

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: P165527

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P165527
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33728)
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-HSS
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(9) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 W/ SPILL LIGHT CONTROL AND HOUSE SIDE SHIELD
Light Source: (189) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 18094.4 lumens
Efficiency: N/A
Efficacy: 80.2 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 1.5' x L: 1' x H: 0.1')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B1 - 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



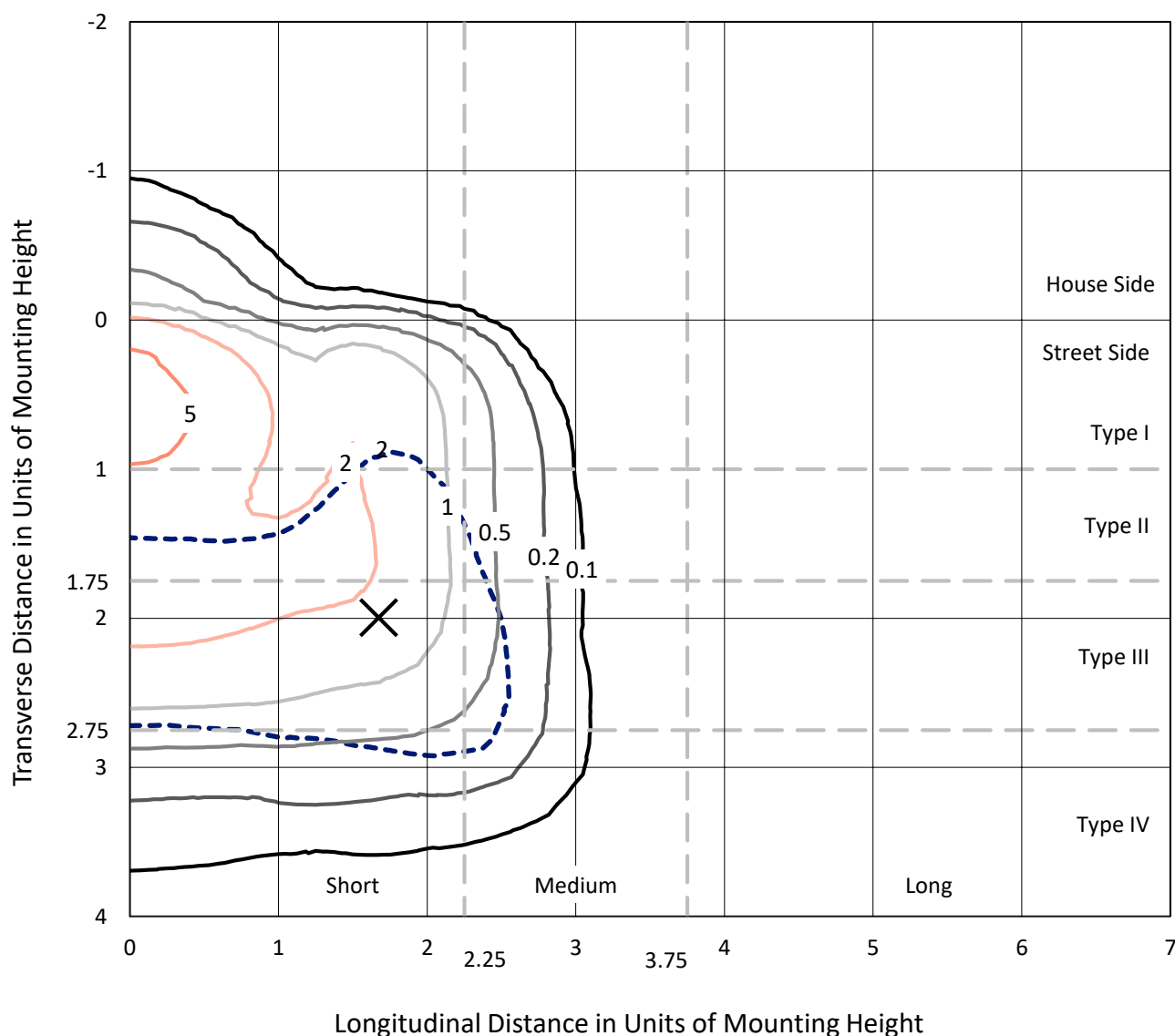
REPORT NUMBER: P165527

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

Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd

--- 1/2 Max cd

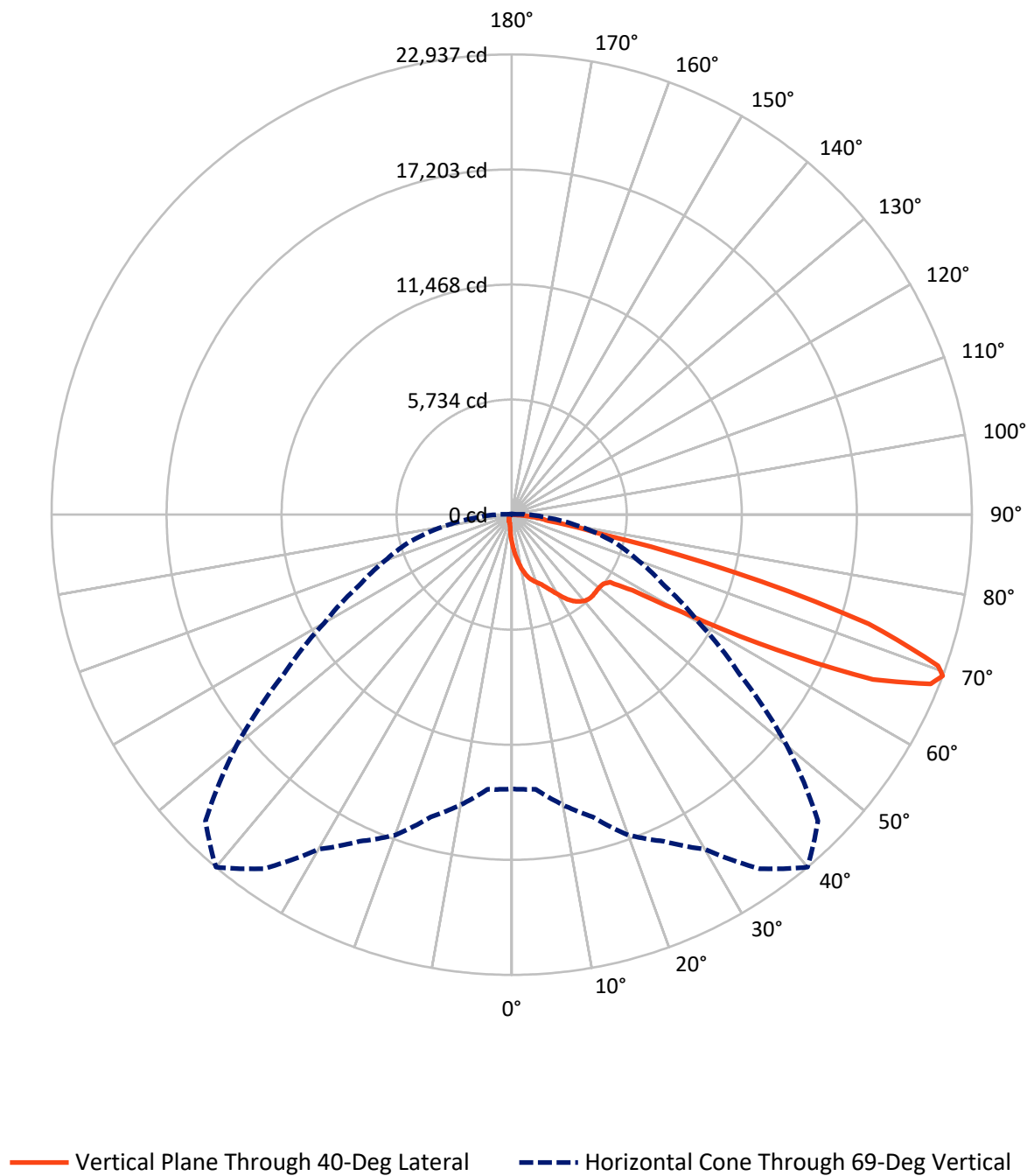


Based on 25 foot mounting height. Maximum calculated value = 6.5 fc
 Type IV - Short - Semi-Cutoff

REPORT NUMBER: P165527

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

Luminous Intensity Polar Plot



REPORT NUMBER: P165527

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	538.8	0.0	538.8
	% Fixture	3.0	0.0	3.0
Street Side	Lumens	17555.6	0.0	17555.6
	% Fixture	97.0	0.0	97.0
Total	Lumens	18094.4	0.0	18094.4
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	140.5	0.8
10°-20°	484.2	2.7
20°-30°	926.8	5.1
30°-40°	1541.3	8.5
40°-50°	2085.7	11.5
50°-60°	3261.8	18.0
60°-70°	6706.1	37.1
70°-80°	2698.4	14.9
80°-90°	249.6	1.4
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°	18094.4	100.0
0°-180°	18094.4	100.0

Coefficient of Utilization



REPORT NUMBER: P165527

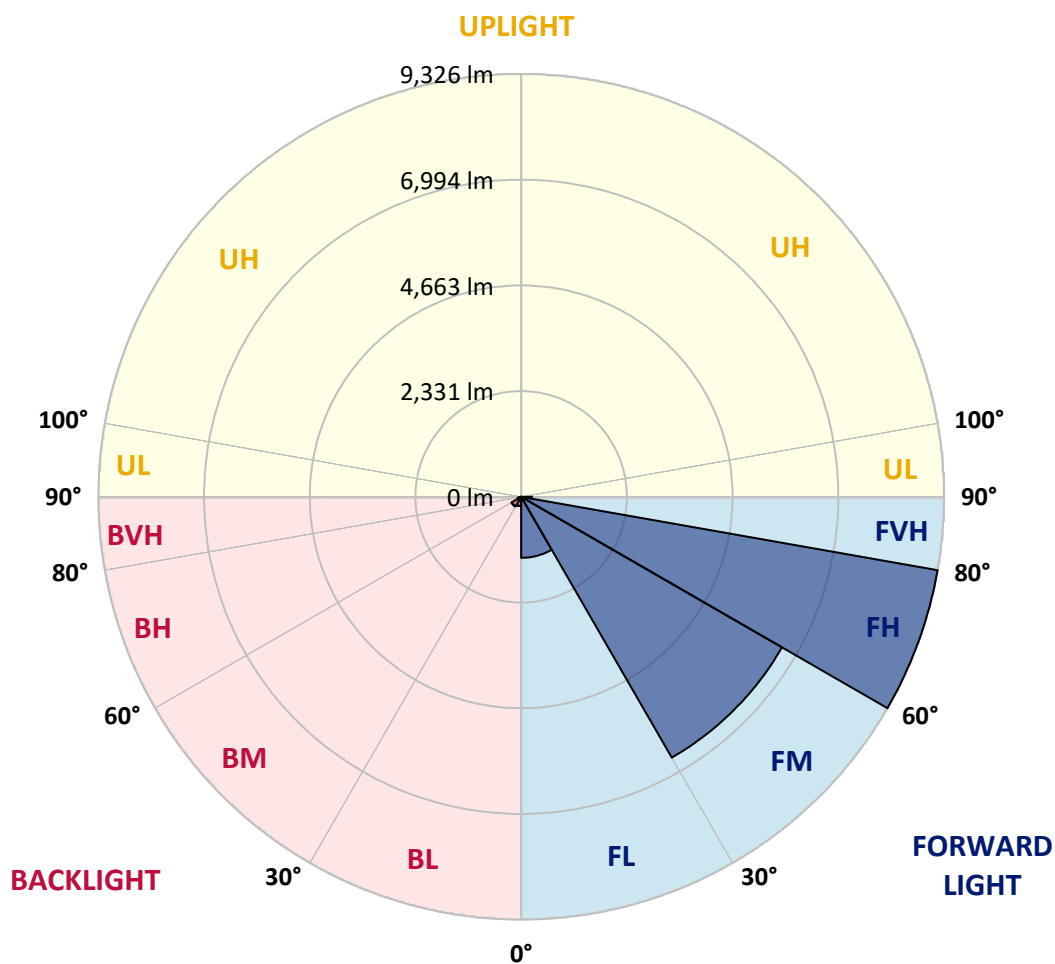
CATALOG NUMBER: VST-E09-LED-E-U-SL4-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1346.6	7.4			
FM	(30°-60°)	6642.7	36.7			
FH	(60°-80°)	9325.9	51.5			G4/12000
FVH	(80°-90°)	240.3	1.3			G3/500
BL	(0°-30°)	204.9	1.1	B1/500		
BM	(30°-60°)	246.0	1.4	B1/1000		
BH	(60°-80°)	78.6	0.4	B0/110		G0/110
BVH	(80°-90°)	9.3	0.1			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G4

Type IV Short





REPORT NUMBER: P165527

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

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1366.6	1366.6	1366.6	1366.6	1366.6	1366.6	1366.6	1366.6	1366.6	1366.6	1366.6
2.5°	1823.0	1802.2	1778.4	1778.4	1748.9	1748.9	1731.1	1683.7	1677.8	1651.0	1624.3
5°	2326.9	2309.0	2279.5	2252.7	2229.1	2187.5	2157.8	2101.5	2039.4	1980.0	1926.7
7.5°	2819.0	2810.0	2756.7	2747.7	2709.2	2641.1	2581.7	2498.8	2392.0	2309.0	2211.3
10°	3275.5	3254.6	3242.7	3192.3	3136.1	3062.0	2970.0	2869.4	2744.8	2614.3	2475.0
12.5°	3637.1	3625.2	3571.7	3551.0	3491.8	3417.7	3302.1	3171.6	3047.2	2878.2	2715.1
15°	3906.7	3886.0	3850.4	3817.8	3746.7	3681.5	3574.8	3432.4	3281.4	3097.6	2902.0
17.5°	4132.1	4093.6	4084.6	4034.2	3960.2	3883.0	3764.5	3634.0	3456.2	3272.4	3058.9
20°	4434.3	4381.0	4363.2	4289.0	4203.2	4096.4	3960.2	3797.1	3610.3	3408.8	3189.4
22.5°	4790.0	4751.5	4712.9	4647.8	4538.2	4387.0	4188.4	4010.6	3773.3	3551.0	3314.0
25°	5294.0	5261.4	5199.1	5110.2	4973.8	4793.0	4552.9	4292.1	4013.5	3728.9	3450.2
27.5°	5783.0	5753.3	5708.9	5640.8	5486.6	5288.0	4991.6	4659.7	4306.9	3963.1	3654.7
30°	6242.6	6215.8	6171.3	6103.3	5966.8	5771.2	5436.2	5080.5	4641.8	4241.7	3871.3
32.5°	6737.6	6728.6	6678.2	6580.4	6461.8	6198.1	5833.4	5451.1	5006.5	4544.1	4111.2
35°	7297.7	7229.5	7182.2	7084.3	6882.8	6601.1	6174.4	5756.4	5288.0	4813.7	4330.6
37.5°	7772.0	7706.9	7647.5	7523.1	7277.0	6918.3	6435.2	5975.6	5492.5	5009.4	4517.3
40°	8118.7	8086.1	8015.0	7852.0	7576.4	7149.6	6627.8	6126.8	5640.8	5154.7	4668.5
42.5°	8376.7	8326.3	8246.3	8077.3	7751.3	7265.2	6704.8	6189.1	5708.9	5243.6	4766.4
45°	8471.5	8430.1	8356.0	8172.2	7819.4	7297.7	6701.9	6171.3	5711.9	5270.2	4831.6
47.5°	8415.2	8373.8	8308.4	8136.5	7789.9	7259.2	6648.7	6120.9	5682.2	5279.2	4890.8
50°	8228.5	8204.8	8154.4	8009.1	7697.9	7185.1	6601.1	6094.3	5676.3	5323.7	4973.8
52.5°	8210.7	8195.9	8133.7	7988.4	7671.2	7161.3	6595.2	6109.2	5726.7	5380.0	5033.2
55°	10033.6	9823.1	9351.9	8951.8	8293.7	7511.2	6894.5	6349.1	5940.2	5602.3	5359.1
57.5°	14260.5	13946.4	13326.8	12565.1	11053.3	9568.3	8379.7	7520.0	7096.1	6942.1	7033.9
60°	16240.5	16184.3	16086.4	15724.8	14951.2	13673.7	12250.8	10712.5	10095.8	10042.6	10229.2
62.5°	17180.3	17144.6	17174.3	17129.9	16889.8	16516.3	16107.1	15443.3	14832.5	14438.3	13602.4
65°	17613.0	17636.8	17805.6	17939.0	17968.7	18066.4	18365.9	19192.9	19797.5	18780.8	16459.9
67.5°	16513.2	16652.5	17041.0	17527.0	18096.1	18647.5	19536.7	21279.6	22521.6	21327.1	18031.0
69°	13670.6	13738.9	14687.3	15603.3	16993.4	17965.8	19255.1	21540.4	22936.7	21587.9	17906.4
70°	10762.7	10825.0	11841.8	13086.7	15437.3	16688.2	18374.8	21098.9	22548.2	21241.1	17266.1
72.5°	4855.3	4766.4	5125.0	5791.9	8347.0	10333.1	13282.4	17094.2	18603.0	17017.2	12917.7
75°	3391.0	3352.5	3391.0	3393.9	3791.2	4890.8	6171.3	9265.9	11459.3	9888.5	6171.3
77.5°	2626.2	2599.6	2572.9	2543.2	2590.7	2902.0	3026.3	3287.2	4268.3	4037.2	2353.5
80°	2077.9	2054.2	2119.3	2098.6	2098.6	2134.3	2110.5	2012.6	1828.8	1695.4	1517.6
82.5°	966.2	972.2	972.2	1055.2	1271.7	1485.0	1553.2	1455.5	1292.4	1099.6	886.3
85°	91.8	103.7	175.0	269.8	536.6	604.6	607.7	503.8	503.8	397.3	320.0
87.5°	0.0	2.9	2.9	2.9	26.6	74.2	62.3	17.8	8.8	8.8	14.8
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: P165527

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

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1366.6	1366.6	1366.6	1366.6	1366.6	1366.6	1366.6	1366.6	1366.6	1366.6	1366.6
2.5°	1577.0	1568.0	1532.5	1496.9	1464.3	1428.7	1396.1	1363.5	1327.9	1301.2	1268.6
5°	1843.7	1778.4	1704.4	1633.3	1562.0	1488.1	1411.0	1342.8	1271.7	1206.4	1144.1
7.5°	2113.4	1985.9	1885.1	1757.7	1642.1	1526.6	1419.8	1310.2	1209.4	1114.6	1025.6
10°	2341.6	2187.5	2030.4	1867.5	1701.4	1547.3	1399.1	1268.6	1135.3	1019.7	910.1
12.5°	2528.5	2332.8	2140.2	1935.5	1748.9	1553.2	1369.4	1212.3	1055.2	924.8	812.2
15°	2697.3	2472.1	2240.8	2003.8	1766.7	1544.4	1339.7	1144.1	984.1	835.9	708.5
17.5°	2833.7	2575.8	2315.0	2048.2	1793.3	1532.5	1301.2	1096.7	910.1	755.8	631.4
20°	2952.4	2682.5	2401.0	2101.5	1811.2	1529.5	1268.6	1037.5	844.7	681.8	560.2
22.5°	3062.0	2792.2	2489.9	2169.7	1837.8	1526.6	1238.9	993.1	788.4	625.5	503.8
25°	3186.5	2902.0	2584.8	2240.8	1885.1	1538.5	1221.3	957.4	738.0	572.0	459.4
27.5°	3325.9	3026.3	2697.3	2329.7	1947.4	1562.0	1215.4	918.9	693.5	521.6	423.9
30°	3521.3	3174.7	2810.0	2418.7	2003.8	1588.9	1209.4	895.1	649.1	483.1	388.3
32.5°	3693.4	3319.9	2934.5	2510.6	2066.0	1615.5	1206.4	862.6	607.7	444.6	361.6
35°	3874.1	3453.3	3041.3	2599.6	2119.3	1645.0	1203.5	838.8	569.2	406.1	335.0
37.5°	4031.3	3565.8	3124.3	2676.6	2178.7	1671.8	1206.4	818.1	533.5	373.5	311.2
40°	4164.7	3681.5	3216.1	2747.7	2240.8	1713.2	1209.4	797.4	498.1	343.8	290.5
42.5°	4283.3	3791.2	3314.0	2827.8	2312.1	1760.8	1227.2	779.6	468.4	317.2	269.8
45°	4375.1	3892.0	3420.5	2940.5	2427.7	1837.8	1259.8	767.7	438.7	293.4	252.0
47.5°	4469.9	4040.1	3601.4	3118.3	2596.7	1959.3	1316.2	764.8	414.9	275.6	237.1
50°	4600.4	4188.4	3761.5	3299.0	2750.8	2083.9	1384.2	767.7	385.4	257.9	222.3
52.5°	4695.3	4339.4	3969.0	3613.3	3118.3	2463.1	1648.1	821.0	370.4	243.0	204.5
55°	5255.5	5193.2	5202.0	5261.4	4879.1	4191.3	2756.7	1185.7	435.8	275.6	201.6
57.5°	7410.4	7629.7	7757.1	7754.2	7122.8	5907.6	3702.2	1523.5	486.2	320.0	240.1
60°	10244.2	10078.2	9844.0	9265.9	8427.1	6743.5	4140.9	1639.3	420.8	254.9	219.4
62.5°	12748.9	11776.5	10913.9	9977.4	8877.6	7033.9	4229.8	1630.3	367.6	192.6	154.1
65°	14310.9	12562.0	11169.0	9995.0	8699.8	6790.9	4001.6	1496.9	311.2	157.1	127.4
67.5°	14684.4	12138.1	10167.1	8670.1	7268.0	5285.2	2937.4	1126.4	243.0	130.5	112.7
69°	13869.2	10789.6	8424.2	6725.7	5288.0	3506.6	1817.1	711.4	186.7	118.6	103.7
70°	12757.7	9384.5	6862.0	5397.7	3915.7	2463.1	1271.7	500.9	151.2	109.6	94.9
72.5°	8207.8	4929.3	3373.2	2347.6	1615.5	981.2	498.1	225.4	115.6	91.8	77.0
75°	3183.5	1823.0	1322.1	1004.8	785.5	545.4	302.4	145.3	97.7	77.0	59.2
77.5°	1568.0	1200.4	981.2	672.8	391.3	243.0	163.1	112.7	80.1	56.3	38.5
80°	1238.9	824.0	492.1	305.3	231.1	175.0	124.6	91.8	59.2	35.6	26.6
82.5°	634.3	346.9	254.9	207.5	171.9	136.4	100.8	65.2	38.5	23.8	20.7
85°	198.5	145.3	130.5	127.4	118.6	97.7	71.1	41.6	23.8	14.8	14.8
87.5°	14.8	20.7	26.6	20.7	23.8	20.7	26.6	17.8	11.9	11.9	8.8
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°	1366.6	1366.6	1366.6	1366.6	1366.6	1366.6	1366.6	1366.6	1366.6	1366.6	1366.6
2.5°	1244.9	1209.4	1176.8	1156.0	1117.4	1102.7	1087.9	1082.0	1055.2	1061.1	1037.5
5°	1087.9	1025.6	978.1	930.8	886.3	853.7	826.9	794.3	767.7	755.8	732.1
7.5°	945.5	865.6	803.3	752.9	699.5	658.1	622.4	598.7	575.1	551.3	539.5
10°	821.0	735.1	664.0	613.6	563.2	527.6	500.9	483.1	468.4	459.4	456.5
12.5°	705.4	622.4	557.3	512.8	474.3	456.5	444.6	435.8	432.7	429.8	429.8
15°	616.5	533.5	483.1	450.5	432.7	423.9	420.8	414.9	409.1	406.1	406.1
17.5°	533.5	471.2	435.8	418.0	409.1	403.2	397.3	391.3	385.4	382.3	382.3
20°	477.2	426.8	409.1	397.3	388.3	382.3	373.5	367.6	364.7	361.6	358.7
22.5°	432.7	400.1	388.3	379.4	367.6	358.7	352.8	346.9	340.9	337.9	335.0
25°	400.1	379.4	370.4	358.7	346.9	337.9	329.0	320.0	314.3	311.2	305.3
27.5°	376.4	361.6	349.7	335.0	323.1	314.3	305.3	296.5	290.5	284.6	281.5
30°	355.7	340.9	326.0	314.3	299.3	290.5	278.6	269.8	266.8	260.8	254.9
32.5°	335.0	320.0	305.3	290.5	275.6	263.9	257.9	246.1	240.1	237.1	231.1
35°	311.2	296.5	278.6	266.8	252.0	240.1	231.1	222.3	216.4	210.4	207.5
37.5°	290.5	272.7	254.9	240.1	228.2	216.4	207.5	198.5	192.6	186.7	183.8
40°	266.8	248.9	231.1	216.4	204.5	195.7	186.7	177.8	171.9	169.0	169.0
42.5°	246.1	225.4	207.5	195.7	186.7	175.0	166.0	157.1	154.1	151.2	154.1
45°	225.4	204.5	189.7	177.8	169.0	157.1	148.1	142.2	139.3	142.2	145.3
47.5°	207.5	186.7	171.9	163.1	154.1	145.3	136.4	130.5	130.5	136.4	142.2
50°	189.7	169.0	157.1	151.2	142.2	133.4	121.5	118.6	121.5	127.4	133.4
52.5°	171.9	148.1	139.3	136.4	127.4	118.6	109.6	106.7	109.6	115.6	112.7
55°	154.1	130.5	127.4	124.6	115.6	103.7	94.9	94.9	94.9	91.8	86.0
57.5°	148.1	115.6	112.7	109.6	100.8	88.9	83.0	77.0	74.2	65.2	62.3
60°	154.1	103.7	103.7	97.7	88.9	77.0	68.2	59.2	53.3	47.3	47.3
62.5°	124.6	94.9	91.8	86.0	74.2	62.3	53.3	44.5	41.6	38.5	38.5
65°	100.8	86.0	80.1	71.1	62.3	50.4	41.6	35.6	32.6	32.6	35.6
67.5°	91.8	77.0	68.2	59.2	50.4	38.5	32.6	29.7	29.7	32.6	32.6
69°	86.0	71.1	62.3	53.3	44.5	35.6	29.7	29.7	29.7	29.7	32.6
70°	80.1	68.2	59.2	50.4	38.5	29.7	26.6	26.6	29.7	29.7	32.6
72.5°	62.3	53.3	50.4	41.6	29.7	26.6	23.8	26.6	26.6	29.7	29.7
75°	47.3	38.5	38.5	32.6	23.8	20.7	20.7	23.8	23.8	26.6	26.6
77.5°	32.6	26.6	26.6	23.8	20.7	17.8	17.8	20.7	23.8	23.8	26.6
80°	23.8	20.7	17.8	20.7	17.8	14.8	17.8	20.7	20.7	23.8	23.8
82.5°	17.8	17.8	17.8	17.8	14.8	14.8	17.8	17.8	20.7	23.8	23.8
85°	14.8	14.8	14.8	14.8	14.8	14.8	14.8	17.8	17.8	20.7	20.7
87.5°	8.8	8.8	8.8	11.9	11.9	14.8	14.8	14.8	14.8	17.8	17.8
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: P165527

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

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1366.6	1366.6	1366.6	1366.6
2.5°	1031.6	1028.5	1016.6	1019.7
5°	723.2	705.4	717.3	714.4
7.5°	530.6	527.6	524.7	530.6
10°	453.6	453.6	450.5	453.6
12.5°	426.8	426.8	426.8	426.8
15°	406.1	406.1	403.2	403.2
17.5°	382.3	382.3	382.3	379.4
20°	358.7	355.7	355.7	355.7
22.5°	331.9	329.0	329.0	329.0
25°	305.3	302.4	302.4	302.4
27.5°	278.6	275.6	272.7	272.7
30°	252.0	248.9	246.1	246.1
32.5°	225.4	222.3	219.4	219.4
35°	201.6	201.6	198.5	195.7
37.5°	180.9	180.9	180.9	180.9
40°	166.0	169.0	169.0	169.0
42.5°	157.1	160.0	163.1	166.0
45°	151.2	157.1	160.0	160.0
47.5°	148.1	151.2	154.1	154.1
50°	136.4	133.4	133.4	133.4
52.5°	109.6	103.7	100.8	97.7
55°	80.1	77.0	71.1	71.1
57.5°	56.3	56.3	53.3	53.3
60°	44.5	44.5	41.6	44.5
62.5°	38.5	38.5	38.5	38.5
65°	35.6	35.6	35.6	35.6
67.5°	35.6	35.6	35.6	35.6
69°	32.6	32.6	32.6	32.6
70°	32.6	32.6	32.6	32.6
72.5°	29.7	29.7	29.7	29.7
75°	26.6	29.7	29.7	29.7
77.5°	26.6	26.6	26.6	26.6
80°	23.8	23.8	26.6	26.6
82.5°	23.8	23.8	23.8	23.8
85°	20.7	20.7	23.8	23.8
87.5°	17.8	17.8	20.7	20.7
90°	0.0	0.0	0.0	0.0

(END OF REPORT)