

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: P142026

Luminaire Tested: **ECM-F01-LED-E1-T4-7050**

Issue Date: 03/03/2020

Test Information

Test Method: LM-79-08
Report Number: P142026
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33685)
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-T4-7050
Description: EPIC CLASSICAL MEDIUM DECORATIVE LED LUMINAIRE
(1) LIGHTBARS WITH AccuLED OPTICS - TYPE 4
Light Source: (7) 5000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2436 lumens
Efficiency: N/A
Efficacy: 94.1 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

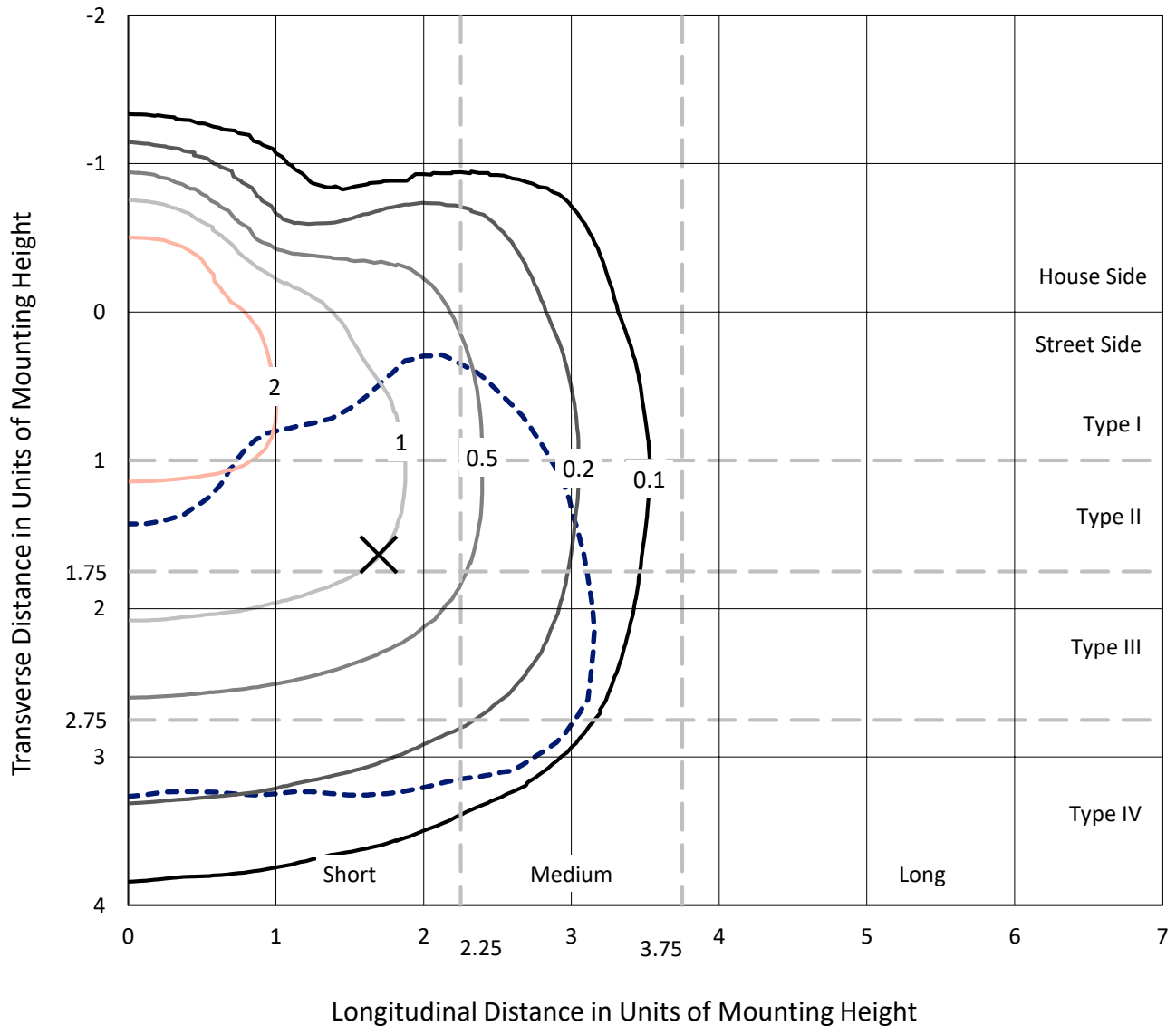
Input Watts (W): 25.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

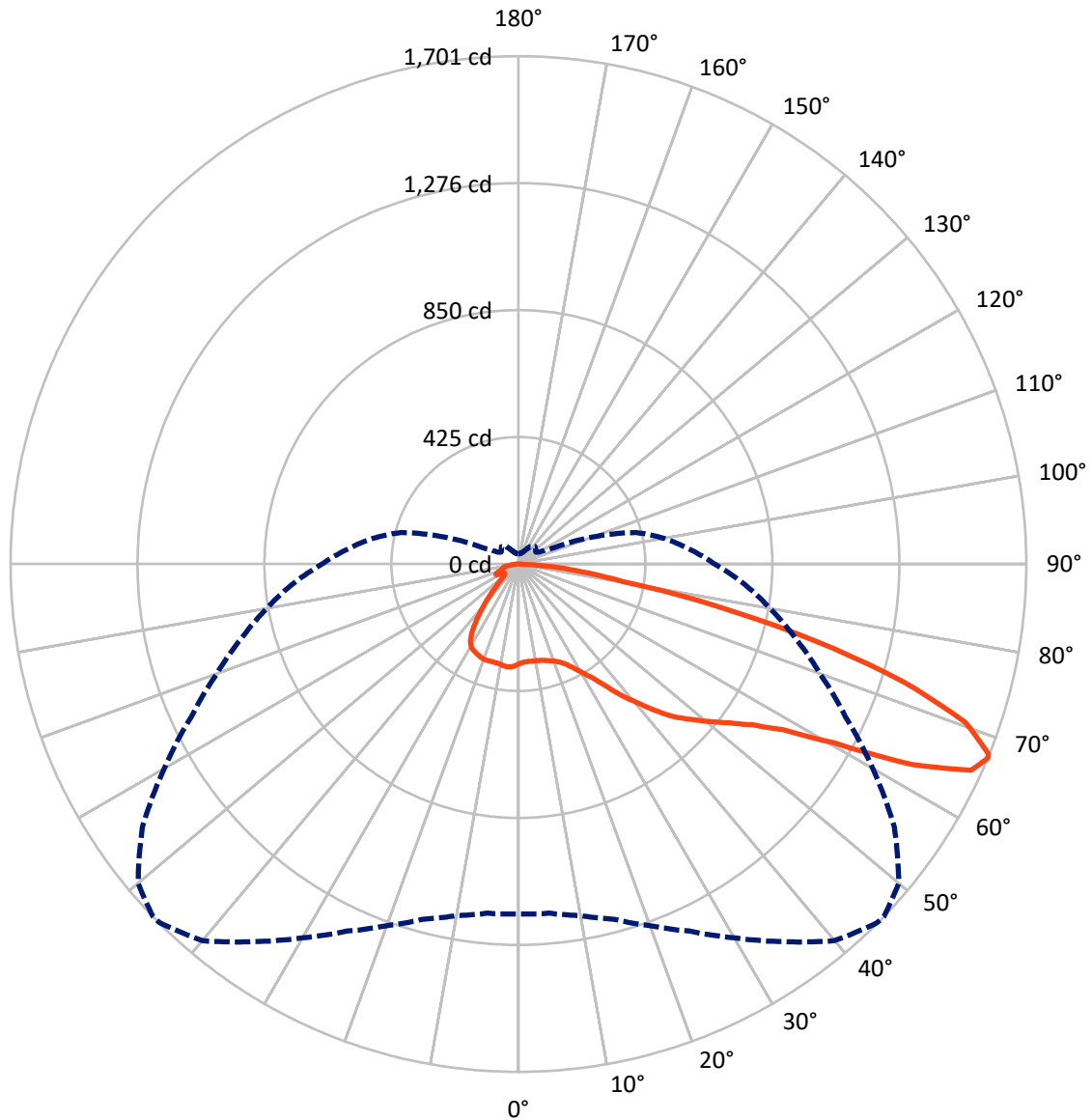
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 3.4 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 46-Deg Lateral - - - Horizontal Cone Through 67-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	484.1	0.0	484.1
	% Fixture	19.9	0.0	19.9
Street Side	Lumens	1951.9	0.0	1951.9
	% Fixture	80.1	0.0	80.1
Total	Lumens	2436.0	0.0	2436.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	32.1	1.3
10°-20°	95.9	3.9
20°-30°	161.2	6.6
30°-40°	241.1	9.9
40°-50°	314.0	12.9
50°-60°	430.0	17.7
60°-70°	679.9	27.9
70°-80°	421.7	17.3
80°-90°	60.1	2.5
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°	2436.0	100.0
0°-180°	2436.0	100.0



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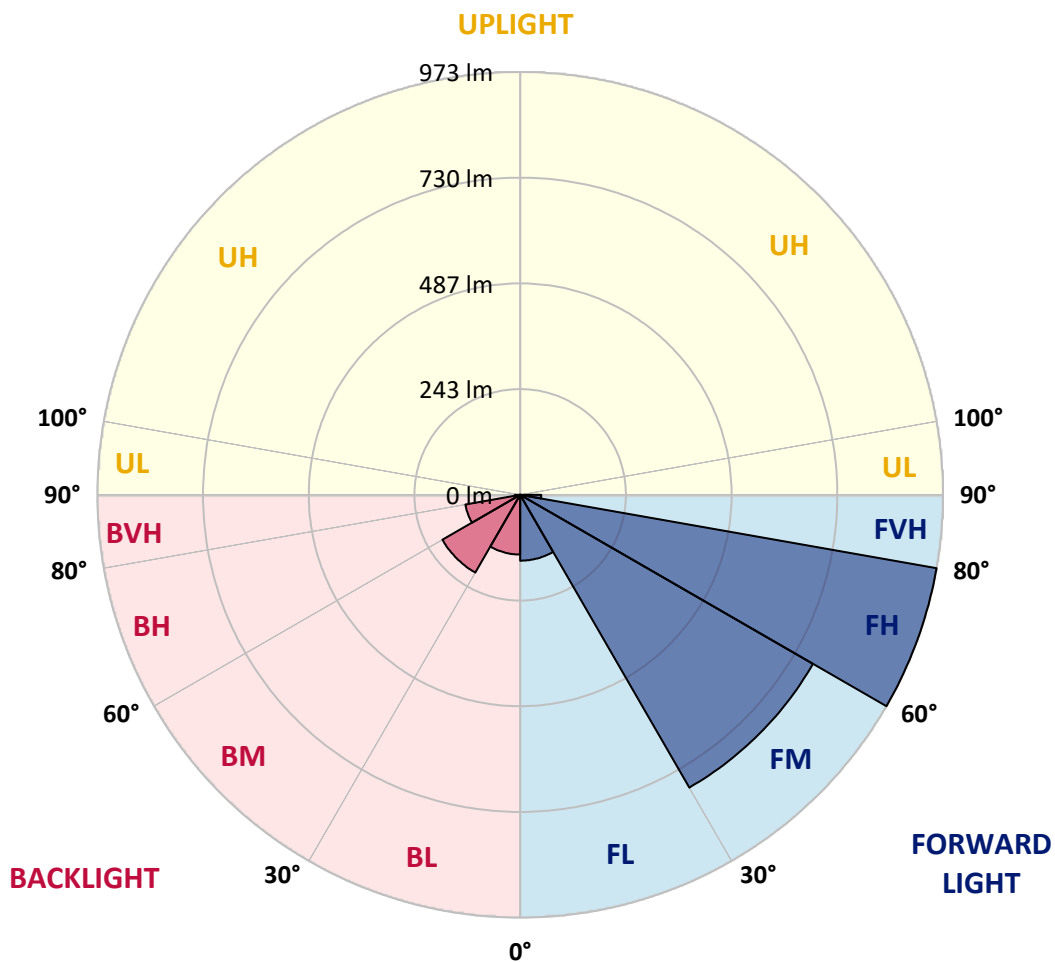
CATALOG NUMBER: ECM-F01-LED-E1-T4-7050

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	151.7	6.2			
FM	(30°-60°)	778.4	32.0			
FH	(60°-80°)	973.4	40.0			G1/1800
FVH	(80°-90°)	48.4	2.0			G1/100
BL	(0°-30°)	137.5	5.6	B1/500		
BM	(30°-60°)	206.7	8.5	B0/220		
BH	(60°-80°)	128.1	5.3	B1/500		G1/500
BVH	(80°-90°)	11.7	0.5			G1/100
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°	45°	46°
0°	333.7	333.7	333.7	333.7	333.7	333.7	333.7	333.7	333.7	333.7	333.7
2.5°	326.4	327.3	327.0	326.7	327.0	327.3	327.5	328.4	328.7	328.9	329.2
5°	320.5	321.3	321.0	321.6	321.9	323.0	323.9	325.3	326.1	327.3	327.8
7.5°	318.8	319.3	319.3	319.9	320.2	321.3	322.7	324.4	326.1	327.8	328.4
10°	323.3	323.6	323.6	323.3	323.6	324.1	324.7	326.1	327.5	328.9	329.5
12.5°	334.0	333.2	332.9	332.1	332.3	331.2	331.2	330.9	330.9	331.2	331.2
15°	345.3	344.8	344.2	342.8	342.8	341.1	340.5	339.4	336.6	335.4	335.2
17.5°	355.5	354.9	353.8	352.7	352.1	349.8	349.3	347.3	343.9	341.4	340.5
20°	367.6	366.2	363.7	363.1	361.7	359.2	358.3	355.8	351.3	347.6	347.3
22.5°	386.3	384.0	381.5	379.5	375.8	373.3	371.0	367.6	362.3	358.0	356.9
25°	404.9	404.1	401.8	399.0	396.4	393.6	390.8	385.7	378.6	373.3	372.1
27.5°	431.2	429.2	426.4	421.8	420.4	415.6	413.4	409.1	402.1	395.3	394.2
30°	458.6	456.6	452.1	448.1	447.3	442.2	440.8	436.2	430.0	423.3	422.4
32.5°	489.9	487.9	484.5	482.3	479.2	476.3	473.0	468.7	460.8	455.2	454.0
35°	530.0	528.3	524.3	526.0	523.2	522.4	520.4	513.3	504.6	497.8	498.9
37.5°	561.6	561.3	562.2	561.3	565.0	568.7	568.7	569.2	565.0	557.7	556.2
40°	591.3	591.0	593.2	595.8	605.7	611.6	618.4	620.9	616.4	610.7	608.8
42.5°	618.9	618.4	621.5	630.8	642.9	653.9	665.5	675.4	677.7	671.4	670.0
45°	646.3	647.2	651.1	661.6	677.7	692.1	711.8	723.4	730.7	727.4	729.6
47.5°	679.4	680.2	684.4	696.9	711.0	729.0	752.2	772.0	780.7	780.7	777.9
50°	718.6	722.6	727.1	735.5	751.9	769.7	797.9	817.7	831.8	831.3	829.0
52.5°	770.8	771.7	779.0	785.8	799.9	818.0	843.4	870.5	888.3	886.6	884.1
55°	841.1	837.8	842.6	849.1	864.3	880.1	907.8	939.1	957.2	951.8	950.1
57.5°	929.8	927.0	930.4	938.3	957.5	970.5	992.8	1021.6	1047.0	1051.5	1047.6
60°	1057.7	1057.7	1064.5	1081.4	1100.9	1120.4	1148.9	1183.6	1209.9	1216.4	1216.1
62.5°	1209.3	1218.9	1220.4	1242.4	1279.6	1313.2	1357.6	1418.9	1458.1	1486.1	1478.7
65°	1233.6	1236.7	1249.2	1283.3	1333.9	1393.4	1462.3	1542.8	1624.4	1664.8	1665.9
67°	1172.6	1173.8	1195.5	1231.4	1289.2	1356.5	1445.7	1543.7	1647.0	1699.2	1700.9
67.5°	1153.7	1151.5	1170.9	1208.5	1271.7	1347.4	1431.3	1534.3	1641.1	1697.0	1697.8
70°	1026.9	1028.1	1043.3	1085.1	1152.0	1222.9	1316.6	1422.5	1534.9	1586.0	1588.5
72.5°	885.5	878.1	892.0	936.6	968.5	1037.7	1123.8	1203.7	1302.5	1350.8	1349.7
75°	675.4	655.1	679.4	705.3	723.1	791.7	845.4	900.4	991.6	1028.3	1026.4
77.5°	364.0	363.1	389.7	410.0	436.5	498.4	545.5	580.2	657.0	675.1	677.4
80°	197.7	205.0	220.8	243.4	264.9	294.5	321.9	343.6	368.8	357.2	354.6
82.5°	119.2	131.3	155.6	172.8	181.3	194.5	214.0	226.5	236.3	214.9	210.6
85°	18.9	34.2	87.8	105.0	114.1	120.3	124.5	132.7	121.1	113.5	115.5
87.5°	6.2	7.1	13.6	29.9	26.3	18.1	23.7	34.4	16.4	8.8	8.5
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°	333.7	333.7	333.7	333.7	333.7	333.7	333.7	333.7	333.7	333.7	333.7
2.5°	329.5	329.8	330.6	331.8	332.3	333.7	333.7	334.9	334.9	335.7	336.6
5°	328.7	330.1	331.2	332.9	333.7	335.7	336.6	338.3	339.1	340.2	341.4
7.5°	330.1	332.1	333.5	335.4	336.9	338.8	339.7	341.1	341.9	343.3	343.9
10°	331.2	333.2	334.9	337.1	338.3	339.7	340.5	341.7	341.9	342.8	343.3
12.5°	332.6	333.5	334.9	336.9	338.0	338.8	339.7	340.5	341.4	341.4	341.4
15°	334.6	333.7	334.0	335.7	336.9	337.4	338.3	338.8	339.1	339.1	338.5
17.5°	338.8	336.6	335.2	335.2	335.7	336.3	336.3	335.4	334.9	334.0	332.9
20°	345.0	341.4	338.5	337.1	336.0	334.6	332.3	329.5	327.0	324.7	323.3
22.5°	353.8	350.1	346.7	343.6	340.0	335.2	330.4	324.4	319.6	316.0	314.5
25°	370.2	364.8	362.3	357.5	351.8	344.2	336.9	328.7	323.0	317.9	315.7
27.5°	392.2	388.0	382.3	379.8	372.4	363.7	355.5	345.6	337.7	331.5	327.3
30°	420.1	417.3	412.5	408.3	401.2	393.3	381.2	370.2	356.3	345.3	339.1
32.5°	452.3	448.1	443.9	438.5	433.4	423.0	411.7	395.0	375.8	356.9	345.3
35°	492.7	488.5	485.7	477.2	468.7	457.4	442.2	422.4	395.6	370.2	350.4
37.5°	548.3	539.3	525.5	513.3	498.1	480.9	463.6	439.9	410.0	376.9	349.8
40°	596.6	583.4	567.8	546.9	525.5	502.9	482.6	456.9	421.8	382.6	345.9
42.5°	659.3	636.4	610.2	582.5	553.1	526.0	500.9	471.5	430.6	382.9	336.6
45°	715.8	687.5	652.8	615.3	579.4	546.4	517.6	485.1	437.9	381.7	325.8
47.5°	766.0	733.0	690.6	645.5	603.1	565.8	534.2	500.1	447.5	385.4	321.9
50°	814.6	776.8	729.0	674.3	627.1	586.5	553.4	516.7	463.6	397.8	328.1
52.5°	866.6	820.5	766.6	704.8	653.4	611.3	574.3	536.8	482.8	414.5	339.4
55°	930.1	877.9	816.3	748.0	689.0	642.1	600.3	560.8	505.7	435.1	352.7
57.5°	1014.8	962.0	891.1	812.3	750.5	694.9	644.6	600.0	540.4	463.6	372.4
60°	1178.0	1112.8	1018.5	932.9	866.0	800.5	739.8	678.8	607.1	521.2	423.3
62.5°	1440.0	1349.1	1232.2	1113.1	1022.7	936.0	855.8	776.5	687.0	590.7	483.7
65°	1621.3	1508.9	1362.1	1212.7	1090.5	984.6	888.9	794.6	694.9	603.1	509.9
67°	1662.8	1537.2	1370.0	1207.9	1074.9	960.0	855.8	757.6	657.3	574.0	494.4
67.5°	1661.1	1535.7	1363.8	1197.8	1064.5	951.3	846.2	742.9	644.3	562.7	486.8
70°	1560.6	1434.7	1261.9	1096.7	968.2	855.5	749.7	659.6	559.1	493.0	436.0
72.5°	1322.3	1212.7	1073.2	924.7	814.6	713.8	629.1	540.7	453.5	409.4	364.5
75°	1005.5	908.3	780.4	671.7	587.9	517.8	432.9	374.7	313.4	283.2	267.1
77.5°	664.4	552.9	464.5	360.9	299.3	244.2	192.6	152.8	127.6	134.1	146.5
80°	351.5	279.0	206.4	159.8	123.4	96.0	76.2	57.0	41.5	48.6	61.0
82.5°	191.4	163.2	120.6	96.0	78.5	64.9	50.0	35.0	26.0	28.8	41.5
85°	109.3	96.0	74.5	58.2	50.8	41.5	28.5	19.2	18.6	20.0	25.7
87.5°	18.1	24.3	19.8	13.6	15.2	15.0	13.3	10.2	7.6	10.7	13.8
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):

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	333.7	333.7	333.7	333.7	333.7	333.7	333.7	333.7	333.7	333.7	333.7
2.5°	337.1	338.0	339.1	339.4	339.1	340.0	341.4	342.5	341.7	341.1	342.5
5°	342.5	343.1	344.5	344.5	344.8	345.3	346.2	347.0	345.9	345.9	346.5
7.5°	344.8	344.8	346.2	345.6	345.6	345.3	346.2	346.5	344.8	344.5	344.8
10°	343.3	343.3	343.9	342.8	342.5	342.2	342.2	342.5	340.8	340.2	341.1
12.5°	341.4	341.4	340.8	340.2	339.7	339.1	339.7	340.0	338.8	338.8	339.1
15°	338.0	337.1	336.9	336.9	337.1	337.4	338.5	339.4	338.5	338.0	338.0
17.5°	332.3	331.8	332.6	334.3	336.3	337.7	339.4	340.0	338.0	335.7	334.0
20°	323.9	325.3	328.4	333.2	337.4	339.7	339.7	337.7	333.2	328.7	326.4
22.5°	315.1	319.1	325.8	333.2	338.3	339.1	336.0	331.8	325.6	320.8	316.5
25°	316.2	321.0	327.8	334.0	337.4	336.0	330.4	325.0	317.7	312.6	306.4
27.5°	328.1	332.6	336.0	338.0	336.9	332.3	325.8	318.5	310.3	303.3	295.9
30°	337.7	339.7	339.4	337.7	333.5	326.4	318.8	310.0	300.1	292.5	282.9
32.5°	339.4	335.7	330.1	323.9	318.2	310.3	301.6	291.4	280.4	270.5	260.9
35°	336.3	322.5	310.0	297.6	289.1	279.3	271.6	259.8	247.6	239.2	232.1
37.5°	324.7	300.7	280.9	263.4	251.0	239.7	228.1	216.6	206.4	202.5	200.5
40°	310.0	273.9	243.7	219.4	206.1	195.1	183.3	173.9	169.1	165.5	164.1
42.5°	288.6	243.4	205.8	179.9	162.9	152.8	141.2	136.1	133.8	134.7	133.6
45°	268.5	211.5	164.3	135.5	124.0	114.4	108.7	106.4	105.3	104.8	105.6
47.5°	254.4	186.9	132.4	103.1	93.5	86.7	84.4	83.6	83.3	82.2	81.9
50°	251.0	172.5	108.4	80.2	72.8	69.2	68.0	67.2	66.6	65.8	63.8
52.5°	255.0	168.6	96.6	68.9	62.7	59.9	59.0	57.6	57.0	54.8	52.2
55°	261.7	170.0	92.9	65.8	59.6	56.5	55.3	54.8	52.8	50.3	47.2
57.5°	275.9	178.7	94.6	66.6	60.1	57.3	56.8	56.2	53.6	50.0	46.0
60°	316.8	204.1	103.3	72.6	64.7	62.7	63.0	61.8	58.2	53.4	47.4
62.5°	380.1	243.7	119.4	79.9	72.0	72.0	73.7	72.8	67.2	59.3	50.8
65°	412.8	267.4	126.2	82.2	74.3	77.9	83.3	82.4	74.3	62.4	51.1
67°	407.7	262.9	122.3	78.8	70.0	74.8	80.2	80.5	71.4	59.6	48.8
67.5°	402.9	259.8	120.3	77.4	68.9	73.7	78.8	77.9	70.3	58.4	48.3
70°	362.0	228.1	107.3	72.3	63.8	65.2	66.6	65.5	59.6	51.7	44.6
72.5°	312.6	189.5	94.6	69.2	61.0	58.7	58.7	56.8	52.8	47.4	42.4
75°	238.3	147.4	83.0	65.8	57.6	54.2	53.6	52.2	48.8	44.9	40.4
77.5°	145.4	105.6	72.0	60.7	53.4	50.5	50.8	50.0	46.6	42.9	38.7
80°	72.8	68.3	60.4	52.8	48.3	45.5	45.7	44.0	41.2	38.4	35.0
82.5°	44.6	47.2	42.4	40.1	37.3	34.2	26.5	31.1	30.2	27.7	26.3
85°	29.6	29.4	26.5	23.4	21.5	18.6	16.7	16.9	18.6	19.2	19.2
87.5°	14.4	13.8	12.7	11.9	11.3	9.3	8.8	9.9	9.9	10.4	10.2
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):

	160°	165°	170°	175°	180°
0°	333.7	333.7	333.7	333.7	333.7
2.5°	342.8	343.3	343.1	343.9	343.1
5°	346.7	346.7	347.0	347.3	347.0
7.5°	344.8	344.5	345.0	345.6	345.3
10°	341.1	341.4	341.9	342.8	342.8
12.5°	339.7	340.0	341.1	341.9	341.9
15°	338.5	338.8	339.4	340.5	339.7
17.5°	333.5	332.3	332.3	333.2	332.3
20°	324.4	322.7	322.7	322.5	322.2
22.5°	313.7	309.5	308.3	306.9	307.2
25°	300.4	294.8	291.7	290.0	289.4
27.5°	289.7	283.2	280.1	277.6	276.7
30°	276.1	268.8	266.3	264.9	264.3
32.5°	256.4	249.9	246.5	245.7	244.0
35°	226.5	223.6	222.2	220.2	220.5
37.5°	196.5	195.7	192.3	193.4	192.3
40°	164.3	164.1	164.6	163.8	165.7
42.5°	134.1	133.3	134.7	133.8	134.7
45°	103.9	105.6	107.6	106.7	107.9
47.5°	79.6	79.9	79.3	79.9	80.5
50°	61.3	60.7	60.1	59.0	59.6
52.5°	50.5	48.6	47.2	46.3	46.0
55°	44.6	42.6	41.5	40.4	40.4
57.5°	42.9	40.4	38.7	37.8	37.6
60°	43.2	39.8	37.6	36.1	35.9
62.5°	44.3	39.8	36.7	35.3	34.7
65°	44.0	39.2	36.1	34.7	34.2
67°	42.6	38.4	35.9	34.4	34.2
67.5°	42.1	38.1	35.9	34.4	33.9
70°	40.1	37.3	35.3	33.9	33.3
72.5°	38.4	36.1	33.9	32.8	32.2
75°	36.7	34.4	32.5	31.3	31.1
77.5°	35.0	32.5	31.1	29.6	28.5
80°	31.9	29.1	27.1	24.8	24.3
82.5°	26.3	24.0	22.0	20.0	19.8
85°	19.5	18.6	16.9	15.2	15.2
87.5°	10.7	11.9	10.4	9.6	9.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)