

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: P157833

Luminaire Tested: **VST-F09-LED-E-U-5XQ-8030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P157833
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33710)
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-5XQ-8030
Description: VENTUS LED SITE/ROADWAY LUMINAIRE
(9) LIGHTBARS WITH AccuLED OPTICS - TYPE 5 SQUARE EXTRA WIDE
Light Source: (63) 3000K CCT, 80 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 19831.5 lumens
Efficiency: N/A
Efficacy: 84.5 lumens/watt
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')
IES Classification: Type V - Short - Non-Cutoff
BUG Rating: B5 - U1 - 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

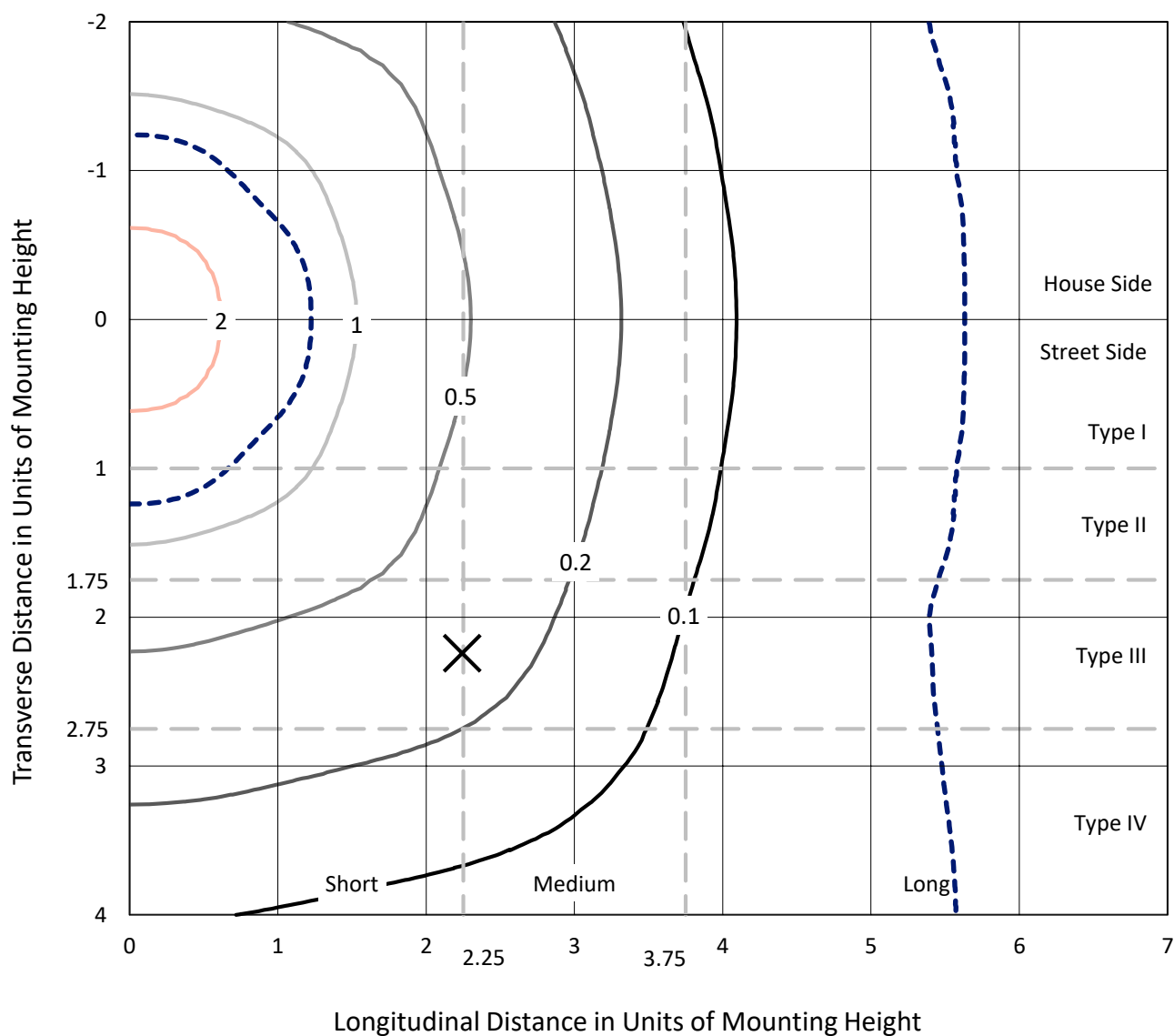


REPORT NUMBER: P157833

CATALOG NUMBER: VST-F09-LED-E-U-5XQ-8030

Iso-Footcandle Lines of Horizontal Illumination

× Max cd
- - - 1/2 Max cd

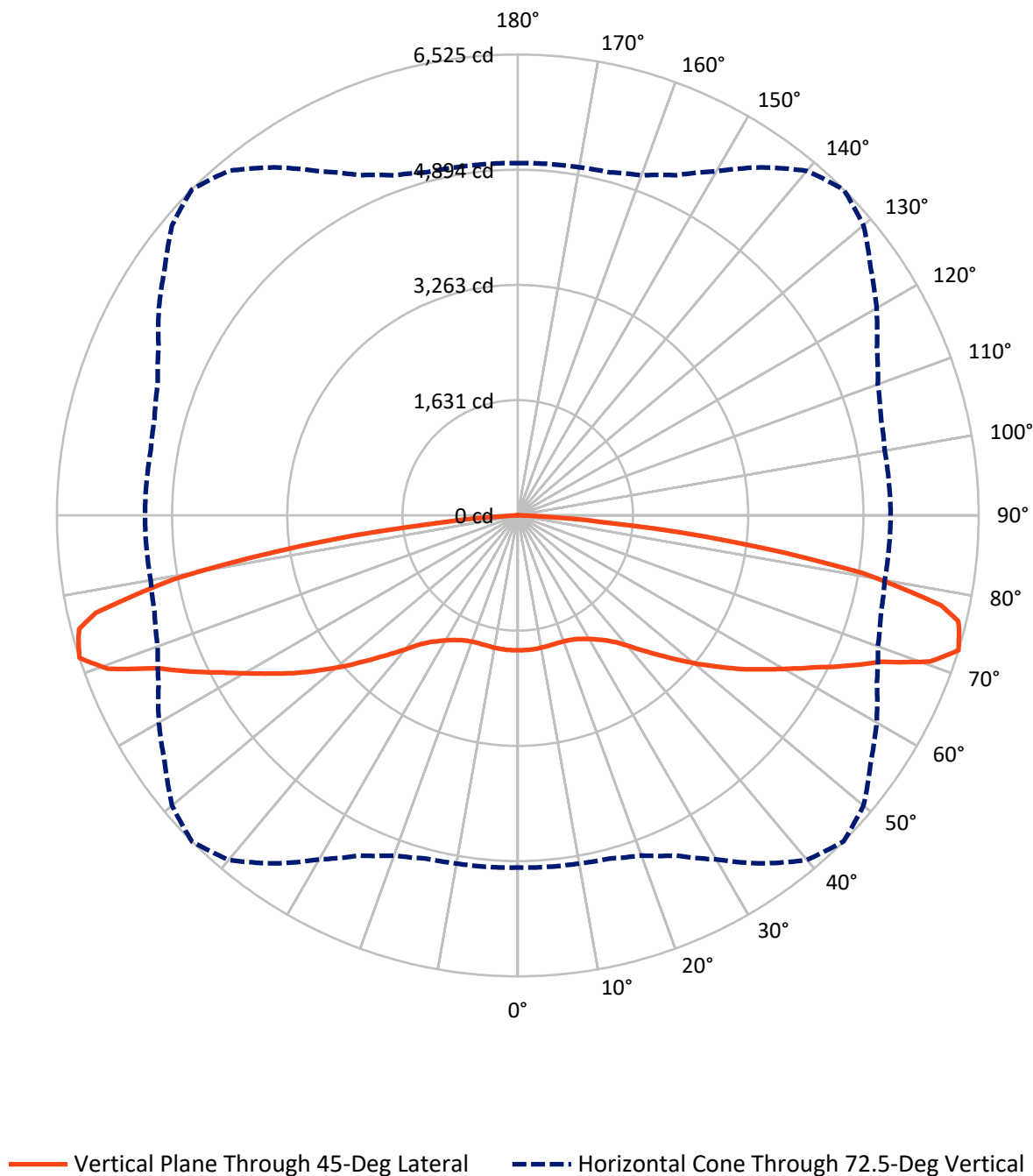


Based on 25 foot mounting height. Maximum calculated value = 3.1 fc
Type V - Short - Non-Cutoff

REPORT NUMBER: P157833

CATALOG NUMBER: VST-F09-LED-E-U-5XQ-8030

Luminous Intensity Polar Plot



REPORT NUMBER: P157833

CATALOG NUMBER: VST-F09-LED-E-U-5XQ-8030

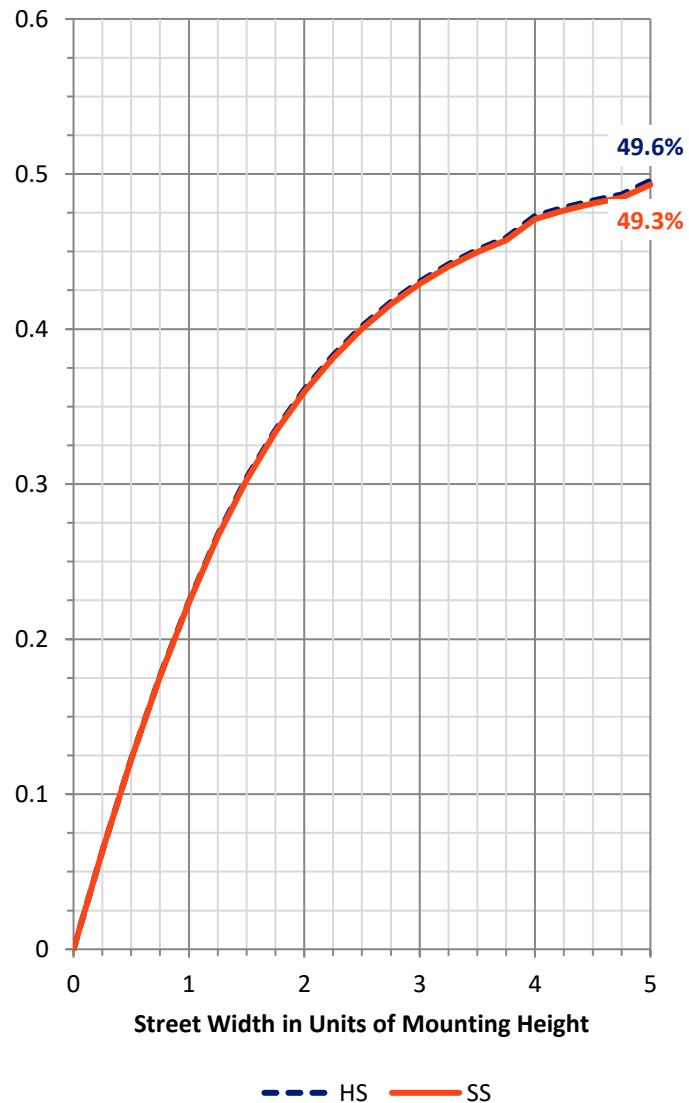
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	9910.8	4.9	9915.7
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	9910.8	4.9	9915.7
	% Fixture	50.0	0.0	50.0
Total	Lumens	19821.7	9.8	19831.5
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	182.1	0.9
10°-20°	537.9	2.7
20°-30°	899.4	4.5
30°-40°	1367.1	6.9
40°-50°	2165.3	10.9
50°-60°	3312.1	16.7
60°-70°	4740.2	23.9
70°-80°	5423.8	27.3
80°-90°	1193.7	6.0
90°-100°	1.0	0.0
100°-110°	2.1	0.0
110°-120°	1.4	0.0
120°-130°	1.6	0.0
130°-140°	1.5	0.0
140°-150°	1.1	0.0
150°-160°	0.8	0.0
160°-170°	0.3	0.0
170°-180°	0.0	0.0
0°-90°	19821.7	100.0
0°-180°	19831.5	100.0

Coefficient of Utilization



REPORT NUMBER: P157833

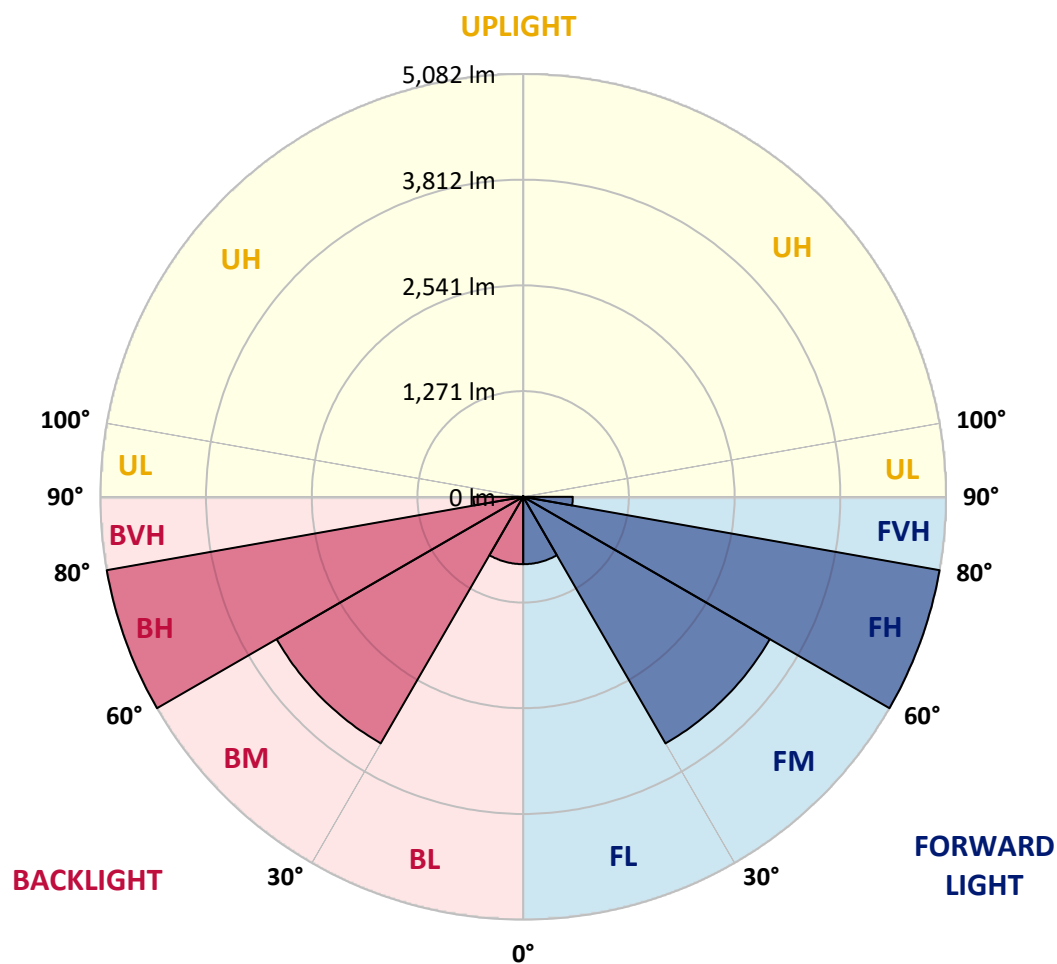
CATALOG NUMBER: VST-F09-LED-E-U-5XQ-8030

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	809.7	4.1			
FM	(30°-60°)	3422.2	17.3			
FH	(60°-80°)	5082.0	25.6			G3/7500
FVH	(80°-90°)	596.9	3.0			G4/750
BL	(0°-30°)	809.7	4.1	B2/1000		
BM	(30°-60°)	3422.2	17.3	B3/5000		
BH	(60°-80°)	5082.0	25.6	B5		G3/7500
BVH	(80°-90°)	596.9	3.0			G4/750
UL	(90°-100°)	1.0	0.0		U1/10	
UH	(100°-180°)	4.9	0.0		U1/10	

BUG Rating: B5-U1-G4

Type V Short





REPORT NUMBER: P157833

CATALOG NUMBER: VST-F09-LED-E-U-5XQ-8030

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1908.8	1908.8	1908.8	1908.8	1908.8	1908.8	1908.8	1908.8	1908.8	1908.8	1908.8
2.5°	1910.0	1907.5	1908.8	1911.3	1910.0	1910.0	1908.8	1908.8	1911.3	1908.8	1910.0
5°	1911.3	1908.8	1910.0	1911.3	1910.0	1911.3	1910.0	1910.0	1910.0	1908.8	1911.3
7.5°	1906.3	1906.3	1907.5	1907.5	1906.3	1907.5	1907.5	1907.5	1906.3	1906.3	1908.8
10°	1903.8	1902.5	1902.5	1903.8	1902.5	1902.5	1903.8	1903.8	1901.3	1901.3	1903.8
12.5°	1900.0	1898.7	1898.7	1898.7	1897.5	1897.5	1898.7	1898.7	1897.5	1896.2	1900.0
15°	1897.5	1896.2	1896.2	1896.2	1893.7	1895.0	1895.0	1895.0	1893.7	1892.5	1896.2
17.5°	1896.2	1895.0	1895.0	1895.0	1893.7	1893.7	1893.7	1893.7	1892.5	1892.5	1895.0
20°	1898.7	1898.7	1898.7	1898.7	1897.5	1897.5	1897.5	1898.7	1898.7	1898.7	1901.3
22.5°	1905.0	1905.0	1906.3	1907.5	1907.5	1910.0	1911.3	1912.5	1912.5	1913.8	1916.3
25°	1921.3	1921.3	1922.6	1923.8	1927.6	1930.1	1935.1	1937.6	1938.9	1938.9	1940.1
27.5°	1951.4	1952.7	1955.2	1957.7	1962.7	1966.5	1971.5	1976.5	1977.8	1979.0	1980.3
30°	1989.0	1990.3	1995.3	1997.8	2004.1	2011.6	2017.9	2022.9	2026.7	2029.2	2027.9
32.5°	2043.0	2045.5	2051.7	2055.5	2064.3	2071.8	2080.6	2088.1	2091.9	2095.6	2094.4
35°	2118.2	2124.5	2130.8	2134.5	2143.3	2149.6	2160.9	2168.4	2175.9	2173.4	2174.7
37.5°	2229.8	2234.8	2236.1	2238.6	2247.4	2252.4	2264.9	2275.0	2278.7	2281.3	2282.5
40°	2380.3	2380.3	2386.6	2381.6	2392.9	2394.1	2409.2	2423.0	2426.7	2436.8	2429.2
42.5°	2555.9	2554.7	2558.4	2554.7	2554.7	2567.2	2579.7	2604.8	2607.3	2619.9	2612.3
45°	2746.5	2746.5	2742.8	2744.0	2746.5	2760.3	2775.4	2803.0	2815.5	2823.0	2818.0
47.5°	2953.5	2948.4	2947.2	2945.9	2953.5	2968.5	2991.1	3017.4	3048.8	3051.3	3048.8
50°	3162.9	3161.6	3152.9	3160.4	3165.4	3172.9	3215.6	3250.7	3283.3	3303.4	3297.1
52.5°	3383.6	3372.3	3372.3	3372.3	3384.9	3408.7	3446.3	3494.0	3537.9	3559.2	3555.4
55°	3606.9	3603.1	3591.8	3586.8	3603.1	3637.0	3690.9	3748.6	3806.3	3838.9	3826.3
57.5°	3811.3	3805.0	3806.3	3807.5	3826.3	3871.5	3934.2	4010.7	4073.4	4108.5	4099.7
60°	3971.8	3964.3	3978.1	3981.8	4015.7	4091.0	4191.3	4287.8	4370.6	4405.7	4391.9
62.5°	4153.7	4148.6	4157.4	4156.2	4192.5	4276.6	4410.8	4565.0	4690.4	4735.6	4715.5
65°	4447.1	4432.1	4428.3	4414.5	4438.3	4503.6	4637.8	4817.1	5017.8	5133.1	5105.5
67.5°	4798.3	4794.5	4782.0	4774.5	4783.2	4864.7	4993.9	5167.0	5371.4	5530.7	5565.8
70°	5030.3	5035.3	5047.8	5066.7	5139.4	5297.4	5533.2	5795.3	6076.2	6195.4	6174.1
72.5°	4986.4	4993.9	5004.0	5027.8	5123.1	5312.5	5623.5	6014.8	6367.2	6525.2	6389.8
75°	4771.9	4778.2	4800.8	4837.2	4953.8	5183.3	5518.1	5933.3	6297.0	6455.0	6313.3
76°	4573.8	4593.9	4635.2	4677.9	4818.3	5067.9	5425.3	5868.0	6253.1	6413.6	6276.9
77.5°	4124.8	4142.4	4176.2	4250.2	4409.5	4729.3	5146.9	5582.1	5983.4	6127.6	6012.3
80°	3104.0	3119.0	3150.4	3239.4	3377.4	3575.5	3899.1	4324.2	4764.4	4953.8	4878.5
82.5°	1310.6	1328.1	1452.3	1581.5	1733.2	1947.7	2158.3	2534.6	2858.1	3073.9	2958.5
85°	144.2	178.1	219.5	298.5	366.2	487.9	607.0	835.2	1056.0	1190.2	1052.2
87.5°	25.1	28.8	41.4	52.7	58.9	67.7	81.5	114.1	155.5	134.2	136.7
90°	3.8	3.8	3.8	3.8	3.8	3.8	3.8	2.5	2.5	2.5	2.5
92.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3
95°	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3	1.3	1.3	1.3
97.5°	0.0	0.0	0.0	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
100°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	2.5	2.5	2.5
102.5°	1.3	1.3	1.3	1.3	1.3	2.5	2.5	2.5	2.5	2.5	2.5
105°	1.3	1.3	1.3	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
107.5°	1.3	1.3	1.3	1.3	2.5	2.5	1.3	1.3	1.3	2.5	1.3



REPORT NUMBER: P157833

CATALOG NUMBER: VST-F09-LED-E-U-5XQ-8030

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
110°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
112.5°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
115°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
117.5°	2.5	2.5	2.5	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
120°	2.5	2.5	2.5	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
122.5°	2.5	2.5	2.5	2.5	1.3	1.3	1.3	1.3	1.3	1.3	1.3
125°	2.5	2.5	2.5	2.5	1.3	1.3	1.3	1.3	1.3	1.3	1.3
127.5°	2.5	2.5	2.5	2.5	1.3	1.3	1.3	1.3	1.3	1.3	1.3
130°	2.5	2.5	2.5	2.5	2.5	1.3	1.3	1.3	1.3	1.3	1.3
132.5°	2.5	2.5	2.5	2.5	1.3	1.3	1.3	1.3	1.3	1.3	1.3
135°	2.5	2.5	2.5	2.5	2.5	1.3	1.3	1.3	1.3	1.3	1.3
137.5°	2.5	2.5	2.5	2.5	2.5	1.3	1.3	1.3	1.3	1.3	1.3
140°	2.5	2.5	2.5	2.5	2.5	1.3	1.3	1.3	1.3	1.3	1.3
142.5°	2.5	2.5	2.5	2.5	1.3	1.3	1.3	1.3	1.3	1.3	1.3
145°	2.5	2.5	2.5	2.5	2.5	1.3	1.3	1.3	1.3	0.0	1.3
147.5°	2.5	2.5	2.5	2.5	2.5	1.3	1.3	1.3	1.3	1.3	1.3
150°	2.5	2.5	2.5	2.5	2.5	1.3	1.3	1.3	0.0	0.0	0.0
152.5°	2.5	2.5	2.5	2.5	2.5	1.3	1.3	1.3	1.3	0.0	0.0
155°	2.5	2.5	2.5	2.5	2.5	1.3	1.3	1.3	1.3	0.0	1.3
157.5°	2.5	2.5	2.5	2.5	1.3	1.3	1.3	1.3	0.0	0.0	0.0
160°	2.5	2.5	2.5	2.5	1.3	1.3	1.3	1.3	0.0	0.0	0.0
162.5°	2.5	2.5	2.5	2.5	1.3	1.3	1.3	1.3	0.0	0.0	0.0
165°	2.5	2.5	2.5	2.5	1.3	1.3	1.3	1.3	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P157833

CATALOG NUMBER: VST-F09-LED-E-U-5XQ-8030

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1908.8	1908.8	1908.8	1908.8	1908.8	1908.8	1908.8	1908.8
2.5°	1908.8	1908.8	1911.3	1910.0	1910.0	1911.3	1913.8	1912.5
5°	1910.0	1911.3	1908.8	1910.0	1911.3	1911.3	1912.5	1911.3
7.5°	1907.5	1907.5	1907.5	1908.8	1910.0	1908.8	1910.0	1910.0
10°	1902.5	1903.8	1902.5	1905.0	1906.3	1906.3	1907.5	1907.5
12.5°	1898.7	1898.7	1898.7	1901.3	1902.5	1902.5	1903.8	1902.5
15°	1895.0	1895.0	1893.7	1896.2	1898.7	1898.7	1900.0	1900.0
17.5°	1893.7	1893.7	1892.5	1895.0	1897.5	1897.5	1898.7	1898.7
20°	1897.5	1898.7	1896.2	1898.7	1901.3	1902.5	1902.5	1902.5
22.5°	1912.5	1911.3	1907.5	1908.8	1910.0	1910.0	1910.0	1910.0
25°	1935.1	1932.6	1928.8	1927.6	1926.3	1925.1	1925.1	1925.1
27.5°	1974.0	1970.2	1964.0	1962.7	1961.4	1958.9	1958.9	1958.9
30°	2020.4	2015.4	2007.9	2005.3	2001.6	1999.1	1997.8	1996.6
32.5°	2086.9	2076.8	2068.1	2061.8	2058.0	2050.5	2049.2	2046.7
35°	2163.4	2155.8	2143.3	2139.5	2133.3	2129.5	2128.2	2122.0
37.5°	2268.7	2259.9	2248.6	2246.1	2244.9	2241.1	2241.1	2239.9
40°	2415.4	2406.7	2396.6	2386.6	2389.1	2390.4	2390.4	2385.3
42.5°	2594.8	2581.0	2560.9	2567.2	2563.4	2558.4	2568.4	2562.2
45°	2799.2	2780.4	2765.3	2759.1	2759.1	2752.8	2762.8	2762.8
47.5°	3026.2	2996.1	2968.5	2969.8	2959.7	2962.2	2968.5	2977.3
50°	3265.7	3225.6	3199.3	3186.7	3176.7	3180.5	3191.7	3194.3
52.5°	3514.1	3465.1	3430.0	3411.2	3398.7	3403.7	3412.5	3420.0
55°	3772.4	3718.5	3665.8	3645.7	3630.7	3640.7	3642.0	3652.0
57.5°	4042.0	3968.0	3906.6	3876.5	3861.4	3871.5	3879.0	3889.0
60°	4314.2	4228.9	4156.2	4121.1	4099.7	4113.5	4131.1	4136.1
62.5°	4630.2	4512.3	4430.8	4380.7	4370.6	4384.4	4389.4	4404.5
65°	5004.0	4862.2	4749.4	4687.9	4685.4	4692.9	4704.2	4708.0
67.5°	5430.4	5272.3	5120.6	5059.1	5035.3	5057.9	5069.2	5084.2
70°	6032.3	5815.4	5595.9	5459.2	5401.5	5384.0	5389.0	5405.3
72.5°	6100.1	5866.8	5611.0	5425.3	5323.8	5277.4	5276.1	5278.6
75°	5952.1	5579.6	5399.0	5185.8	5041.6	4966.3	4956.3	4955.0
76°	5878.1	5437.9	5177.0	5007.7	4834.6	4758.1	4746.9	4740.6
77.5°	5565.8	5093.0	4700.5	4597.6	4432.1	4335.5	4355.6	4339.3
80°	4462.2	3993.1	3623.2	3333.5	3342.2	3272.0	3243.2	3234.4
82.5°	2629.9	2244.9	1836.0	1596.5	1368.2	1308.1	1126.2	1084.8
85°	840.3	595.7	361.2	262.1	178.1	149.2	116.6	106.6
87.5°	111.6	87.8	71.5	69.0	62.7	53.9	35.1	25.1
90°	1.3	1.3	1.3	0.0	0.0	0.0	0.0	0.0
92.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95°	1.3	1.3	1.3	1.3	0.0	0.0	0.0	0.0
97.5°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
100°	2.5	1.3	1.3	1.3	1.3	1.3	1.3	1.3
102.5°	2.5	2.5	2.5	2.5	1.3	1.3	1.3	1.3
105°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
107.5°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5



REPORT NUMBER: P157833

CATALOG NUMBER: VST-F09-LED-E-U-5XQ-8030

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
110°	1.3	1.3	1.3	1.3	1.3	2.5	2.5	2.5
112.5°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	2.5
115°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	2.5
117.5°	1.3	1.3	1.3	1.3	1.3	2.5	2.5	2.5
120°	1.3	1.3	1.3	1.3	1.3	2.5	2.5	2.5
122.5°	1.3	1.3	1.3	1.3	2.5	2.5	2.5	2.5
125°	1.3	1.3	1.3	1.3	2.5	2.5	2.5	2.5
127.5°	1.3	1.3	1.3	1.3	2.5	2.5	2.5	2.5
130°	1.3	1.3	1.3	2.5	2.5	2.5	2.5	2.5
132.5°	1.3	1.3	1.3	2.5	2.5	2.5	2.5	2.5
135°	1.3	1.3	1.3	2.5	2.5	2.5	2.5	2.5
137.5°	1.3	1.3	1.3	2.5	2.5	2.5	2.5	2.5
140°	1.3	1.3	1.3	2.5	2.5	2.5	2.5	2.5
142.5°	1.3	1.3	1.3	2.5	2.5	2.5	2.5	2.5
145°	1.3	1.3	1.3	1.3	2.5	2.5	2.5	2.5
147.5°	1.3	1.3	1.3	2.5	2.5	2.5	2.5	2.5
150°	1.3	1.3	1.3	1.3	2.5	2.5	2.5	2.5
152.5°	1.3	1.3	1.3	1.3	2.5	2.5	2.5	2.5
155°	1.3	1.3	1.3	2.5	2.5	2.5	2.5	2.5
157.5°	1.3	1.3	1.3	1.3	2.5	2.5	2.5	2.5
160°	1.3	1.3	1.3	1.3	2.5	2.5	2.5	2.5
162.5°	1.3	1.3	1.3	2.5	2.5	2.5	2.5	2.5
165°	1.3	1.3	1.3	2.5	2.5	2.5	2.5	2.5
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)