

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: INVUE

Report Number: P95371

Luminaire Tested: **VFS-K-B20-5-LED-E1-MSR-SG**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P95371
REPORT SCALED FROM IESNA LM79-08 TEST DATA (P22804)
Test Lab: INNOVATION CENTER
Issue Date: 03/03/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: VFS-K-B20-5-LED-E1-MSR-SG
Description: ARCHITECTURAL FLOOD LUMINAIRE
MEDIUM SYMMETRIC ROUND WITH SOFTENING GLASS DISTRIBUTION
WITH 20 LED'S, 525mA DRIVE CURRENT
Light Source: -
Ballast/Driver: -

Summary

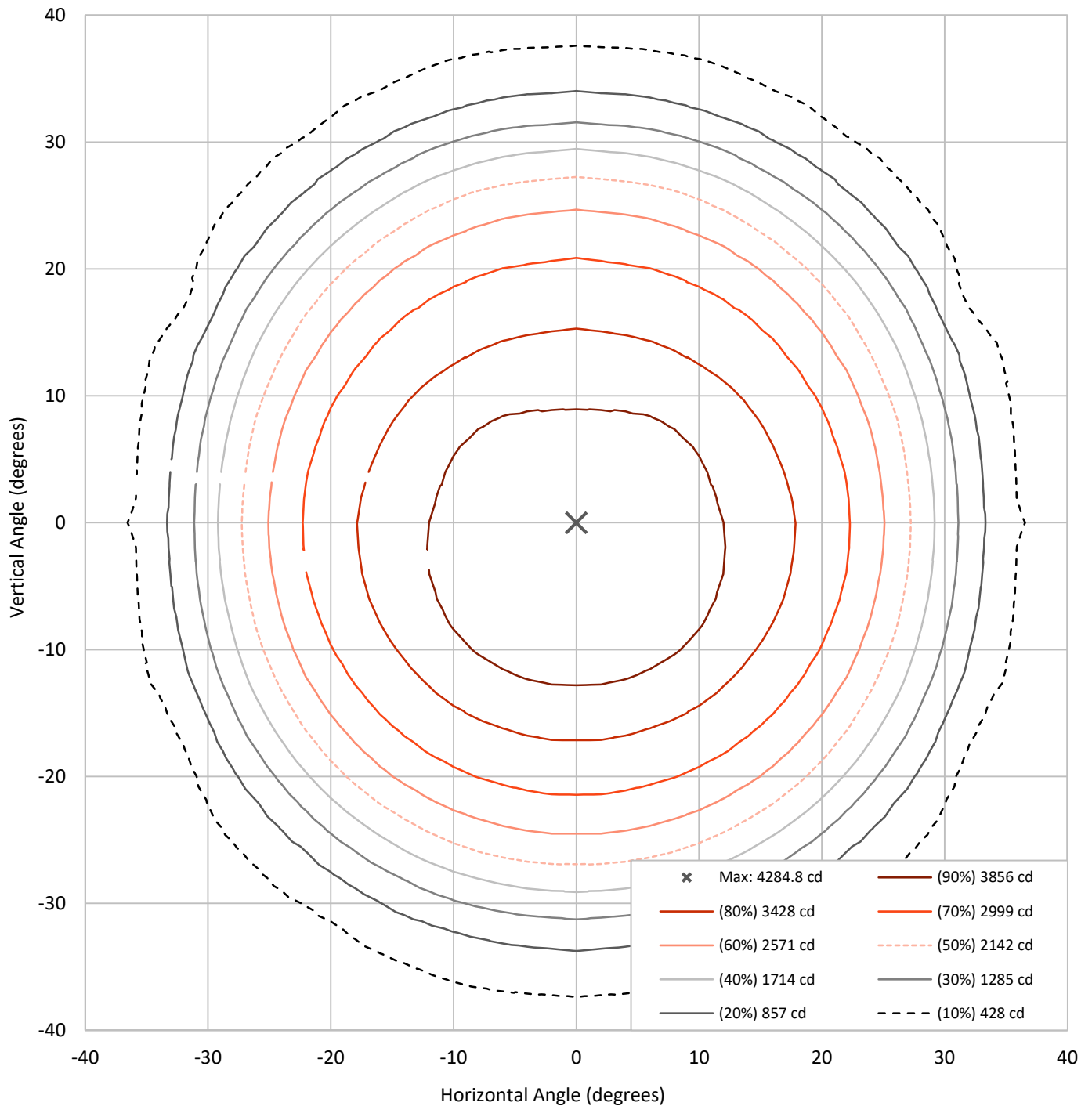
Lumens per Lamp:	N/A	NEMA Type:	5H x 5V
Luminaire Lumens:	3105.7 lumens	Max Intensity:	4284.8 candela
Efficiency:	N/A	Max Intensity Angle:	0°H x 0°V
Efficacy:	89.0 lumens/watt		
Luminous Opening:	(L: 0.83 ' x W: 0 ' x H: 0.5 ')		
Beam Angle (50%):	54.5°H x 54.2°V	Field Angle (10%):	73°H x 74.6°V
Beam Lumens:	2178.2 lumens	Field Lumens:	2890 lumens
Beam Efficiency:	70.1%	Field Efficiency:	93.1%

Input Watts (W): 34.9
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: 25 FT



REPORT NUMBER: P95371
CATALOG NUMBER: VFS-K-B20-5-LED-E1-MSR-SG

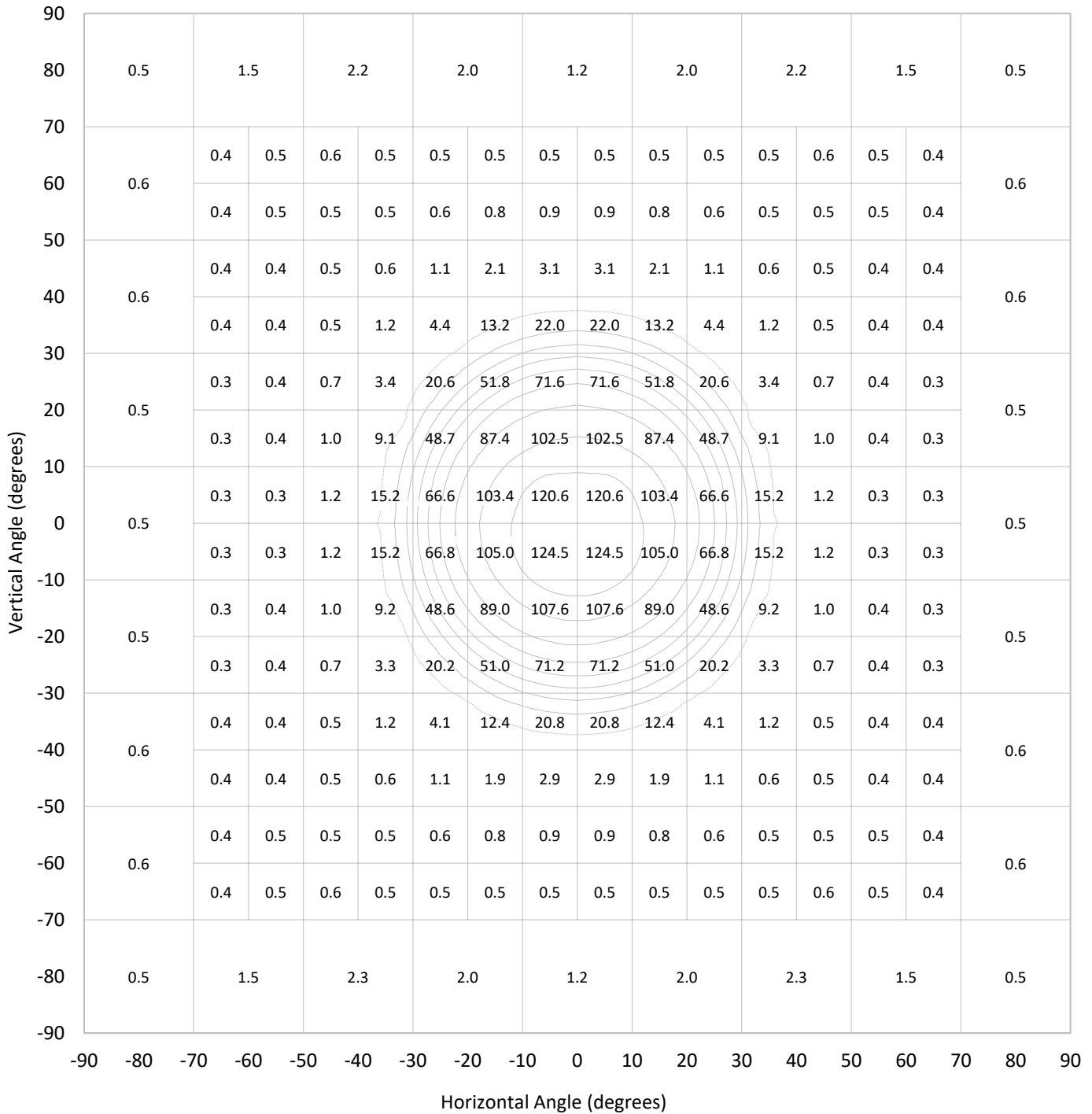
Iso-Candela Plot





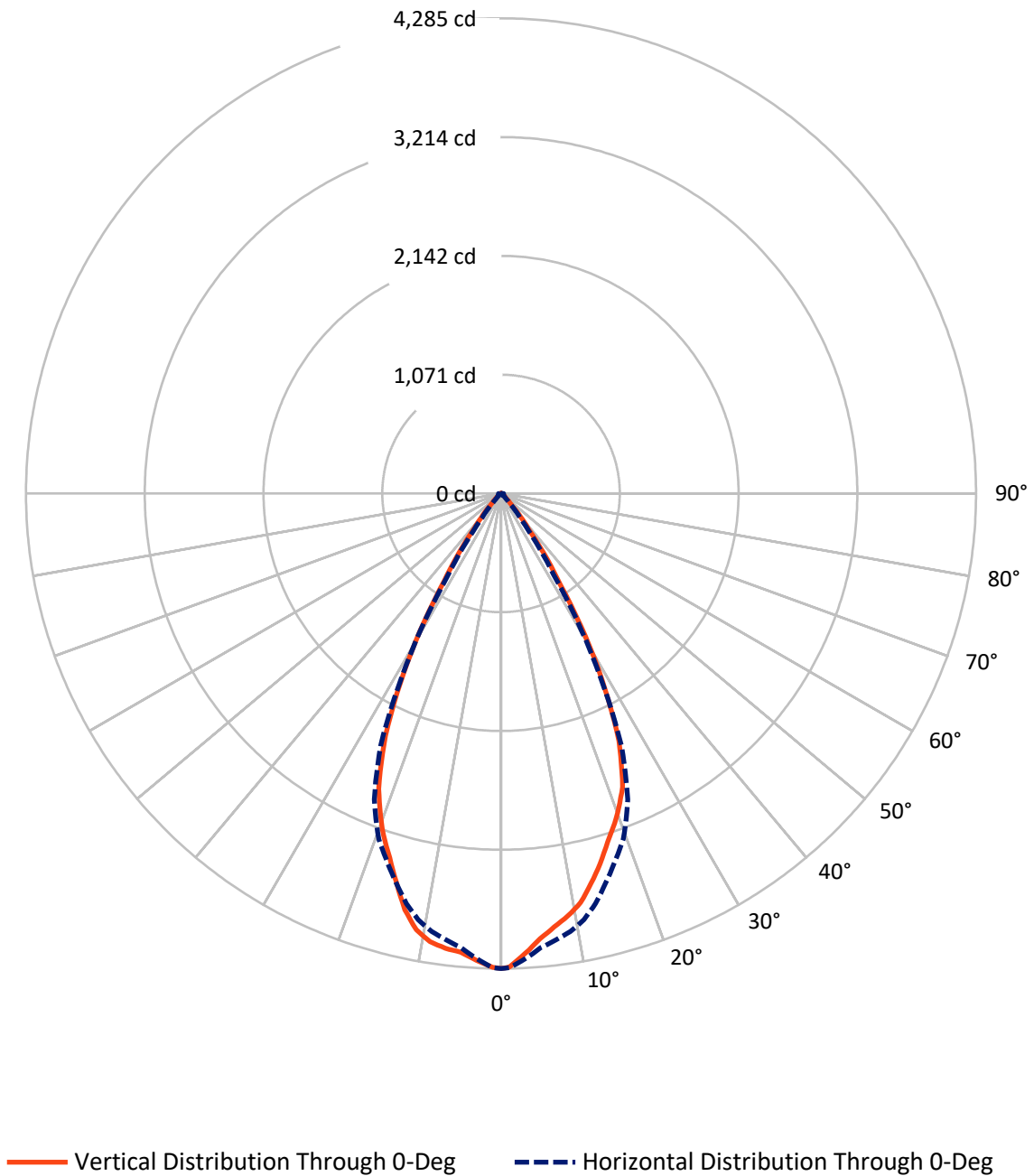
REPORT NUMBER: P95371
 CATALOG NUMBER: VFS-K-B20-5-LED-E1-MSR-SG

Lumen Table



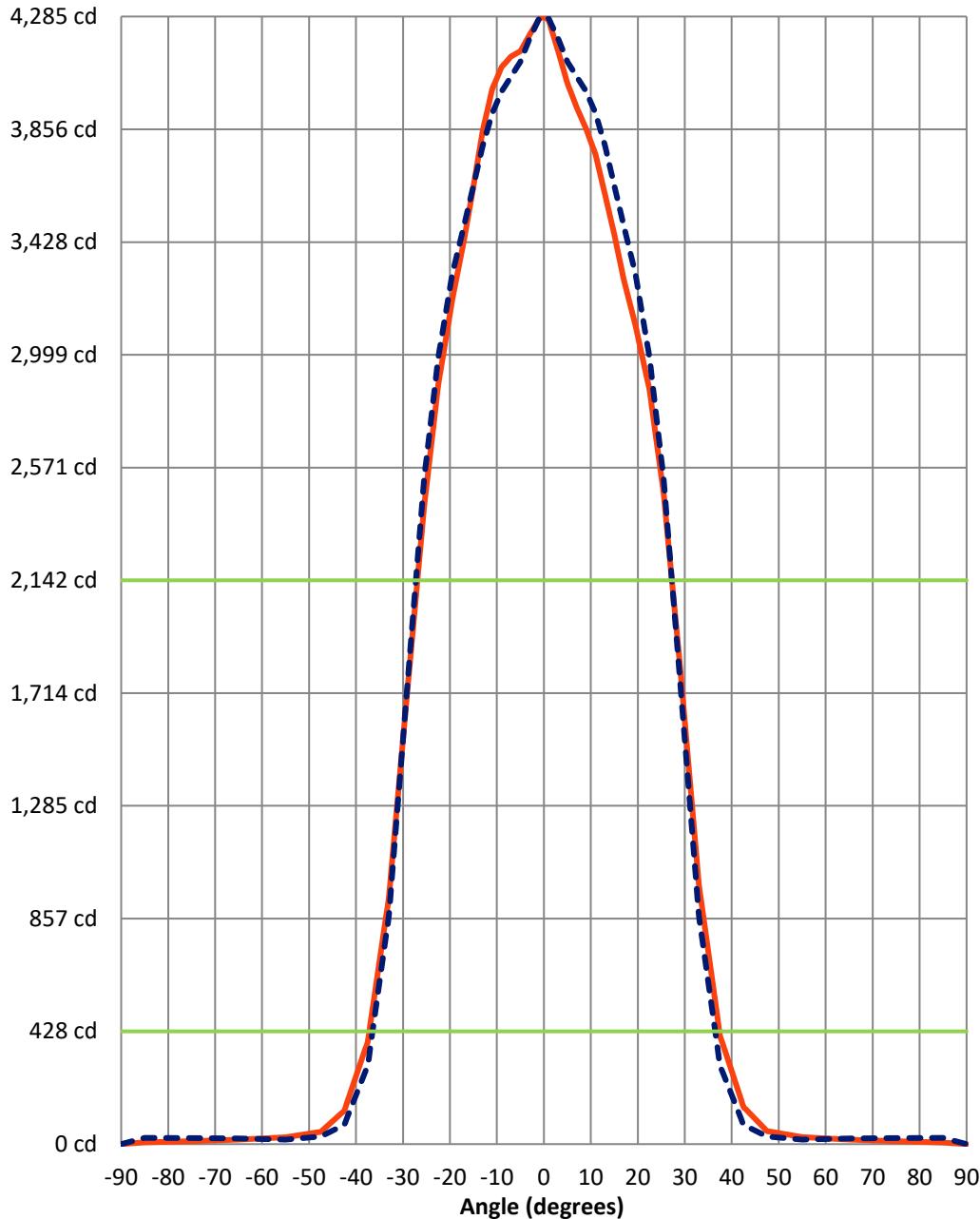
REPORT NUMBER: P95371
CATALOG NUMBER: VFS-K-B20-5-LED-E1-MSR-SG

Luminous Intensity Polar Plot



REPORT NUMBER: P95371
 CATALOG NUMBER: VFS-K-B20-5-LED-E1-MSR-SG

Luminous Intensity Plot



Beam:
 H Angle: 54.5°
 V Angle: 54.2°
 Lumens: 2178.2
 Efficiency: 70.1%

Field:
 H Angle: 73°
 V Angle: 74.6°
 Lumens: 2890
 Efficiency: 93.1%

Spill:
 Lumens: 215.7
 Efficiency: 6.9%

— Vertical Distribution through 0-Deg
 - - Horizontal Distribution through 0-Deg



REPORT NUMBER: P95371

CATALOG NUMBER: VFS-K-B20-5-LED-E1-MSR-SG

FIELD
BEAM

CANDELA DISTRIBUTION:

	0°	1°	3°	5°	7°	9°	11°	13°	15°	17°	19.5°
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	5.9	5.9	8.9	8.2	8.9	15.6	21.5	24.5	25.2	26.0	26.7
75°	11.1	11.1	11.1	11.9	12.6	12.6	12.6	12.6	11.9	11.9	12.6
65°	17.1	17.1	17.1	17.1	17.1	17.1	17.8	17.8	17.8	17.8	17.1
55°	26.7	26.7	26.7	26.7	26.0	26.0	26.0	25.2	25.2	25.2	24.5
47.5°	49.7	49.0	49.0	49.0	48.2	46.0	43.8	41.6	39.3	37.1	34.9
42.5°	141.7	138.7	133.6	132.1	125.4	120.2	108.3	96.5	83.8	72.0	60.8
37.5°	412.5	406.6	394.7	395.5	365.0	346.5	314.6	273.8	183.3	177.3	158.0
33°	986.8	963.1	949.0	930.4	859.9	793.2	723.4	634.4	549.8	468.2	368.8
29°	1813.4	1789.6	1765.1	1720.6	1649.4	1529.9	1414.9	1255.4	1082.5	911.1	726.4
25.5°	2473.0	2452.9	2434.4	2384.7	2326.8	2217.0	2099.0	1921.7	1713.9	1492.8	1207.2
22.5°	2864.7	2850.6	2834.3	2798.0	2747.5	2657.0	2558.3	2413.6	2225.9	2001.8	1682.0
19.5°	3111.1	3101.4	3085.1	3063.6	3036.9	2972.3	2898.9	2789.8	2638.4	2441.8	2134.6
17°	3286.2	3278.7	3260.2	3234.2	3207.5	3153.4	3094.7	3007.9	2885.5	2721.5	2446.3
15°	3456.1	3443.5	3422.7	3390.8	3354.4	3286.2	3217.9	3144.4	3041.3	2899.6	2648.1
13°	3609.7	3602.2	3596.3	3557.0	3510.2	3427.1	3349.2	3267.6	3168.2	3039.1	2813.5
11°	3760.3	3754.3	3752.1	3716.5	3671.2	3582.2	3486.5	3390.0	3276.5	3149.6	2953.8
9°	3857.5	3853.0	3856.7	3844.1	3814.4	3725.4	3622.3	3502.1	3380.4	3260.9	3066.5
7°	3939.1	3933.9	3945.8	3942.8	3920.5	3845.6	3735.8	3600.0	3458.3	3337.4	3143.7
5°	4031.8	4022.2	4017.0	4008.1	3991.8	3930.2	3821.1	3682.4	3533.2	3398.2	3216.4
3°	4155.7	4146.8	4109.7	4061.5	4030.4	3966.5	3867.1	3738.8	3591.1	3447.9	3265.4
1°	4271.5	4258.9	4189.1	4105.3	4047.4	3989.5	3905.0	3783.3	3631.9	3485.8	3301.7
0°	4284.8	4277.4	4202.5	4113.5	4056.3	3999.9	3916.8	3795.2	3641.6	3490.9	3306.2
-1°	4275.2	4270.0	4204.0	4123.1	4068.2	4013.3	3925.0	3799.6	3638.6	3491.7	3302.5
-3°	4216.6	4217.3	4193.6	4149.8	4101.6	4045.9	3942.8	3798.1	3632.7	3478.3	3283.2
-5°	4153.5	4160.9	4171.3	4164.7	4132.7	4043.0	3914.6	3763.2	3604.5	3448.7	3246.8
-7°	4132.7	4138.7	4155.7	4149.1	4106.0	4005.1	3861.2	3700.2	3545.1	3392.3	3187.5
-9°	4092.7	4100.8	4103.1	4081.6	4011.1	3902.7	3754.3	3597.0	3451.6	3306.2	3093.3
-11°	4008.8	4016.3	3999.9	3952.4	3867.9	3765.5	3626.7	3480.6	3355.9	3217.9	2989.4
-13°	3853.0	3860.4	3830.8	3772.9	3687.6	3597.0	3485.0	3358.1	3239.4	3089.5	2846.2
-15°	3639.3	3649.7	3620.8	3570.3	3504.3	3433.1	3333.6	3220.1	3101.4	2934.5	2664.4
-17°	3436.0	3444.9	3424.9	3383.4	3327.0	3266.1	3177.1	3060.6	2924.8	2743.8	2450.7
-19.5°	3209.0	3217.2	3196.4	3160.8	3102.2	3033.9	2938.9	2812.8	2651.0	2446.3	2126.5
-22.5°	2884.0	2895.9	2867.0	2823.9	2754.9	2677.0	2545.7	2389.9	2206.6	1981.8	1659.8
-25.5°	2421.8	2441.1	2412.9	2363.9	2277.8	2179.2	2044.9	1873.5	1677.6	1458.0	1178.2
-29°	1735.5	1727.3	1702.8	1653.1	1566.3	1480.2	1350.4	1202.0	1048.4	882.2	698.9
-33°	938.6	916.3	896.3	864.4	809.5	746.4	681.9	605.4	531.2	452.6	290.1
-37.5°	389.5	379.1	373.2	360.6	346.5	322.8	295.3	228.5	179.6	169.2	146.2
-42.5°	126.9	122.4	121.7	118.0	115.0	108.3	97.2	87.6	77.9	66.8	57.1
-47.5°	46.7	46.0	46.0	46.0	45.3	43.8	41.6	40.1	37.8	36.4	34.9
-55°	26.0	26.0	26.0	26.0	26.0	26.0	25.2	25.2	25.2	25.2	24.5
-65°	17.1	17.1	17.1	17.1	17.1	17.1	17.8	17.8	17.8	17.8	17.1
-75°	11.1	11.1	11.1	11.9	11.9	12.6	12.6	12.6	11.9	11.9	12.6
-85°	6.7	6.7	8.9	8.9	9.6	16.3	22.3	25.2	26.0	26.7	27.5
-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: P95371

CATALOG NUMBER: VFS-K-B20-5-LED-E1-MSR-SG

CANDELA DISTRIBUTION (continued):

	22.5°	25.5°	29°	33°	37.5°	42.5°	47.5°	55°	65°	75°	85°
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	27.5	27.5	28.2	28.2	28.2	28.2	28.2	28.2	28.9	28.9	28.9
75°	15.6	19.3	23.7	26.0	27.5	28.2	28.2	28.9	28.9	28.9	28.9
65°	16.3	15.6	15.6	17.8	21.5	26.0	28.2	28.9	28.9	28.9	28.9
55°	23.7	22.3	20.8	19.3	18.5	20.8	24.5	28.2	28.9	28.9	28.9
47.5°	32.6	29.7	27.5	23.7	21.5	20.0	21.5	26.7	28.9	28.9	28.9
42.5°	49.7	40.8	34.9	28.9	24.5	21.5	20.8	25.2	28.9	28.9	28.2
37.5°	115.7	83.1	56.4	39.3	29.7	23.7	20.8	23.7	28.9	28.9	28.2
33°	186.2	164.0	105.4	57.1	34.9	26.0	22.3	22.3	27.5	28.2	27.5
29°	514.9	342.0	175.1	98.7	51.2	30.4	23.0	21.5	26.7	27.5	26.7
25.5°	872.6	582.4	339.8	136.5	72.0	34.9	23.7	20.8	26.0	26.7	26.7
22.5°	1265.8	862.9	500.1	160.3	97.2	39.3	24.5	20.0	26.0	26.7	26.0
19.5°	1688.0	1206.4	707.1	177.3	128.4	45.3	25.2	20.0	25.2	26.0	25.2
17°	2015.9	1491.4	897.8	186.2	155.8	50.5	26.0	19.3	24.5	26.0	25.2
15°	2240.0	1715.4	1055.8	499.3	163.2	54.2	26.7	18.5	23.7	25.2	25.2
13°	2429.2	1908.3	1209.4	574.3	169.9	57.9	27.5	18.5	23.7	24.5	24.5
11°	2596.9	2076.0	1354.8	647.7	175.1	62.3	27.5	18.5	23.0	24.5	24.5
9°	2734.1	2229.6	1484.7	716.0	178.8	66.0	28.2	17.8	23.0	23.7	24.5
7°	2832.1	2346.1	1589.3	775.4	181.8	68.3	28.2	17.8	22.3	23.7	24.5
5°	2904.8	2429.2	1670.2	822.1	184.0	70.5	28.9	17.8	22.3	23.7	24.5
3°	2961.2	2482.6	1728.0	847.3	185.5	72.0	28.9	17.1	22.3	23.7	23.7
1°	2980.5	2519.7	1757.0	864.4	186.2	73.5	28.9	17.1	21.5	23.0	23.7
0°	2987.2	2527.1	1759.2	868.8	299.0	73.5	28.9	17.1	21.5	23.0	23.7
-1°	2986.4	2525.6	1754.0	869.6	186.2	73.5	28.9	17.1	22.3	23.7	23.7
-3°	2970.1	2496.7	1731.0	848.8	185.5	72.0	28.9	17.1	22.3	23.7	23.7
-5°	2918.9	2429.9	1675.4	819.9	184.0	69.7	28.2	17.8	22.3	23.7	23.7
-7°	2849.1	2337.9	1590.8	769.4	181.8	67.5	28.2	17.8	22.3	23.7	24.5
-9°	2745.3	2228.1	1482.4	708.6	178.8	64.6	28.2	17.8	22.3	23.7	24.5
-11°	2608.7	2085.7	1358.5	646.3	174.4	60.8	27.5	17.8	23.0	24.5	24.5
-13°	2438.8	1905.4	1210.1	571.3	169.2	56.4	26.7	18.5	23.0	24.5	24.5
-15°	2236.3	1699.8	1055.1	370.2	162.5	52.7	26.0	18.5	23.7	24.5	24.5
-17°	2004.8	1479.5	895.6	325.7	148.4	48.2	26.0	19.3	23.7	25.2	24.5
-19.5°	1666.5	1184.9	701.2	175.8	126.1	43.8	25.2	19.3	24.5	25.2	25.2
-22.5°	1243.5	854.0	496.4	158.0	95.0	38.6	24.5	20.0	25.2	26.0	25.2
-25.5°	848.1	572.8	332.4	133.6	69.7	34.1	23.7	20.8	26.0	26.7	26.0
-29°	496.4	336.1	168.4	95.0	49.7	29.7	23.0	21.5	26.7	27.5	26.7
-33°	184.0	160.3	100.2	54.9	34.9	26.0	22.3	22.3	27.5	28.2	27.5
-37.5°	109.1	78.6	54.2	38.6	29.7	23.7	21.5	23.7	28.9	28.2	27.5
-42.5°	48.2	40.1	34.9	29.7	25.2	21.5	20.8	25.2	28.9	28.9	28.2
-47.5°	32.6	30.4	27.5	24.5	21.5	20.0	21.5	27.5	29.7	28.9	28.9
-55°	23.7	22.3	20.8	19.3	18.5	20.8	24.5	28.9	29.7	28.9	28.9
-65°	16.3	15.6	16.3	17.8	21.5	26.0	28.2	29.7	29.7	28.9	28.9
-75°	16.3	20.0	24.5	26.7	28.2	28.9	28.9	29.7	28.9	28.9	28.9
-85°	28.2	28.2	28.2	28.2	28.9	28.9	28.9	28.9	28.9	28.9	28.9
-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):

	90°
90°	0.0
85°	0.0
75°	0.0
65°	0.0
55°	0.0
47.5°	0.0
42.5°	0.0
37.5°	0.0
33°	0.0
29°	0.0
25.5°	0.0
22.5°	0.0
19.5°	0.0
17°	0.0
15°	0.0
13°	0.0
11°	0.0
9°	0.0
7°	0.0
5°	0.0
3°	0.0
1°	0.0
0°	0.0
-1°	0.0
-3°	0.0
-5°	0.0
-7°	0.0
-9°	0.0
-11°	0.0
-13°	0.0
-15°	0.0
-17°	0.0
-19.5°	0.0
-22.5°	0.0
-25.5°	0.0
-29°	0.0
-33°	0.0
-37.5°	0.0
-42.5°	0.0
-47.5°	0.0
-55°	0.0
-65°	0.0
-75°	0.0
-85°	0.0
-90°	0.0

(END OF REPORT)