

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: P158494

Luminaire Tested: **VST-F09-LED-E-U-SL3-7030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P158494
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33713)
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-SL3-7030
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(9) LIGHTBARS WITH AccuLED OPTICS - TYPE 3 W/ SPILL LIGHT CONTROL
Light Source: (63) 3000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 20472.3 lumens
Efficiency: N/A
Efficacy: 87.2 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')
IES Classification: Type III - Short - Semi-Cutoff
BUG Rating: B3 - U0 - G3

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



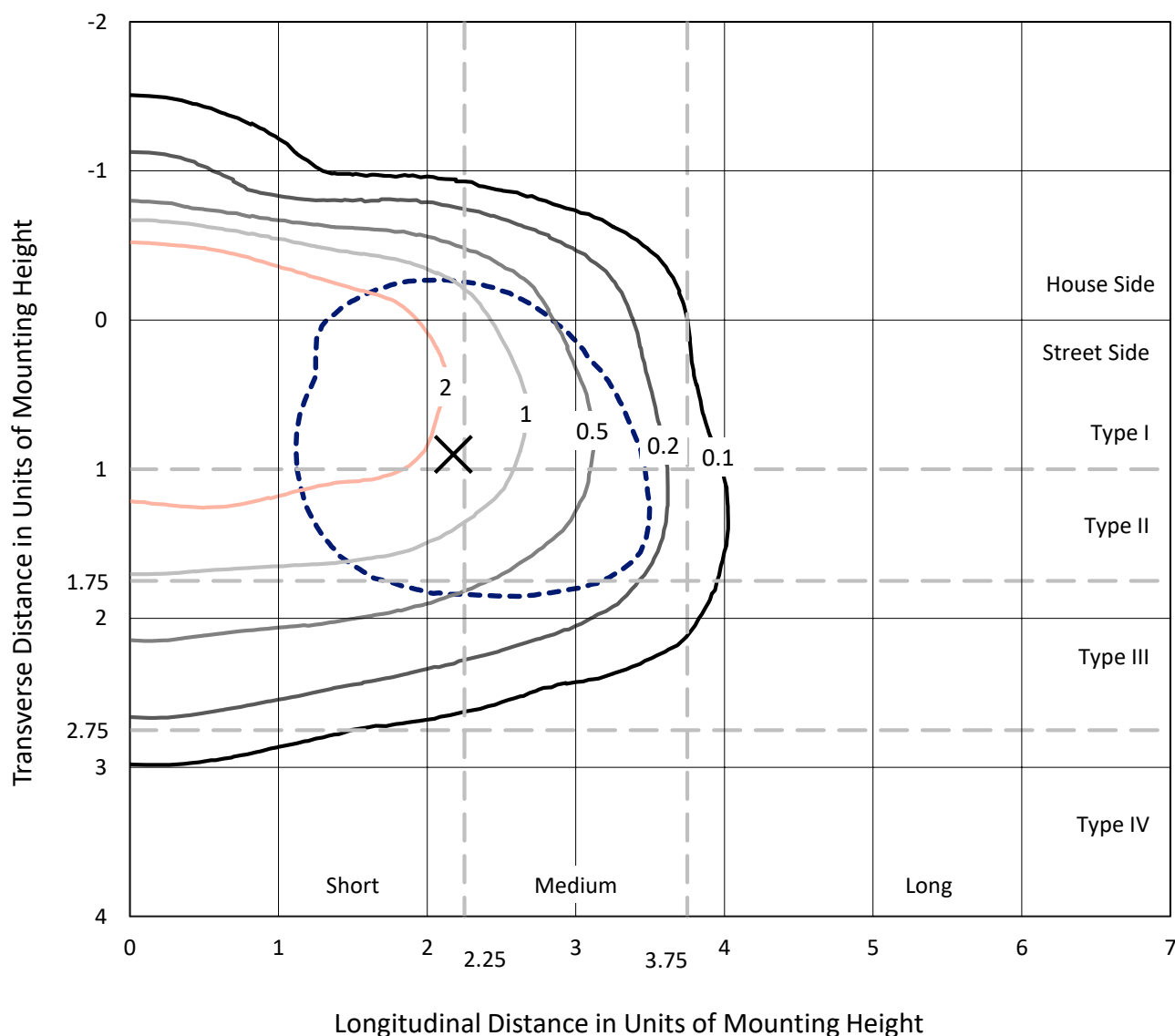
REPORT NUMBER: P158494

CATALOG NUMBER: VST-F09-LED-E-U-SL3-7030

Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

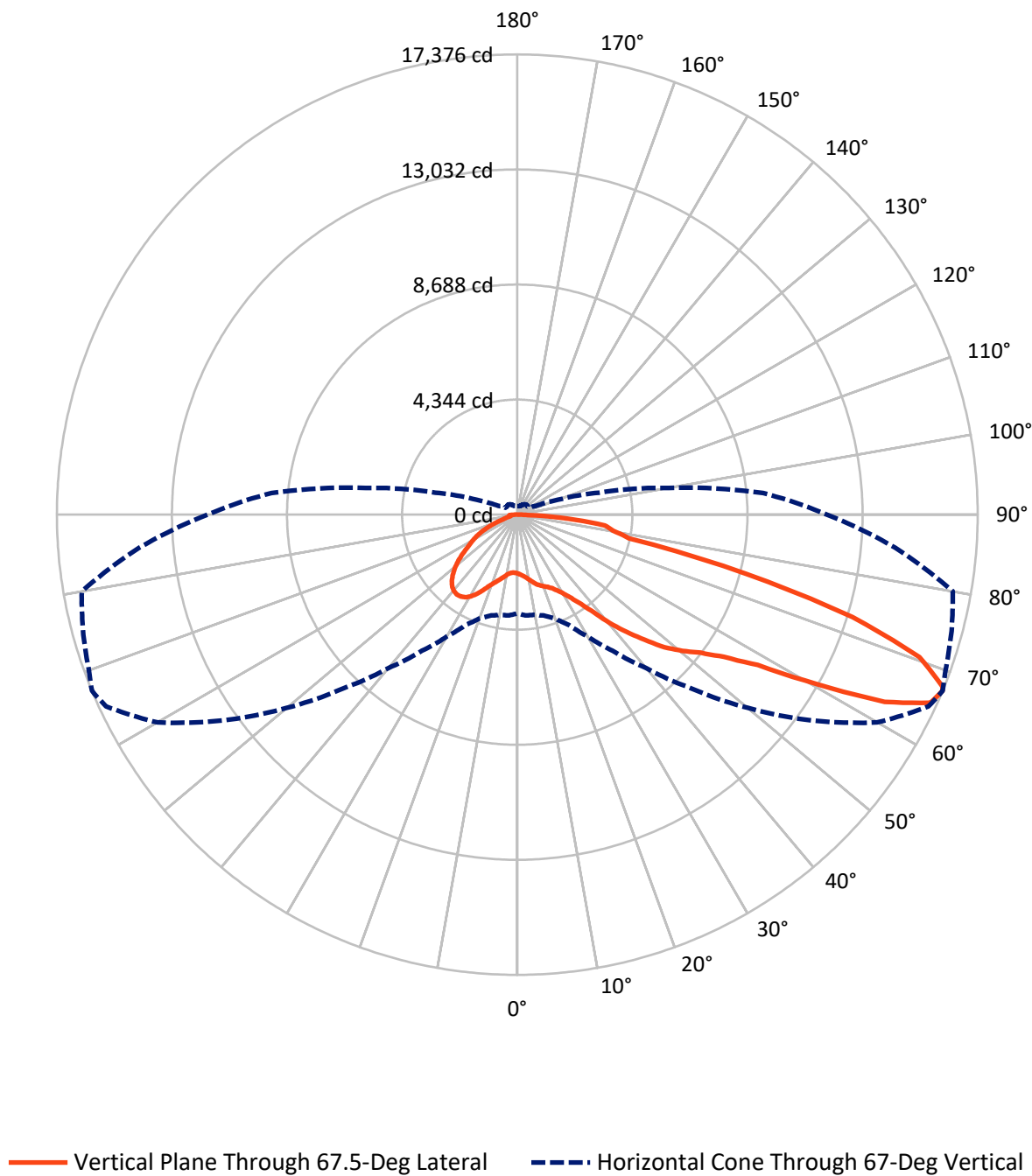


Based on 25 foot mounting height. Maximum calculated value = 4.5 fc
 Type III - Short - Semi-Cutoff

REPORT NUMBER: P158494

CATALOG NUMBER: VST-F09-LED-E-U-SL3-7030

Luminous Intensity Polar Plot



REPORT NUMBER: P158494

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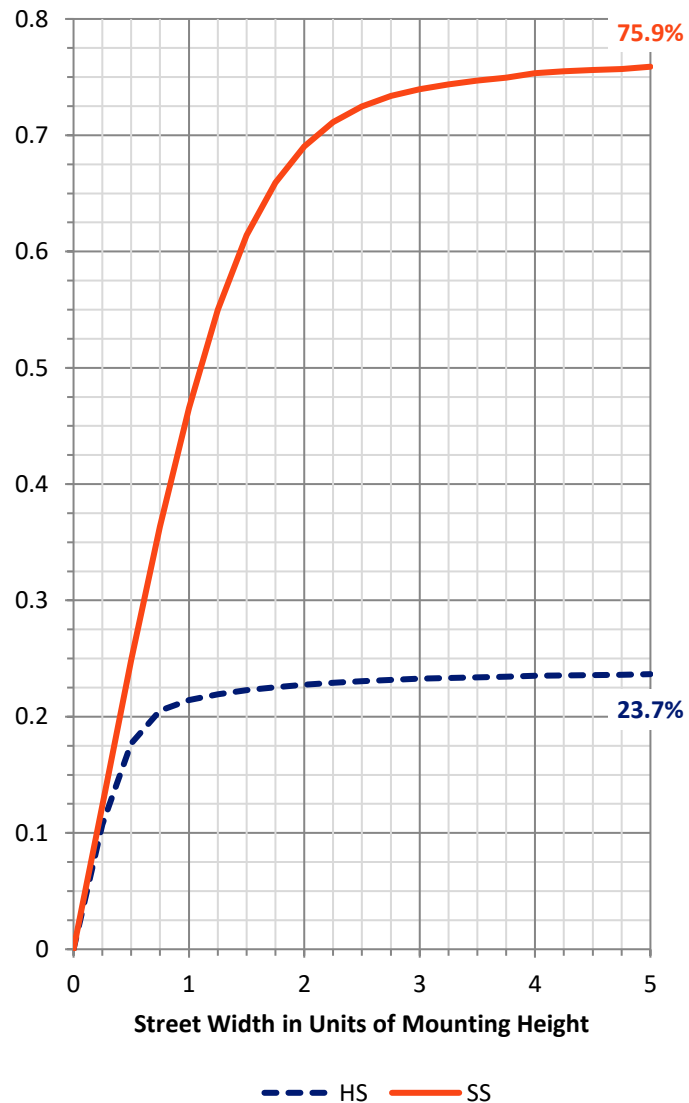
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4911.3	0.0	4911.3
	% Fixture	24.0	0.0	24.0
Street Side	Lumens	15560.9	0.0	15560.9
	% Fixture	76.0	0.0	76.0
Total	Lumens	20472.3	0.0	20472.3
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	220.5	1.1
10°-20°	751.4	3.7
20°-30°	1341.5	6.6
30°-40°	1966.0	9.6
40°-50°	3037.7	14.8
50°-60°	4423.5	21.6
60°-70°	5762.3	28.1
70°-80°	2579.4	12.6
80°-90°	390.0	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°	20472.3	100.0
0°-180°	20472.3	100.0

Coefficient of Utilization



REPORT NUMBER: P158494

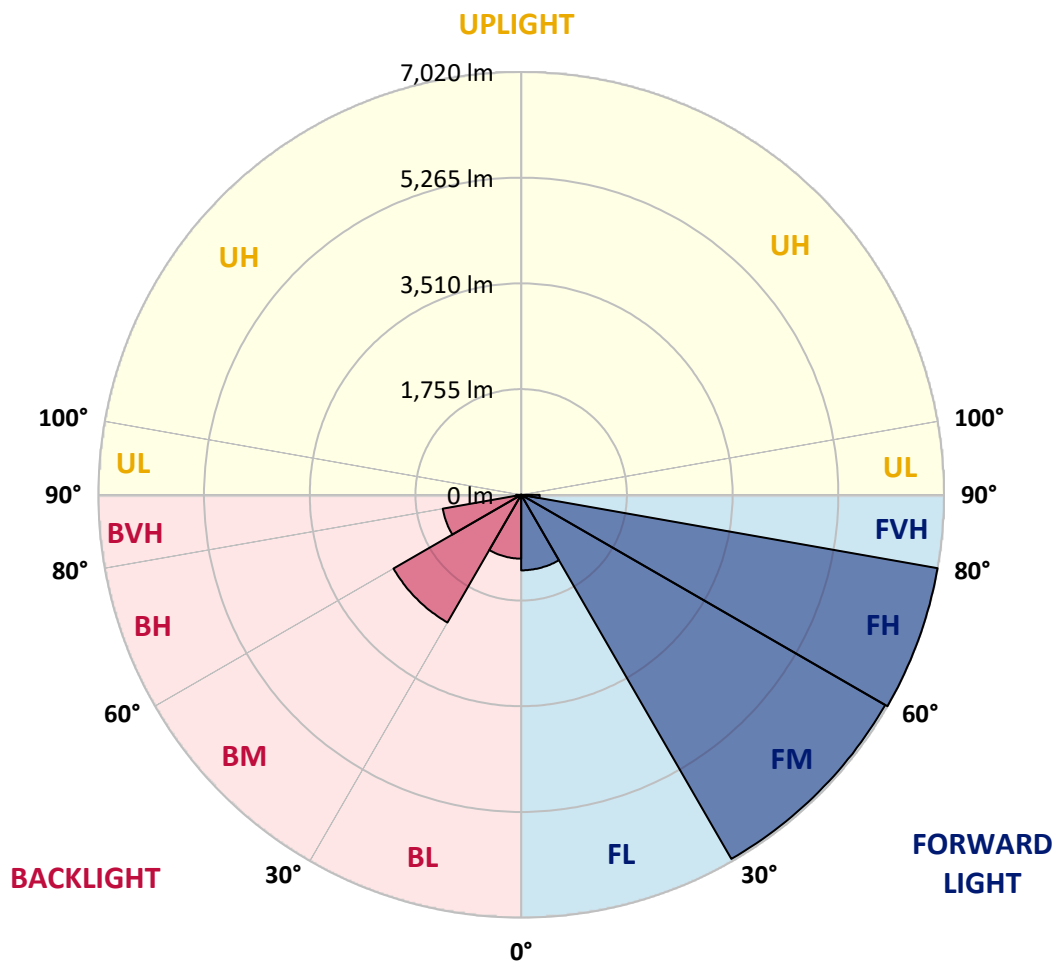
CATALOG NUMBER: VST-F09-LED-E-U-SL3-7030

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1254.3	6.1			
FM	(30°-60°)	6980.0	34.1			
FH	(60°-80°)	7020.3	34.3			G3/7500
FVH	(80°-90°)	306.3	1.5			G3/500
BL	(0°-30°)	1059.0	5.2	B3/2500		
BM	(30°-60°)	2447.2	12.0	B2/2500		
BH	(60°-80°)	1321.3	6.5	B3/2500		G3/2500
BVH	(80°-90°)	83.7	0.4			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G3

Type III Short





REPORT NUMBER: P158494

CATALOG NUMBER: VST-F09-LED-E-U-SL3-7030

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2219.0	2219.0	2219.0	2219.0	2219.0	2219.0	2219.0	2219.0	2219.0	2219.0	2219.0
2.5°	2305.9	2311.3	2312.6	2311.3	2312.6	2307.2	2305.9	2297.7	2301.8	2290.9	2288.2
5°	2430.7	2434.8	2437.5	2426.7	2429.4	2423.9	2417.2	2409.0	2398.2	2383.2	2373.7
7.5°	2552.9	2559.7	2558.3	2554.2	2544.7	2539.3	2525.7	2513.5	2494.5	2476.9	2464.7
10°	2717.1	2715.7	2715.7	2692.7	2679.1	2666.9	2642.4	2623.4	2604.4	2578.7	2565.1
12.5°	2907.1	2897.6	2893.5	2877.2	2848.7	2827.0	2791.7	2755.1	2721.2	2694.0	2672.3
15°	3090.3	3090.3	3079.5	3053.7	3026.5	2998.0	2947.8	2894.9	2839.2	2795.8	2774.1
17.5°	3257.3	3242.3	3232.8	3198.9	3170.4	3124.2	3068.6	3011.6	2942.4	2881.3	2839.2
20°	3379.4	3367.2	3346.8	3304.8	3255.9	3201.6	3136.5	3070.0	2995.3	2928.8	2881.3
22.5°	3450.0	3435.0	3403.8	3348.2	3281.7	3205.7	3129.7	3067.2	2999.4	2949.2	2909.8
25°	3486.6	3471.7	3429.6	3356.3	3266.8	3166.3	3079.5	3018.4	2979.0	2966.8	2961.4
27.5°	3485.3	3473.0	3428.3	3344.1	3228.8	3113.4	3019.7	2968.2	2964.1	3011.6	3046.9
30°	3450.0	3441.8	3401.1	3317.0	3196.2	3075.4	2988.5	2961.4	3003.5	3103.9	3190.7
32.5°	3414.7	3410.6	3382.1	3306.1	3203.0	3101.2	3041.5	3044.2	3131.0	3285.8	3425.5
35°	3418.8	3424.2	3420.1	3379.4	3314.3	3261.3	3232.8	3292.5	3428.3	3615.5	3802.8
37.5°	3454.0	3474.4	3500.2	3504.3	3505.6	3497.5	3557.2	3683.4	3881.6	4125.9	4419.0
40°	3531.4	3554.5	3629.1	3694.3	3778.4	3878.8	3999.6	4174.7	4420.4	4721.7	5081.3
42.5°	3771.6	3804.2	3896.5	4017.3	4172.0	4329.4	4509.9	4748.8	5050.1	5367.7	5745.0
45°	4085.1	4153.0	4254.8	4389.1	4621.2	4842.4	5075.9	5343.3	5663.5	6061.2	6441.2
47.5°	4476.0	4543.9	4691.8	4835.7	5109.8	5385.3	5640.5	5920.1	6267.5	6674.7	7095.4
50°	4818.0	4895.4	5027.0	5221.1	5538.7	5876.6	6158.9	6461.6	6753.4	7182.2	7607.0
52.5°	5086.7	5142.4	5268.6	5446.4	5800.6	6171.1	6528.1	6864.7	7210.7	7639.6	8033.2
55°	5120.7	5172.2	5295.7	5499.3	5859.0	6270.2	6681.4	7080.5	7570.4	8038.6	8559.8
57.5°	4974.1	5016.2	5141.0	5322.9	5673.0	6141.3	6661.1	7172.7	7799.8	8432.2	9068.7
60°	4766.4	4808.5	4906.2	5051.5	5367.7	5872.6	6479.2	7179.5	8012.8	8926.2	9862.7
62.5°	4538.4	4575.1	4653.8	4756.9	5035.2	5500.7	6195.6	7134.7	8186.6	9417.5	10861.6
65°	4154.4	4242.6	4276.5	4382.4	4660.6	5100.3	5807.4	6832.1	8116.0	9636.0	11488.6
67°	3729.6	3819.1	3836.8	3944.0	4166.6	4588.7	5308.0	6271.6	7556.8	9258.7	11350.2
67.5°	3593.8	3669.8	3697.0	3804.2	4014.6	4412.2	5094.9	6069.3	7385.8	9052.4	11183.2
70°	2642.4	2726.6	2756.4	2801.2	2951.9	3283.0	3735.0	4580.5	5888.8	7387.2	9433.8
72.5°	1414.2	1482.0	1510.6	1577.1	1654.4	1834.9	2181.0	2787.7	3614.2	4942.9	6711.3
75°	956.8	984.0	1004.3	1050.5	1130.5	1274.4	1426.4	1639.5	2138.9	2789.0	3819.1
77.5°	545.6	557.8	560.5	568.7	632.4	769.5	1019.2	1380.3	1769.8	2020.9	2442.9
80°	236.2	260.6	279.6	267.4	263.3	291.8	365.1	544.2	1066.7	1693.8	2010.0
82.5°	127.6	138.4	154.7	156.1	164.2	173.7	188.6	223.9	314.9	635.2	1385.7
85°	66.5	69.2	92.3	105.9	112.6	118.1	120.8	134.4	154.7	196.8	344.7
87.5°	9.5	13.6	16.3	21.7	24.4	25.8	29.9	38.0	44.8	54.3	92.3
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: P158494

CATALOG NUMBER: VST-F09-LED-E-U-SL3-7030

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°	100°
0°	2219.0	2219.0	2219.0	2219.0	2219.0	2219.0	2219.0	2219.0	2219.0	2219.0	2219.0
2.5°	2276.0	2273.3	2265.1	2259.7	2254.3	2248.9	2242.1	2236.6	2227.1	2220.4	2212.2
5°	2360.2	2343.9	2333.0	2318.1	2315.4	2297.7	2280.1	2271.9	2255.6	2242.1	2225.8
7.5°	2445.7	2426.7	2409.0	2396.8	2390.0	2365.6	2347.9	2327.6	2308.6	2290.9	2271.9
10°	2546.1	2527.1	2508.1	2499.9	2487.7	2464.7	2449.7	2423.9	2404.9	2383.2	2357.4
12.5°	2650.6	2637.0	2623.4	2612.6	2607.2	2596.3	2574.6	2552.9	2527.1	2505.4	2475.5
15°	2742.9	2733.4	2727.9	2725.2	2718.4	2698.1	2677.7	2650.6	2626.2	2593.6	
17.5°	2808.0	2804.0	2808.0	2812.1	2817.5	2812.1	2808.0	2785.0	2767.3	2737.4	2704.9
20°	2846.0	2854.2	2874.5	2888.1	2900.3	2909.8	2913.9	2894.9	2871.8	2850.1	2828.4
22.5°	2886.7	2909.8	2945.1	2965.5	2985.8	3019.7	3027.9	3014.3	2996.7	2983.1	2960.0
25°	2954.6	2988.5	3049.6	3082.2	3110.7	3160.9	3167.7	3170.4	3166.3	3155.5	3127.0
27.5°	3060.5	3127.0	3208.4	3250.5	3281.7	3346.8	3372.6	3372.6	3361.8	3374.0	3374.0
30°	3245.0	3333.3	3439.1	3463.5	3512.4	3569.4	3611.5	3616.9	3618.3	3644.1	3682.1
32.5°	3528.7	3612.8	3730.9	3758.1	3800.1	3854.4	3901.9	3896.5	3908.7	3964.3	4014.6
35°	3941.3	4026.8	4104.1	4140.8	4159.8	4208.6	4226.3	4256.1	4292.8	4362.0	4355.2
37.5°	4552.0	4628.0	4638.9	4661.9	4638.9	4648.4	4661.9	4697.2	4794.9	4857.4	4756.9
40°	5287.6	5413.8	5401.6	5374.5	5322.9	5253.7	5278.1	5332.4	5438.3	5384.0	5113.9
42.5°	5981.1	6111.4	6087.0	6055.8	5941.8	5916.0	5913.3	5958.1	6015.1	5860.3	5393.5
45°	6663.8	6796.8	6754.7	6737.1	6661.1	6605.4	6651.6	6654.3	6639.4	6308.2	5637.8
47.5°	7368.2	7490.3	7463.2	7478.1	7399.4	7362.7	7366.8	7347.8	7208.0	6688.2	5827.8
50°	7936.8	8101.1	8117.3	8083.4	8041.3	7985.7	8128.2	8076.6	7765.8	7057.4	6011.0
52.5°	8379.3	8600.5	8684.6	8662.9	8629.0	8635.8	8903.2	8961.5	8447.1	7522.9	6213.2
55°	8903.2	9252.0	9389.0	9470.5	9435.2	9570.9	10183.0	10212.8	9394.5	8130.9	6476.5
57.5°	9659.1	10158.6	10591.5	10706.9	10818.1	11259.2	12252.7	11950.0	10624.1	9051.1	6810.4
60°	10808.6	11902.5	12605.6	12974.7	13235.3	13851.5	14796.1	14029.3	12156.3	10146.3	7229.7
62.5°	12418.3	14017.0	15192.4	15562.9	15670.1	16024.3	16708.3	15241.2	12991.0	10637.6	7266.4
65°	13616.7	15534.4	16941.8	17131.8	17004.2	17011.0	17190.1	15177.4	12680.2	10208.8	6636.7
67°	13538.0	15685.0	17126.4	17376.1	17199.6	16967.6	16688.0	14312.9	11681.3	9310.3	5811.5
67.5°	13417.2	15539.8	17046.3	17309.6	17148.1	16883.4	16474.9	13977.7	11370.5	9030.7	5643.2
70°	11598.5	13706.2	15735.2	16105.8	16173.6	15932.0	14785.2	11785.8	9231.6	7346.5	4382.4
72.5°	9028.0	10905.0	12912.3	13233.9	13494.5	12798.3	10761.1	8140.4	6728.9	5294.4	3173.1
75°	5960.8	7870.3	8882.8	8930.3	8597.8	7308.5	5257.7	4077.0	3752.6	3112.0	1963.9
77.5°	3189.4	4628.0	4656.5	4311.8	4154.4	3097.1	1256.8	693.5	772.2	876.7	781.7
80°	2379.2	2947.8	3416.0	3672.6	3748.6	2656.0	650.1	367.8	321.7	293.2	289.1
82.5°	2145.7	2847.4	3192.1	3331.9	3296.6	2185.1	365.1	247.0	204.9	222.6	253.8
85°	841.5	1520.1	1999.1	1935.4	1625.9	814.3	199.5	133.0	133.0	192.7	249.7
87.5°	172.4	312.2	423.4	404.4	363.7	157.4	97.7	80.1	81.4	156.1	236.2
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):

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	2219.0	2219.0	2219.0	2219.0	2219.0	2219.0	2219.0	2219.0	2219.0	2219.0	2219.0
2.5°	2204.1	2195.9	2190.5	2185.1	2179.6	2176.9	2172.9	2172.9	2164.7	2162.0	2159.3
5°	2213.6	2200.0	2190.5	2178.3	2168.8	2160.6	2149.8	2147.1	2137.6	2130.8	2128.1
7.5°	2254.3	2233.9	2213.6	2198.6	2185.1	2167.4	2155.2	2144.4	2134.9	2128.1	2119.9
10°	2331.6	2309.9	2281.4	2254.3	2236.6	2209.5	2190.5	2171.5	2160.6	2152.5	2141.6
12.5°	2445.7	2414.4	2380.5	2347.9	2318.1	2282.8	2263.8	2240.7	2227.1	2220.4	2212.2
15°	2562.4	2528.4	2486.4	2455.2	2421.2	2394.1	2376.4	2356.1	2345.2	2337.1	2331.6
17.5°	2681.8	2642.4	2612.6	2581.4	2565.1	2544.7	2521.7	2495.9	2464.7	2445.7	2419.9
20°	2804.0	2774.1	2756.4	2738.8	2719.8	2691.3	2645.2	2592.2	2533.9	2478.2	2425.3
22.5°	2946.5	2928.8	2926.1	2909.8	2870.5	2802.6	2717.1	2618.0	2518.9	2426.7	2354.7
25°	3147.3	3147.3	3133.7	3067.2	2975.0	2852.8	2708.9	2566.4	2434.8	2308.6	2213.6
27.5°	3399.8	3390.3	3323.8	3186.7	3021.1	2831.1	2638.4	2457.9	2289.6	2151.1	2029.0
30°	3678.0	3611.5	3469.0	3253.2	3004.8	2760.5	2524.4	2315.4	2117.2	1947.6	1803.7
32.5°	3967.1	3805.6	3549.0	3253.2	2947.8	2654.7	2381.9	2125.4	1898.7	1708.7	1537.7
35°	4229.0	3934.5	3568.0	3200.2	2836.5	2498.6	2182.4	1891.9	1620.5	1415.5	1228.3
37.5°	4466.5	4020.0	3547.7	3097.1	2675.0	2278.7	1908.2	1587.9	1281.2	1083.0	922.9
40°	4621.2	4037.6	3463.5	2935.6	2444.3	1981.5	1571.6	1213.3	970.4	789.9	682.7
42.5°	4717.6	4003.7	3327.8	2714.4	2133.5	1608.3	1179.4	870.0	689.5	589.0	548.3
45°	4771.9	3915.5	3127.0	2411.7	1757.6	1222.8	837.4	628.4	530.7	495.4	481.8
47.5°	4769.2	3773.0	2875.9	2061.6	1342.3	852.3	593.1	489.9	462.8	451.9	449.2
50°	4740.7	3597.9	2581.4	1681.6	969.0	594.4	469.6	439.7	432.9	426.2	423.4
52.5°	4701.3	3380.8	2255.6	1311.0	688.1	475.0	426.2	418.0	412.6	405.8	403.1
55°	4628.0	3113.4	1902.8	986.7	538.8	428.9	411.2	408.5	401.7	392.2	386.8
57.5°	4538.4	2842.0	1564.8	770.9	476.4	418.0	408.5	404.4	394.9	384.1	373.2
60°	4505.9	2618.0	1300.2	650.1	461.4	422.1	415.3	409.9	396.3	380.0	367.8
62.5°	4302.3	2365.6	1110.2	602.6	469.6	439.7	437.0	428.9	408.5	389.5	370.5
65°	3775.7	2000.5	940.5	570.0	485.9	469.6	472.3	460.1	439.7	413.9	380.0
67°	3193.5	1631.3	783.1	538.8	498.1	500.8	510.3	500.8	475.0	438.4	392.2
67.5°	3038.7	1537.7	743.7	529.3	500.8	508.9	519.8	513.0	487.2	445.2	397.7
70°	2258.4	1083.0	555.1	479.1	500.8	533.4	557.8	564.6	536.1	477.7	408.5
72.5°	1590.6	699.0	426.2	415.3	454.7	498.1	544.2	567.3	534.7	470.9	393.6
75°	955.5	437.0	346.1	352.9	382.7	427.5	464.2	473.7	432.9	392.2	340.7
77.5°	442.4	290.4	271.4	280.9	309.4	329.8	329.8	310.8	279.6	255.2	244.3
80°	260.6	237.5	236.2	253.8	272.8	257.9	234.8	209.0	192.7	184.6	180.5
82.5°	244.3	253.8	270.1	274.2	259.2	222.6	194.1	168.3	160.1	156.1	152.0
85°	287.7	308.1	280.9	259.2	229.4	187.3	152.0	130.3	126.2	122.1	116.7
87.5°	266.0	253.8	221.2	190.0	157.4	114.0	82.8	74.6	80.1	78.7	76.0
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: P158494

CATALOG NUMBER: VST-F09-LED-E-U-SL3-7030

CANDELA DISTRIBUTION (continued):

	160°	165°	170°	175°	180°
0°	2219.0	2219.0	2219.0	2219.0	2219.0
2.5°	2160.6	2160.6	2155.2	2152.5	2159.3
5°	2122.6	2124.0	2119.9	2118.6	2119.9
7.5°	2114.5	2113.1	2110.4	2107.7	2110.4
10°	2138.9	2137.6	2133.5	2136.2	2132.1
12.5°	2212.2	2220.4	2219.0	2221.7	2227.1
15°	2331.6	2330.3	2326.2	2328.9	2333.0
17.5°	2399.5	2388.7	2379.2	2375.1	2375.1
20°	2383.2	2352.0	2335.7	2326.2	2323.5
22.5°	2286.9	2242.1	2208.1	2200.0	2193.2
25°	2129.4	2073.8	2030.4	2020.9	2003.2
27.5°	1946.2	1871.6	1820.0	1809.1	1799.6
30°	1706.0	1620.5	1560.8	1522.8	1535.0
32.5°	1412.8	1331.4	1262.2	1201.1	1191.6
35°	1091.2	1001.6	940.5	913.4	895.7
37.5°	814.3	739.7	699.0	673.2	674.5
40°	622.9	583.6	561.9	544.2	545.6
42.5°	519.8	502.2	496.7	488.6	484.5
45°	470.9	465.5	466.9	458.7	456.0
47.5°	443.8	439.7	441.1	435.7	434.3
50°	422.1	419.4	420.7	416.7	415.3
52.5°	400.4	401.7	400.4	397.7	397.7
55°	381.4	380.0	382.7	378.7	378.7
57.5°	366.4	365.1	365.1	363.7	363.7
60°	358.3	352.9	351.5	351.5	352.9
62.5°	354.2	344.7	343.4	343.4	344.7
65°	355.6	340.7	335.2	333.9	332.5
67°	356.9	335.2	324.4	318.9	317.6
67.5°	358.3	332.5	320.3	314.9	312.2
70°	350.2	313.5	295.9	286.4	283.7
72.5°	329.8	290.4	268.7	256.5	253.8
75°	293.2	263.3	244.3	230.7	225.3
77.5°	226.7	213.1	206.3	198.1	195.4
80°	176.4	169.6	166.9	161.5	160.1
82.5°	146.6	139.8	135.7	128.9	124.9
85°	114.0	105.9	103.1	97.7	95.0
87.5°	74.6	70.6	69.2	62.4	59.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)