

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: P148815

Luminaire Tested: **VWM-F04-LED-E1-RW**

Issue Date: 03/03/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P148815  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33677)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 03/03/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: VWM-F04-LED-E1-RW  
Description: VISION WALL MEDIUM LED LUMINAIRE  
(4) LIGHTBARS WITH AccuLED OPTICS - RECTANGULAR WIDE  
Light Source: (28) 4000K CCT, 70 CRI LEDs  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 10315.6 lumens  
Efficiency: N/A  
Efficacy: 100.9 lumens/watt  
Luminous Opening: Rectangular (W 0.67' x L: 1' x H: 0')  
IES Classification: Type I - Short - Full Cutoff  
BUG Rating: B3 - U0 - G3

Input Watts (W): 102.2  
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

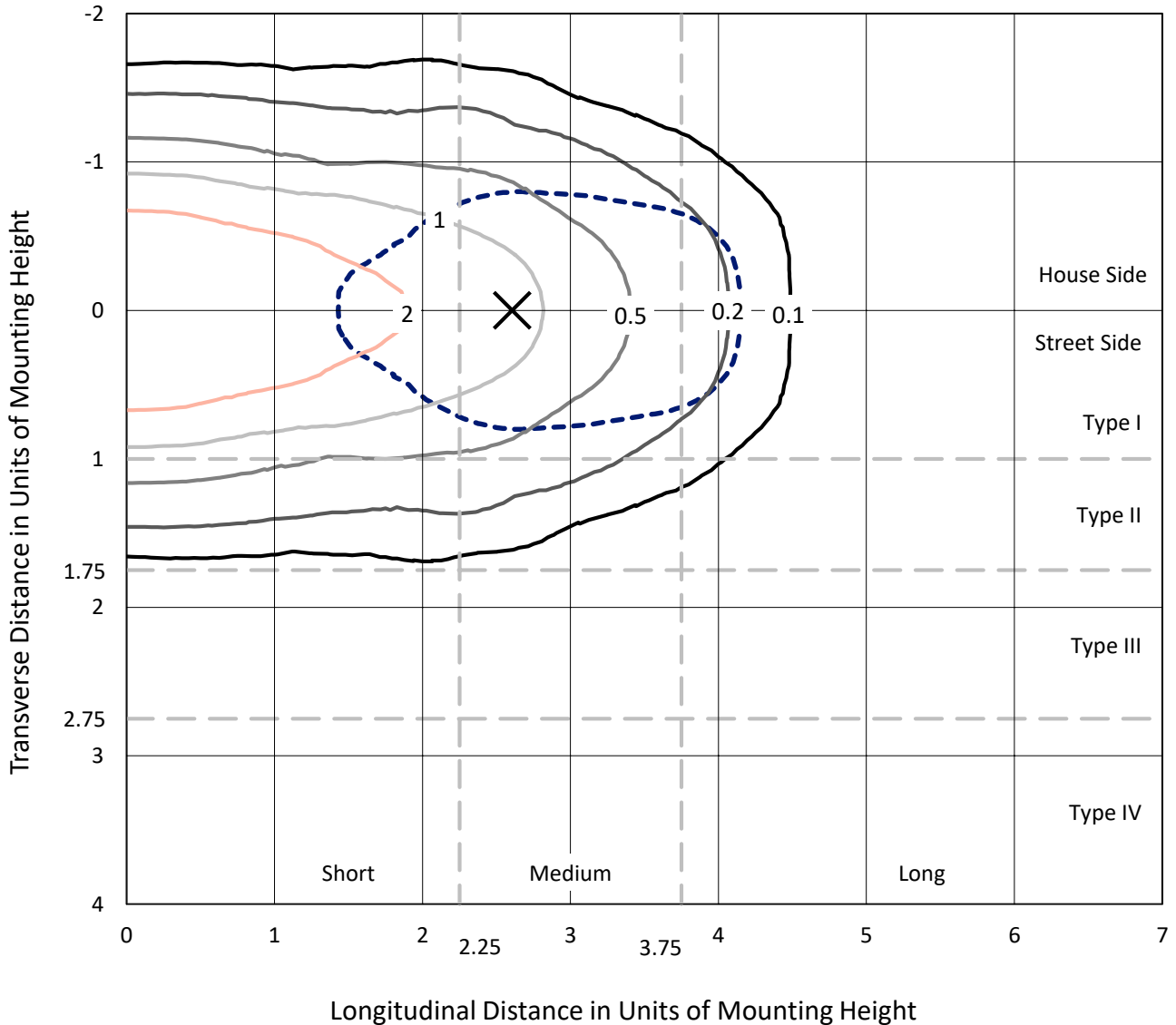


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### Iso-Footcandle Lines of Horizontal Illumination

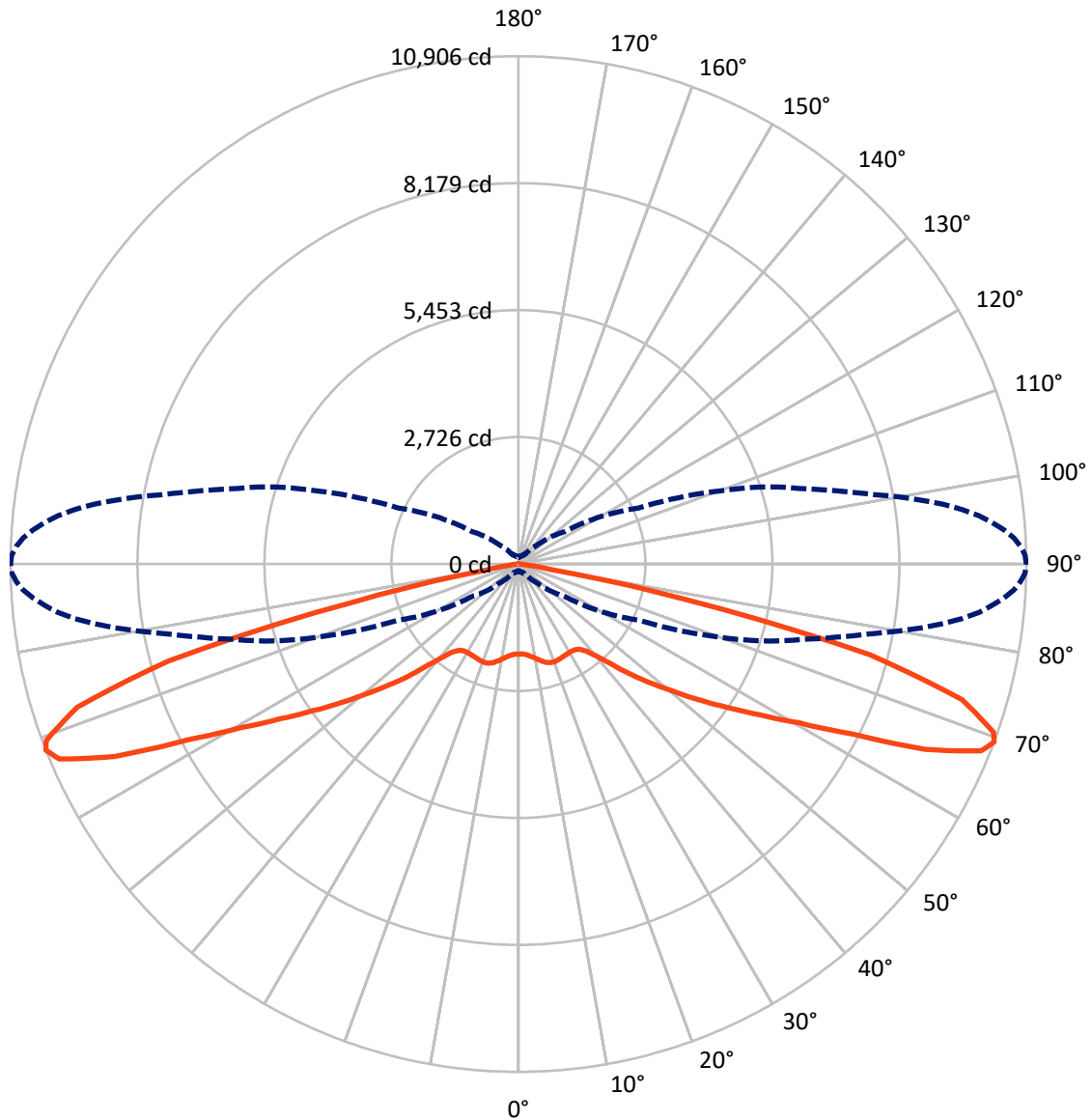
× Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 4.9 fc  
 Type I - Short - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 90-Deg Lateral      - - - Horizontal Cone Through 69-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	5157.8	0.0	5157.8
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	5157.8	0.0	5157.8
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	10315.6	0.0	10315.6
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	189.6	1.8
10°-20°	598.1	5.8
20°-30°	969.0	9.4
30°-40°	1207.6	11.7
40°-50°	1509.0	14.6
50°-60°	1863.3	18.1
60°-70°	2315.2	22.4
70°-80°	1537.0	14.9
80°-90°	126.9	1.2
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°	10315.6	100.0
0°-180°	10315.6	100.0



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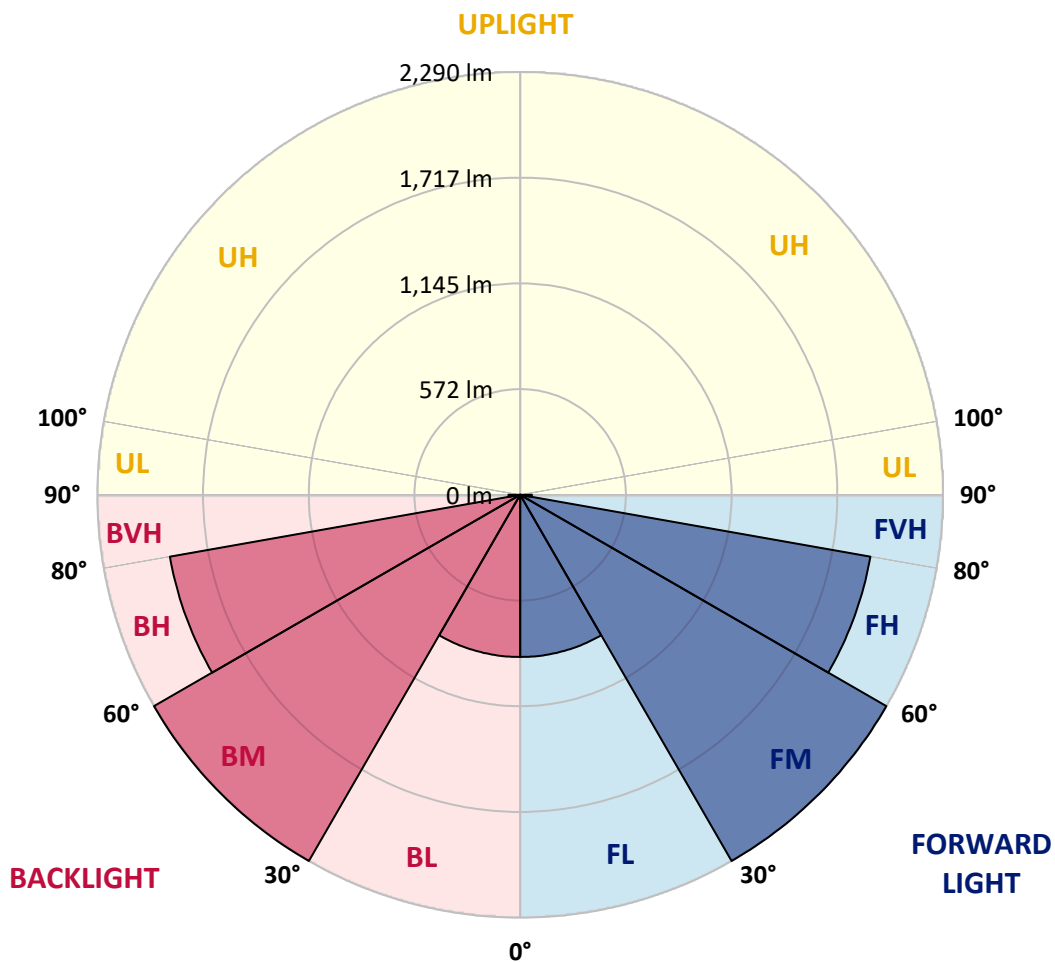
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	878.3	8.5			
FM	(30°-60°)	2289.9	22.2			
FH	(60°-80°)	1926.1	18.7			G2/5000
FVH	(80°-90°)	63.5	0.6			G1/100
BL	(0°-30°)	878.3	8.5	B2/1000		
BM	(30°-60°)	2289.9	22.2	B2/2500		
BH	(60°-80°)	1926.1	18.7	B3/2500		G3/2500
BVH	(80°-90°)	63.5	0.6			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 I Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	66°	67°	68°
0°	1932.8	1932.8	1932.8	1932.8	1932.8	1932.8	1932.8	1932.8	1932.8	1932.8	1932.8
2.5°	1941.6	1943.3	1942.2	1944.4	1943.8	1943.8	1942.7	1940.5	1940.2	1940.0	1939.7
5°	1960.4	1958.2	1961.4	1964.8	1963.6	1964.2	1963.6	1963.6	1963.4	1963.2	1963.0
7.5°	1980.2	1979.6	1981.8	1990.6	1991.7	1995.0	1998.8	2001.6	2001.8	2001.9	2002.0
10°	1997.2	1997.8	2003.2	2015.9	2022.6	2033.0	2043.4	2051.7	2052.3	2052.9	2053.5
12.5°	2011.0	2011.5	2019.8	2039.6	2055.6	2075.4	2098.0	2110.6	2111.7	2112.8	2113.9
15°	2012.0	2013.7	2028.0	2060.5	2092.4	2124.9	2151.8	2169.0	2169.8	2170.7	2171.6
17.5°	1997.8	1998.9	2023.1	2071.0	2124.4	2175.0	2203.0	2210.8	2211.1	2211.4	2211.7
20°	1960.3	1963.0	1997.2	2068.2	2149.7	2215.7	2244.9	2234.4	2233.4	2232.3	2231.3
22.5°	1899.8	1899.2	1943.8	2039.6	2154.6	2247.6	2273.5	2246.0	2242.7	2239.5	2236.2
25°	1801.8	1808.4	1860.8	1975.2	2126.6	2254.8	2293.8	2252.0	2247.4	2242.7	2238.0
27.5°	1695.6	1699.4	1755.1	1877.8	2061.1	2230.0	2303.8	2264.2	2258.9	2253.7	2248.5
30°	1571.8	1576.8	1636.2	1764.4	1956.0	2166.2	2301.0	2291.6	2285.5	2279.4	2273.3
32.5°	1450.8	1456.2	1509.6	1650.0	1845.3	2078.7	2284.5	2330.7	2324.4	2318.2	2311.9
35°	1325.2	1333.5	1398.4	1540.4	1738.6	1981.2	2259.2	2380.8	2377.3	2373.9	2370.4
37.5°	1221.2	1222.8	1285.6	1434.8	1639.5	1888.2	2225.6	2444.1	2446.6	2449.2	2451.7
40°	1105.1	1115.6	1178.3	1335.7	1549.8	1809.6	2193.6	2530.0	2543.1	2556.3	2569.4
42.5°	1001.1	1002.2	1066.0	1228.4	1452.4	1746.3	2176.0	2633.4	2661.6	2689.7	2717.8
45°	891.6	896.0	953.8	1110.6	1340.1	1671.4	2175.5	2752.8	2797.8	2842.7	2887.6
47.5°	788.1	789.8	850.8	996.7	1211.3	1566.8	2171.6	2881.1	2942.2	3003.4	3064.5
50°	689.0	687.4	747.4	887.7	1084.2	1429.8	2138.1	3026.4	3103.6	3180.8	3258.0
52.5°	575.7	583.3	645.6	779.8	968.6	1290.6	2040.2	3185.4	3277.8	3370.2	3462.5
55°	464.5	467.8	534.4	659.9	851.4	1160.7	1869.6	3331.8	3440.7	3549.5	3658.4
57.5°	342.3	352.2	410.6	534.4	732.5	1051.2	1652.7	3407.8	3540.2	3672.7	3805.2
60°	241.6	249.3	301.0	405.0	602.0	936.1	1466.1	3365.4	3537.5	3709.7	3881.8
62.5°	188.2	194.2	235.6	303.2	469.4	821.2	1332.4	3228.4	3462.6	3696.8	3931.0
65°	165.1	170.6	208.0	242.7	350.5	703.9	1259.2	3083.6	3393.2	3702.9	4012.5
67.5°	149.1	155.8	188.2	212.4	285.6	614.2	1240.0	2992.2	3342.9	3693.6	4044.3
69°	142.0	148.6	177.8	198.1	265.3	582.2	1206.9	2848.6	3197.2	3545.9	3894.5
70°	137.6	143.1	170.0	191.0	258.7	560.2	1151.9	2669.2	3011.6	3354.0	3696.3
72.5°	127.7	130.4	154.1	174.4	240.0	453.0	886.0	1982.4	2279.1	2576.0	2872.8
75°	112.8	116.2	138.1	158.0	187.1	281.2	560.8	1226.2	1447.8	1669.3	1890.9
77.5°	97.4	100.2	119.4	150.8	145.3	175.6	335.2	682.4	811.0	939.5	1068.0
80°	78.2	81.5	98.6	149.7	120.0	136.5	241.0	477.2	511.8	546.5	581.2
82.5°	57.2	60.0	77.0	121.1	92.0	103.0	183.8	404.5	416.6	428.6	440.7
85°	29.2	29.7	49.0	73.8	58.3	53.4	103.5	276.8	284.5	292.2	299.9
87.5°	5.0	5.0	11.0	12.6	14.3	8.8	13.2	47.3	48.8	50.3	51.8
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):**

	69°	70°	71°	72°	73°	74°	75°	76°	77°	78°	79°
0°	1932.8	1932.8	1932.8	1932.8	1932.8	1932.8	1932.8	1932.8	1932.8	1932.8	1932.8
2.5°	1939.4	1939.1	1938.2	1938.4	1939.1	1938.7	1939.4	1939.5	1940.2	1938.1	1937.6
5°	1962.8	1962.6	1962.4	1962.3	1962.8	1962.7	1963.1	1964.0	1963.8	1962.4	1962.2
7.5°	2002.1	2002.2	2002.8	2002.2	2003.3	2002.8	2001.6	2003.4	2004.6	2004.7	2005.9
10°	2054.1	2054.7	2056.6	2056.4	2058.3	2058.0	2058.3	2060.2	2061.5	2061.7	2063.0
12.5°	2115.0	2116.1	2117.1	2118.1	2120.2	2119.0	2121.6	2122.7	2124.4	2127.6	2126.0
15°	2172.5	2173.4	2176.3	2176.5	2178.4	2179.2	2181.6	2182.6	2183.0	2185.7	2186.1
17.5°	2212.1	2212.4	2213.5	2213.0	2214.6	2214.0	2215.7	2216.6	2218.0	2219.4	2222.0
20°	2230.2	2229.2	2228.6	2228.0	2226.8	2225.1	2225.6	2226.4	2226.6	2227.9	2229.8
22.5°	2233.0	2229.7	2226.4	2224.1	2220.8	2218.0	2215.2	2215.4	2215.6	2215.3	2216.6
25°	2233.3	2228.6	2223.4	2217.1	2212.4	2206.1	2200.9	2200.4	2198.9	2199.0	2199.6
27.5°	2243.2	2238.0	2230.7	2223.4	2213.3	2204.9	2196.4	2193.5	2190.5	2188.6	2187.9
30°	2267.2	2261.1	2252.4	2243.1	2232.1	2219.0	2207.0	2203.2	2198.9	2195.1	2191.9
32.5°	2305.6	2299.4	2289.7	2280.0	2265.4	2252.4	2240.5	2234.4	2228.4	2221.8	2215.8
35°	2367.0	2363.5	2355.0	2346.4	2335.7	2325.5	2314.8	2308.0	2297.8	2292.6	2285.3
37.5°	2454.2	2456.8	2456.8	2457.8	2454.6	2449.6	2441.9	2434.7	2431.4	2417.7	2408.9
40°	2582.6	2595.7	2607.8	2617.1	2625.3	2633.5	2640.6	2636.4	2637.7	2634.1	2628.8
42.5°	2745.9	2774.0	2799.7	2825.4	2844.0	2873.0	2893.2	2899.6	2915.9	2922.2	2934.1
45°	2932.5	2977.4	3020.5	3060.4	3097.5	3139.0	3179.4	3209.4	3242.2	3279.4	3316.7
47.5°	3125.7	3186.8	3250.4	3302.4	3356.1	3417.4	3471.1	3516.3	3575.3	3629.9	3690.0
50°	3335.2	3412.4	3484.8	3549.0	3618.0	3688.8	3762.2	3828.7	3908.4	3995.8	4090.3
52.5°	3554.8	3647.2	3730.9	3811.4	3892.4	3973.4	4051.7	4145.6	4243.9	4359.2	4477.3
55°	3767.3	3876.1	3971.1	4060.6	4153.4	4244.0	4324.6	4450.2	4570.9	4708.5	4862.8
57.5°	3937.7	4070.1	4179.7	4286.0	4390.6	4487.0	4586.1	4727.7	4881.5	5042.4	5238.0
60°	4054.0	4226.1	4366.0	4493.8	4622.2	4743.4	4857.4	5042.6	5225.5	5425.5	5669.0
62.5°	4165.2	4399.5	4582.0	4756.2	4929.4	5084.9	5226.6	5459.6	5698.5	5945.7	6235.3
65°	4322.1	4631.8	4900.5	5143.4	5383.0	5611.7	5823.8	6118.9	6420.6	6746.0	7091.7
67.5°	4395.0	4745.7	5095.7	5423.1	5727.5	6017.0	6289.4	6646.2	7001.2	7378.3	7796.1
69°	4243.2	4591.8	4966.0	5323.7	5659.9	5966.9	6261.9	6626.1	6995.3	7380.4	7801.9
70°	4038.7	4381.1	4758.8	5132.6	5454.2	5774.1	6079.8	6441.1	6815.1	7201.2	7642.4
72.5°	3169.6	3466.4	3834.7	4197.6	4520.3	4841.3	5138.0	5507.9	5884.3	6289.9	6707.6
75°	2112.5	2334.0	2608.4	2945.1	3240.9	3524.7	3812.2	4125.1	4492.4	4826.7	5208.8
77.5°	1196.5	1325.0	1484.4	1703.3	1915.6	2085.5	2290.6	2437.7	2650.9	2835.0	3029.5
80°	615.8	650.5	698.1	750.5	780.5	775.8	806.2	776.1	782.8	758.2	731.8
82.5°	452.7	464.8	486.3	496.8	495.7	461.1	424.3	373.2	328.2	281.0	237.6
85°	307.6	315.4	320.7	328.9	326.6	311.6	278.4	234.1	190.9	153.1	122.5
87.5°	53.2	54.7	54.3	58.9	59.1	54.8	45.1	38.5	32.4	24.2	17.0
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):**

	80°	81°	82°	83°	84°	85°	86°	87°	88°	89°	90°
0°	1932.8	1932.8	1932.8	1932.8	1932.8	1932.8	1932.8	1932.8	1932.8	1932.8	1932.8
2.5°	1937.2	1937.2	1938.3	1937.2	1937.2	1937.2	1936.6	1937.8	1937.2	1935.6	1933.9
5°	1962.6	1960.9	1960.4	1961.4	1962.6	1960.4	1962.0	1963.6	1960.8	1961.4	1960.3
7.5°	2005.0	2004.4	2003.8	2005.0	2005.0	2004.4	2005.0	2003.3	2002.2	2003.8	2005.5
10°	2061.6	2061.0	2062.1	2062.2	2064.4	2063.2	2062.7	2064.4	2063.2	2062.2	2062.7
12.5°	2128.2	2126.6	2129.3	2129.3	2131.0	2131.0	2130.4	2131.0	2130.4	2128.8	2127.7
15°	2187.6	2185.4	2186.0	2190.4	2189.9	2191.0	2191.0	2189.8	2189.3	2188.8	2189.3
17.5°	2223.4	2222.3	2222.3	2224.5	2226.1	2225.6	2225.6	2225.6	2225.0	2225.6	2226.7
20°	2230.0	2230.0	2230.6	2232.8	2235.5	2233.8	2233.9	2235.0	2233.8	2235.0	2235.5
22.5°	2217.4	2218.4	2219.6	2222.3	2222.9	2222.9	2222.8	2223.4	2224.5	2224.5	2225.6
25°	2199.8	2200.8	2202.5	2204.7	2206.9	2206.9	2206.9	2208.0	2208.0	2208.6	2209.1
27.5°	2186.6	2187.6	2189.3	2191.5	2194.2	2194.2	2194.2	2195.4	2195.4	2195.9	2197.0
30°	2188.2	2186.0	2187.6	2188.8	2190.4	2190.4	2189.8	2190.4	2191.0	2191.0	2191.5
32.5°	2211.8	2206.9	2205.2	2204.7	2205.2	2203.6	2203.0	2202.0	2200.8	2200.8	2200.3
35°	2274.6	2266.9	2266.4	2262.0	2257.6	2253.1	2253.6	2250.4	2251.4	2248.7	2246.5
37.5°	2403.4	2394.6	2400.1	2390.8	2384.7	2380.2	2375.3	2368.7	2364.8	2369.8	2369.8
40°	2634.0	2628.0	2626.3	2627.9	2622.4	2625.1	2613.0	2609.8	2602.6	2607.6	2614.2
42.5°	2952.6	2948.8	2969.7	2973.6	2975.8	2979.0	2981.2	2963.0	2962.6	2958.7	2947.7
45°	3346.2	3369.2	3368.2	3393.5	3394.6	3386.8	3390.2	3381.9	3378.6	3366.5	3381.4
47.5°	3750.6	3794.7	3811.2	3816.6	3837.6	3842.6	3822.7	3816.1	3827.7	3807.9	3810.6
50°	4184.8	4232.2	4270.8	4296.6	4311.4	4312.6	4297.7	4294.4	4304.8	4267.4	4285.0
52.5°	4611.9	4683.4	4756.1	4794.6	4822.2	4824.4	4836.0	4822.2	4827.7	4818.8	4836.5
55°	5033.0	5156.8	5242.1	5317.5	5365.4	5406.6	5410.5	5425.4	5426.4	5444.6	5426.5
57.5°	5444.6	5579.4	5728.0	5861.8	5936.0	5982.8	6026.8	6086.9	6100.1	6093.0	6104.5
60°	5930.6	6139.2	6341.1	6495.2	6623.5	6746.2	6812.2	6906.4	6921.2	6962.0	6926.7
62.5°	6544.8	6847.4	7121.5	7329.0	7523.8	7714.8	7859.0	7931.6	7975.7	8061.0	8032.9
65°	7487.0	7850.2	8212.9	8510.0	8783.0	9010.4	9229.4	9334.0	9449.6	9570.6	9592.6
67.5°	8263.0	8712.6	9121.5	9483.7	9814.4	10067.0	10294.8	10475.9	10616.8	10706.0	10713.1
69°	8298.2	8765.4	9209.6	9598.1	9943.2	10211.8	10451.7	10653.2	10790.2	10881.5	10905.7
70°	8129.8	8608.0	9081.4	9473.8	9827.0	10101.7	10356.0	10548.0	10701.0	10794.0	10826.5
72.5°	7182.6	7693.4	8199.1	8543.1	8904.2	9231.0	9434.6	9630.6	9846.3	9874.4	9963.5
75°	5662.0	6091.3	6483.7	6746.8	7048.3	7341.6	7541.4	7593.2	7706.0	7848.0	7797.4
77.5°	3281.2	3413.3	3666.4	3731.4	3676.3	3804.0	3846.4	3756.1	3751.8	3834.8	3669.7
80°	727.0	685.8	737.4	699.0	700.0	701.2	689.6	685.2	693.4	685.2	673.6
82.5°	201.4	194.8	195.9	193.7	197.5	194.8	193.2	197.6	197.0	196.4	200.3
85°	96.9	95.8	94.2	93.6	91.4	88.6	84.2	84.2	86.4	83.2	84.8
87.5°	12.6	12.1	12.1	14.3	12.6	10.4	10.4	10.4	9.9	9.9	9.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)