

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: P141225

Luminaire Tested: **ECM-F01-LED-E1-SL4**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P141225
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33692)
Test Lab: INNOVATION CENTER-P3
Issue Date: 03/03/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ECM-F01-LED-E1-SL4
Description: EPIC CLASSICAL MEDIUM DECORATIVE LED LUMINAIRE
(1) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 W/ SPILL LIGHT CONTROL
Light Source: (7) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2330.9 lumens
Efficiency: N/A
Efficacy: 90.0 lumens/watt
Luminous Opening: Rectangular (W 0.17' x L: 1' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G1

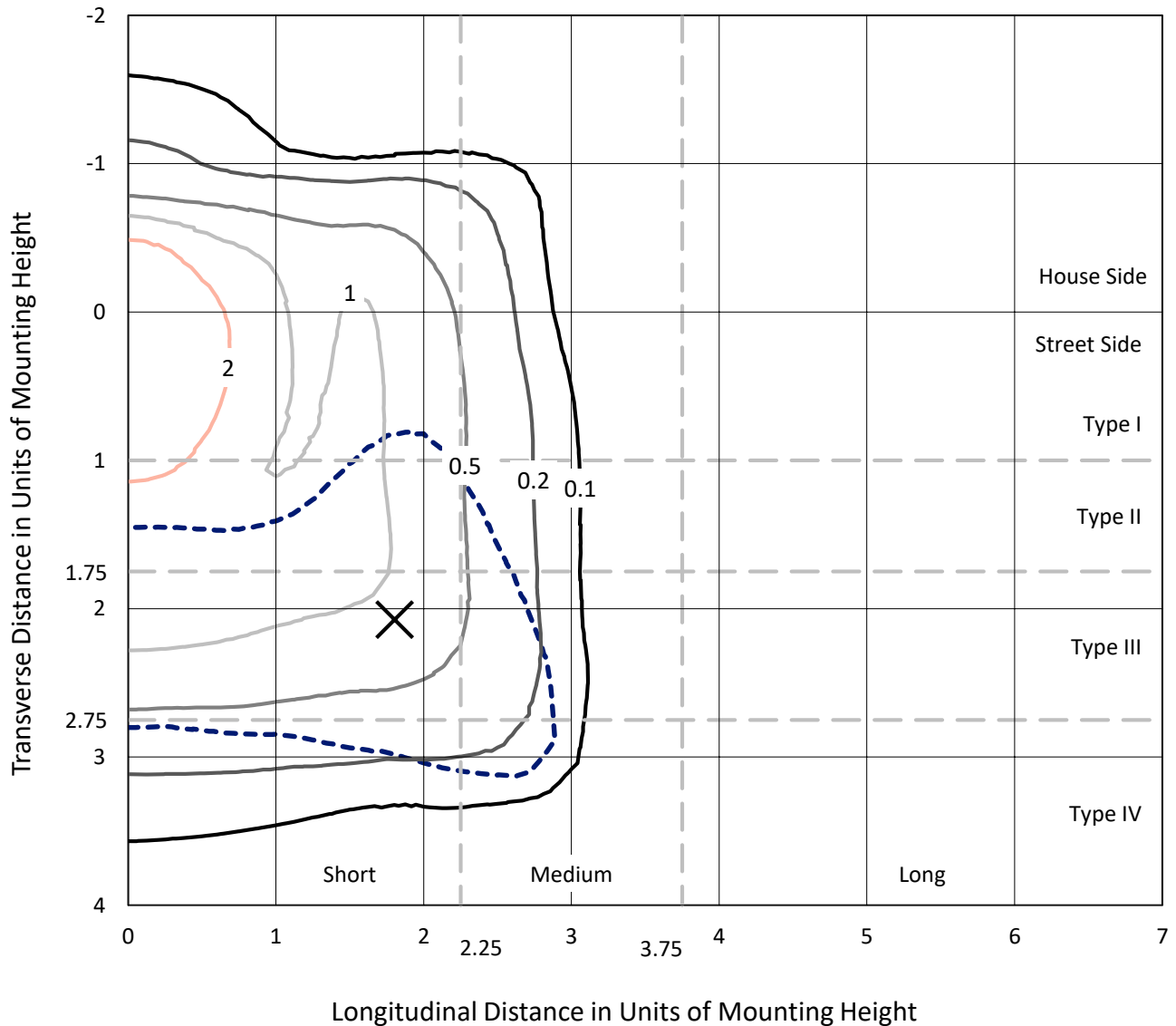
Input Watts (W): 25.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

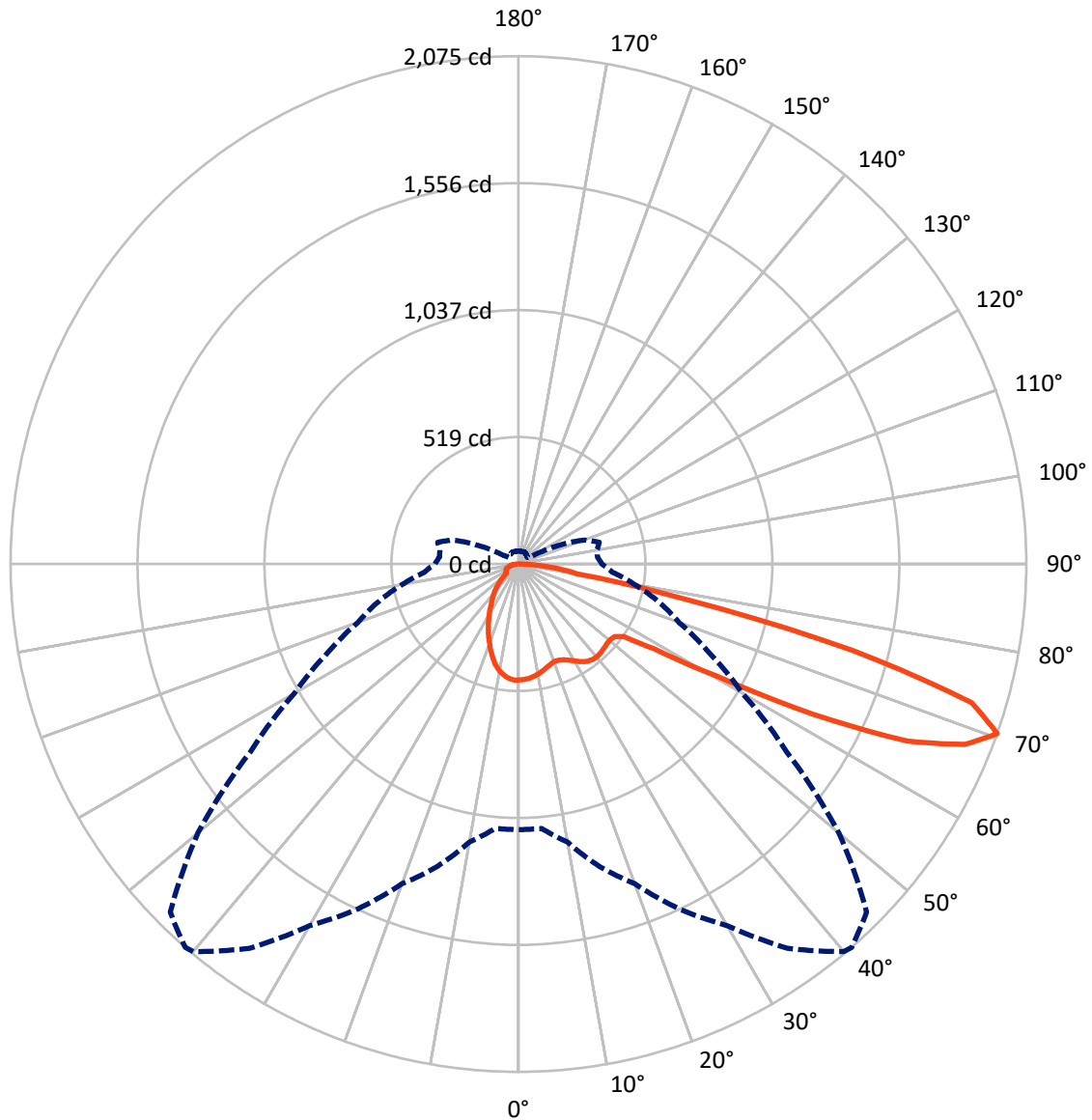
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 4.7 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 41-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	500.1	0.0	500.1
	% Fixture	21.5	0.0	21.5
Street Side	Lumens	1830.8	0.0	1830.8
	% Fixture	78.5	0.0	78.5
Total	Lumens	2330.9	0.0	2330.9
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	44.1	1.9
10°-20°	118.1	5.1
20°-30°	170.8	7.3
30°-40°	217.4	9.3
40°-50°	256.1	11.0
50°-60°	391.9	16.8
60°-70°	728.4	31.3
70°-80°	351.6	15.1
80°-90°	52.5	2.3
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°	2330.9	100.0
0°-180°	2330.9	100.0



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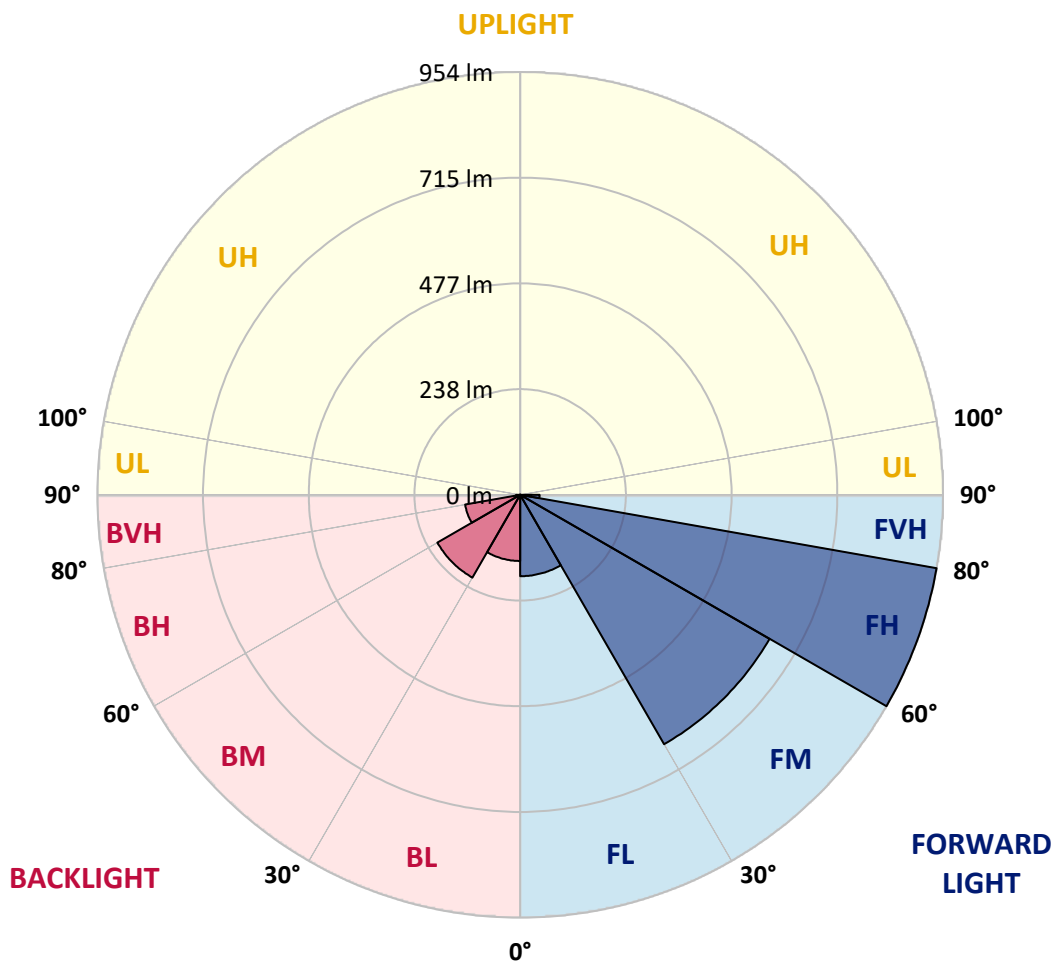
CATALOG NUMBER: ECM-F01-LED-E1-SL4

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	183.6	7.9			
FM (30°-60°)	649.7	27.9			
FH (60°-80°)	953.9	40.9			G1/1800
FVH (80°-90°)	43.6	1.9			G1/100
BL (0°-30°)	149.4	6.4	B1/500		
BM (30°-60°)	215.7	9.3	B0/220		
BH (60°-80°)	126.1	5.4	B1/500		G1/500
BVH (80°-90°)	8.9	0.4			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G1

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	41°	45°
0°	473.6	473.6	473.6	473.6	473.6	473.6	473.6	473.6	473.6	473.6	473.6
2.5°	473.6	474.1	473.9	473.3	472.8	473.0	472.8	472.5	472.5	472.2	471.9
5°	471.4	472.5	471.6	471.1	470.3	470.3	470.0	469.4	468.9	468.6	468.1
7.5°	466.7	467.8	467.2	466.7	465.9	465.3	464.2	463.7	463.1	462.8	462.0
10°	460.4	460.9	460.4	459.3	458.7	458.4	457.9	456.8	455.7	455.1	454.3
12.5°	452.1	452.4	451.8	451.3	450.5	450.5	449.6	448.8	447.2	446.6	444.7
15°	445.0	444.1	443.6	443.3	443.0	441.7	441.9	440.6	437.8	437.0	434.8
17.5°	443.0	442.2	441.9	441.1	440.6	438.9	437.3	434.5	429.8	429.0	425.7
20°	448.5	448.5	447.7	447.2	446.3	443.3	439.7	434.5	426.0	424.0	419.9
22.5°	461.7	460.4	459.8	459.8	459.5	455.1	448.5	440.3	429.0	426.5	419.4
25°	482.4	479.9	480.7	480.5	479.9	473.6	463.9	452.1	436.7	433.4	424.0
27.5°	506.9	507.4	507.1	506.0	504.4	497.5	483.8	467.8	448.5	445.2	433.1
30°	532.5	533.0	534.7	533.8	532.7	522.3	505.2	487.9	464.5	460.1	445.2
32.5°	562.2	564.1	565.5	565.8	561.4	547.0	527.0	504.9	480.2	475.8	457.3
35°	596.6	595.5	598.0	596.9	589.1	569.6	544.8	518.7	493.4	487.6	467.8
37.5°	631.3	632.6	630.2	625.5	613.4	587.8	557.2	527.8	499.7	494.2	473.6
40°	664.8	664.0	658.2	650.2	632.1	599.3	564.1	531.9	501.9	496.1	475.0
42.5°	689.9	687.7	678.9	665.9	642.5	604.8	566.0	531.9	500.5	494.5	473.0
45°	700.9	698.7	690.1	673.6	645.8	603.7	562.7	527.2	495.9	490.6	469.2
47.5°	700.9	700.0	690.7	674.7	645.0	600.7	557.8	521.5	491.2	486.0	465.9
50°	695.4	694.8	686.6	670.9	642.3	599.1	556.4	520.4	490.9	485.7	467.2
52.5°	713.8	710.2	701.7	683.5	652.4	605.9	563.3	525.9	497.5	492.3	473.3
55°	938.1	935.0	891.8	815.9	736.4	663.7	601.5	558.6	530.0	522.0	508.2
57.5°	1300.8	1296.3	1252.0	1183.0	1046.2	890.7	768.8	697.3	657.1	651.3	643.1
60°	1448.0	1446.3	1427.6	1399.5	1347.8	1267.5	1154.1	1035.2	942.7	927.9	929.0
62.5°	1532.4	1528.3	1519.2	1512.4	1494.8	1462.0	1440.8	1407.5	1362.7	1352.5	1288.1
65°	1579.8	1579.2	1584.2	1590.0	1588.9	1598.8	1609.5	1673.1	1747.6	1744.3	1676.4
67.5°	1509.3	1514.0	1539.9	1579.5	1621.1	1665.1	1747.1	1874.5	1966.7	1966.7	1907.0
70°	1085.0	1084.2	1153.0	1278.5	1390.2	1554.7	1705.8	1915.8	2066.6	2074.5	2011.3
72.5°	650.2	665.4	707.8	764.7	859.6	1058.9	1339.8	1717.1	1927.6	1936.1	1860.5
75°	456.8	445.5	443.9	447.2	463.4	512.4	667.0	1053.9	1397.3	1410.5	1337.4
77.5°	292.2	289.8	290.9	294.4	295.3	299.9	307.4	361.3	647.8	711.1	707.8
80°	252.1	251.2	251.5	247.4	239.4	236.4	245.7	238.3	231.4	241.1	227.8
82.5°	169.0	172.0	176.9	183.5	199.5	205.0	202.0	200.6	178.9	173.9	154.4
85°	125.2	123.6	125.5	125.5	121.4	117.2	120.3	117.2	103.7	97.1	85.9
87.5°	67.7	68.0	73.5	75.7	75.4	64.4	53.1	46.0	41.6	38.5	32.5
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):

	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°
0°	473.6	473.6	473.6	473.6	473.6	473.6	473.6	473.6	473.6	473.6	473.6
2.5°	472.2	471.4	471.6	471.6	471.4	471.9	471.1	470.8	471.1	471.1	471.1
5°	467.5	466.4	466.4	466.1	465.6	465.6	464.5	464.2	463.7	464.5	463.9
7.5°	460.9	459.3	457.9	456.8	456.2	455.4	454.0	453.5	452.9	452.7	452.1
10°	452.9	451.0	448.3	446.1	445.0	442.8	441.1	438.9	438.9	437.8	436.7
12.5°	443.3	440.6	437.8	434.8	432.9	429.8	427.1	424.6	422.7	420.2	418.5
15°	433.7	429.5	426.5	423.5	419.9	415.8	412.5	408.6	405.1	401.2	400.1
17.5°	423.2	419.9	417.2	413.6	409.7	404.8	400.4	394.1	389.6	385.0	381.4
20°	416.3	412.5	409.5	406.2	402.0	396.3	390.5	383.3	376.7	369.8	364.6
22.5°	412.8	406.4	403.7	400.7	396.5	390.2	383.6	374.8	366.5	357.5	349.2
25°	414.1	405.6	400.1	396.8	393.2	386.9	378.4	368.5	359.1	347.5	338.2
27.5°	420.2	408.6	400.1	394.6	390.7	384.1	375.3	364.1	352.8	340.7	329.4
30°	428.2	413.6	402.6	394.6	388.8	381.7	372.0	359.9	347.5	334.1	321.1
32.5°	437.3	419.4	406.2	395.2	385.8	376.7	366.8	354.2	341.2	326.9	314.2
35°	444.4	423.8	408.6	394.1	381.7	370.4	358.8	347.0	334.1	320.6	307.1
37.5°	448.5	426.5	408.6	390.2	375.1	363.2	351.1	339.6	327.2	314.0	302.1
40°	450.2	427.6	407.0	385.8	368.2	354.7	343.4	331.6	320.6	309.0	298.6
42.5°	449.4	426.8	404.8	381.7	362.7	348.1	335.7	324.7	315.6	306.0	297.2
45°	446.1	424.0	402.6	379.7	360.8	345.9	333.2	322.8	314.2	305.4	298.6
47.5°	443.3	422.9	404.0	384.4	366.3	351.1	337.4	325.8	318.7	311.8	307.4
50°	445.5	426.0	407.0	388.5	370.9	355.5	341.5	330.8	326.6	325.5	324.2
52.5°	451.6	432.3	416.3	403.4	395.4	389.6	375.3	372.9	369.3	367.4	362.7
55°	490.9	482.9	497.2	512.9	515.7	533.0	539.9	540.4	534.4	512.9	462.8
57.5°	651.1	670.9	676.9	713.3	723.2	715.5	705.0	704.4	685.7	657.4	584.5
60°	937.2	926.8	913.9	890.2	867.9	844.0	810.9	785.6	761.7	718.2	641.4
62.5°	1236.6	1145.6	1079.2	1011.3	956.2	908.1	860.2	819.5	780.7	720.4	638.1
65°	1496.4	1310.9	1176.4	1074.3	989.0	918.5	855.0	799.4	750.4	675.0	591.6
67.5°	1665.4	1398.7	1197.6	1045.1	924.6	834.9	741.3	653.5	605.4	544.6	502.2
70°	1708.6	1336.8	1056.1	860.7	698.4	591.4	481.0	385.2	340.9	323.9	325.3
72.5°	1541.3	1056.7	748.8	547.6	428.7	339.8	276.3	212.4	165.9	139.2	135.9
75°	1006.9	588.0	355.5	247.7	197.0	156.8	123.6	104.0	89.7	72.4	60.5
77.5°	380.6	224.0	159.6	130.2	96.3	67.1	52.3	44.0	40.5	39.4	35.5
80°	195.1	155.5	111.2	73.2	51.2	41.0	34.4	29.2	27.0	25.9	26.4
82.5°	131.5	98.0	61.4	44.0	35.5	30.5	24.2	20.4	18.2	17.9	19.3
85°	73.2	49.0	35.8	29.7	26.1	22.8	18.4	15.1	14.0	14.9	17.3
87.5°	22.8	22.6	16.2	13.2	13.8	11.8	8.8	6.6	6.6	8.5	12.1
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°	473.6	473.6	473.6	473.6	473.6	473.6	473.6	473.6	473.6	473.6	473.6
2.5°	471.1	471.6	472.8	471.9	472.2	472.5	473.3	474.4	473.6	473.0	474.7
5°	464.5	464.5	465.9	465.3	466.4	467.5	468.1	470.0	469.4	468.9	471.1
7.5°	452.4	452.7	454.6	454.0	456.2	456.5	458.7	460.4	460.4	461.5	463.4
10°	437.0	437.0	438.6	438.9	440.3	441.4	443.9	446.9	447.4	449.4	452.1
12.5°	419.6	419.1	420.5	420.5	421.6	422.9	425.7	429.3	429.8	432.9	436.4
15°	398.2	397.4	396.8	397.4	397.9	398.2	402.3	405.9	408.1	411.4	415.0
17.5°	377.5	374.5	373.1	373.1	373.4	373.4	375.1	379.2	382.2	387.4	392.7
20°	359.1	353.9	351.9	347.5	346.7	344.8	346.2	350.8	356.4	360.5	364.6
22.5°	341.8	336.3	330.8	325.5	321.4	318.9	321.4	324.4	326.4	329.7	330.8
25°	328.6	319.5	311.8	303.5	299.1	296.9	296.6	296.4	294.7	294.2	294.2
27.5°	318.1	307.4	295.8	286.7	280.7	276.6	271.9	268.6	264.4	258.9	256.2
30°	309.3	297.7	285.1	274.3	266.6	258.7	249.0	241.6	234.2	227.6	221.8
32.5°	301.3	289.5	277.1	265.8	252.6	238.9	226.7	217.9	205.0	196.2	188.8
35°	295.3	283.4	271.9	257.0	238.9	221.2	205.6	192.6	179.4	167.9	158.0
37.5°	290.9	281.0	268.6	248.5	225.6	204.5	187.9	172.5	156.8	141.2	128.8
40°	289.5	281.0	265.3	239.1	213.0	190.1	171.2	152.2	134.8	118.1	105.4
42.5°	290.3	281.2	260.0	230.9	202.5	177.8	156.3	134.3	113.6	95.8	83.1
45°	293.3	281.2	254.5	221.8	192.9	166.5	140.9	114.7	90.8	76.5	71.0
47.5°	302.4	283.2	250.1	215.2	184.4	154.1	123.6	93.8	73.5	67.4	67.4
50°	316.5	288.9	249.6	210.2	174.7	139.8	102.1	74.0	64.9	64.7	66.3
52.5°	340.4	299.1	252.3	206.9	164.6	120.5	79.5	63.8	61.9	63.6	66.0
55°	386.9	317.0	256.2	200.9	147.5	94.4	65.2	60.5	61.4	63.3	65.5
57.5°	471.9	353.0	260.3	187.9	119.4	71.5	59.2	59.4	60.8	62.7	64.7
60°	530.5	397.6	268.6	166.2	88.9	59.2	56.7	58.9	60.5	61.9	63.6
62.5°	535.5	413.9	274.6	141.7	66.0	53.9	54.5	57.8	60.0	60.5	61.4
65°	505.8	392.9	257.3	116.9	54.8	51.2	53.1	56.1	58.3	58.6	59.4
67.5°	440.8	349.2	219.6	88.9	50.1	49.3	51.5	53.4	55.0	56.4	57.5
70°	341.5	285.1	176.7	69.1	46.5	46.2	48.2	50.4	52.0	53.4	55.0
72.5°	180.0	202.5	131.5	55.3	42.7	42.9	44.9	46.8	47.9	49.3	50.9
75°	55.9	85.9	81.2	44.3	38.0	39.1	40.2	41.8	43.8	44.6	45.4
77.5°	33.0	34.9	42.4	34.7	33.0	33.8	35.2	36.6	38.0	39.1	39.9
80°	26.7	27.2	27.5	27.5	27.5	28.6	29.7	31.6	32.7	33.3	33.6
82.5°	20.9	22.3	22.6	22.0	22.8	23.9	24.5	25.6	25.9	26.4	27.0
85°	17.3	17.1	17.6	17.9	16.8	16.8	16.2	16.2	17.3	19.3	19.5
87.5°	13.5	11.8	9.6	9.1	8.5	8.0	7.4	7.4	7.7	8.8	9.6
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):

	160°	165°	170°	175°	180°
0°	473.6	473.6	473.6	473.6	473.6
2.5°	474.7	474.4	475.0	475.8	475.2
5°	471.4	471.4	472.5	473.3	472.8
7.5°	464.8	465.0	466.7	467.8	467.2
10°	454.3	454.9	456.8	458.4	459.3
12.5°	438.6	440.6	443.0	444.7	444.7
15°	418.8	421.8	424.6	427.1	425.7
17.5°	396.3	399.8	403.4	404.8	403.4
20°	369.0	369.3	371.5	372.9	372.3
22.5°	331.9	330.8	331.9	332.4	333.2
25°	293.9	292.0	290.9	292.5	293.3
27.5°	255.1	252.3	253.2	251.2	249.0
30°	217.4	214.9	211.9	211.1	212.4
32.5°	184.1	177.8	175.3	170.6	172.5
35°	148.9	142.5	136.5	134.8	133.7
37.5°	120.0	112.3	104.8	102.4	101.8
40°	93.8	87.5	82.6	81.2	80.6
42.5°	76.2	73.5	72.6	72.6	72.9
45°	69.6	69.9	70.7	71.3	71.5
47.5°	68.2	69.3	70.4	71.5	71.8
50°	68.2	69.1	69.9	71.0	71.3
52.5°	67.7	68.5	68.8	69.3	69.9
55°	67.1	67.4	67.4	67.7	68.2
57.5°	65.8	66.0	65.5	65.8	66.9
60°	64.4	64.7	64.1	64.7	64.9
62.5°	62.5	62.5	62.2	62.5	62.7
65°	60.3	59.4	60.0	59.7	60.0
67.5°	57.5	56.4	56.1	56.1	56.4
70°	53.7	52.8	52.6	53.1	53.7
72.5°	49.0	49.5	50.4	51.2	52.6
75°	45.7	46.5	47.6	50.4	52.3
77.5°	41.0	40.7	41.8	44.9	47.6
80°	34.1	34.4	34.1	34.9	35.5
82.5°	26.1	25.9	25.0	25.0	24.5
85°	18.4	17.6	16.5	16.2	16.0
87.5°	9.4	9.9	9.1	8.3	8.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)