45°	3931.6	3117.4	2643.4	2410.4	2392.2
47.5°	3607.6	2781.1	2297.0	2086.3	2064.1
50°	3257.1	2392.2	1958.7	1729.8	1729.8
52.5°	2839.9	2013.4	1565.8	1393.6	1379.4
55°	2359.8	1586.0	1247.8	1116.1	1097.9
57.5°	1843.3	1219.4	996.6	919.6	899.4
60°	1355.1	915.6	802.1	759.6	751.5
62.5°	919.6	696.8	646.2	627.9	625.9
65°	621.9	542.9	528.7	522.6	524.6
67.5°	478.0	451.7	445.6	443.6	443.6
70°	415.2	399.0	393.0	395.0	393.0
72.5°	390.9	368.7	370.7	374.7	372.7
75°	382.8	354.5	362.6	364.6	356.5
77.5°	376.8	338.3	358.5	364.6	342.3
80°	364.6	324.1	372.7	374.7	336.2
82.5°	334.2	287.6	372.7	344.3	303.8
85°	283.6	218.8	421.3	299.8	224.8
87.5°	180.3	129.6	285.6	204.6	135.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)