

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: P596110

Luminaire Tested: **MSA-SA4A-AMB-U-SLL-HSS**

Issue Date: 4/29/2022

Test Information

Test Method: LM-79-08
Report Number: P596110
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2109-400-24)
Test Lab: INNOVATIONS CENTER
Issue Date: 4/29/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA4A-AMB-U-SLL-HSS
Description: POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH
AND SPILL LIGHT ELIMINATOR LEFT OPTICS WITH HOUSE SIDE SHIELD
Light Source: (64) 1549K CCT, -21.5 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1744 lumens
Efficiency: N/A
Efficacy: 22.1 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B0 - U0 - G1

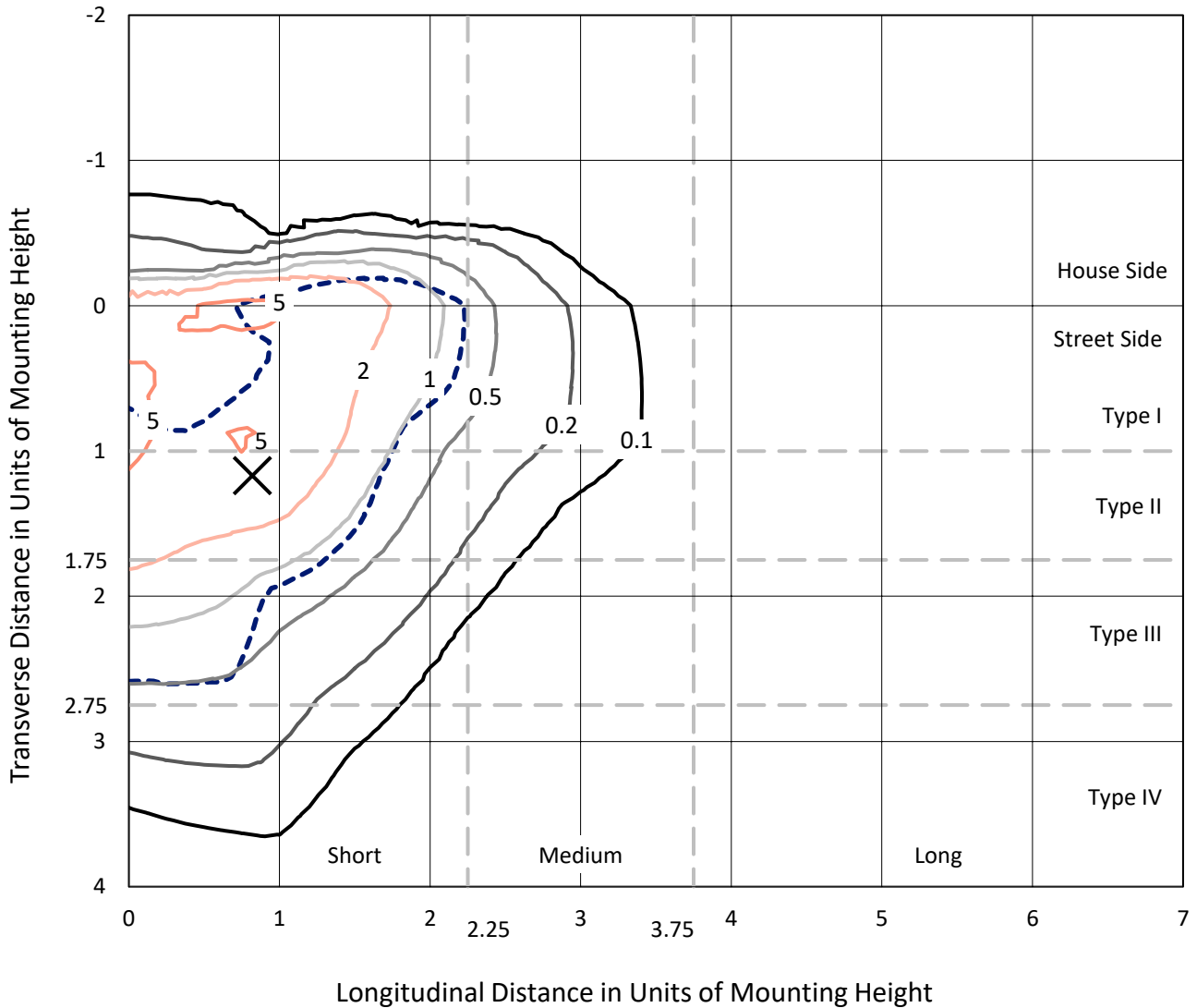
Input Watts (W): 79
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

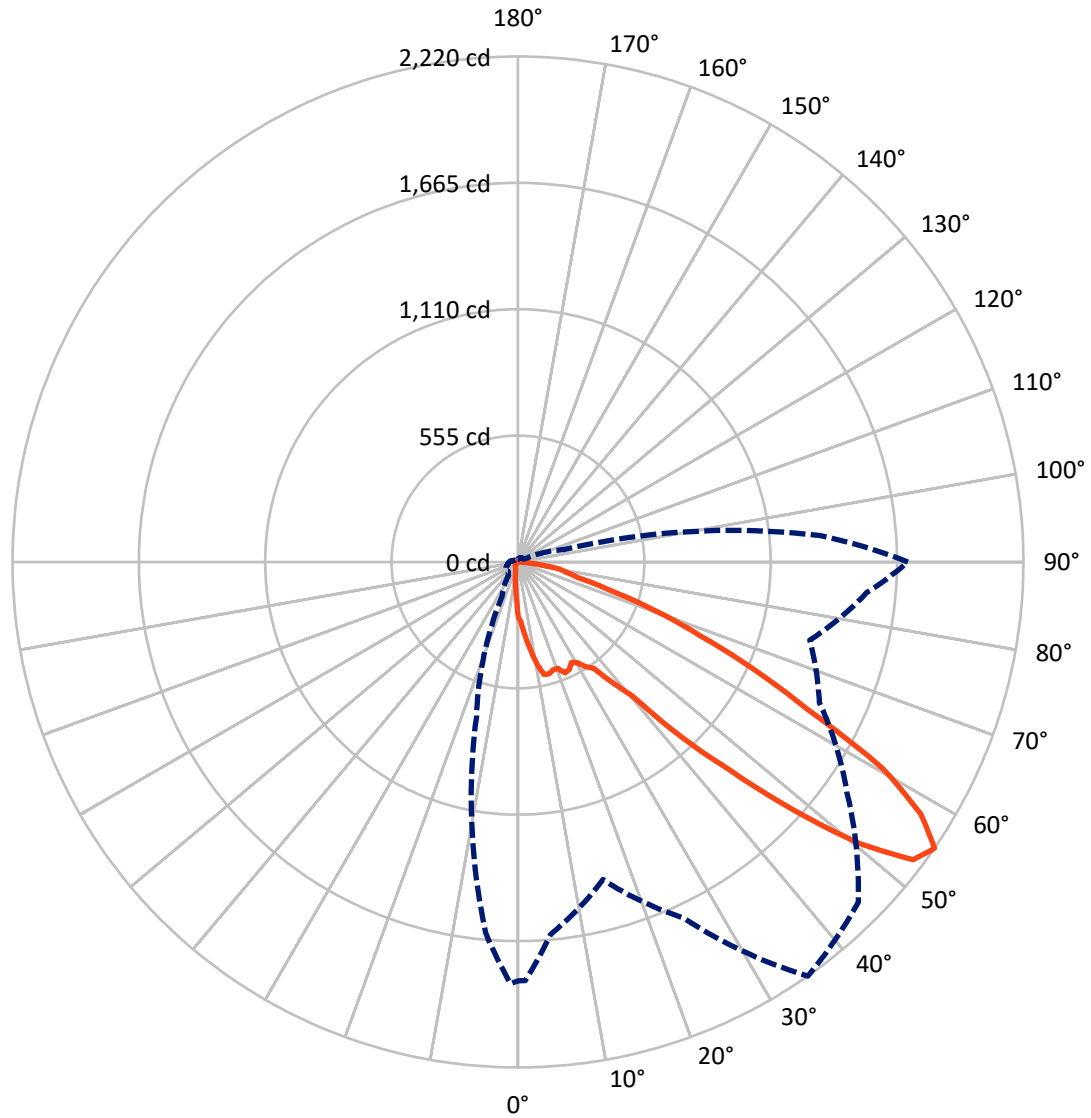
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 6.5 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 35-Deg Lateral - - - Horizontal Cone Through 55-Deg Vertical

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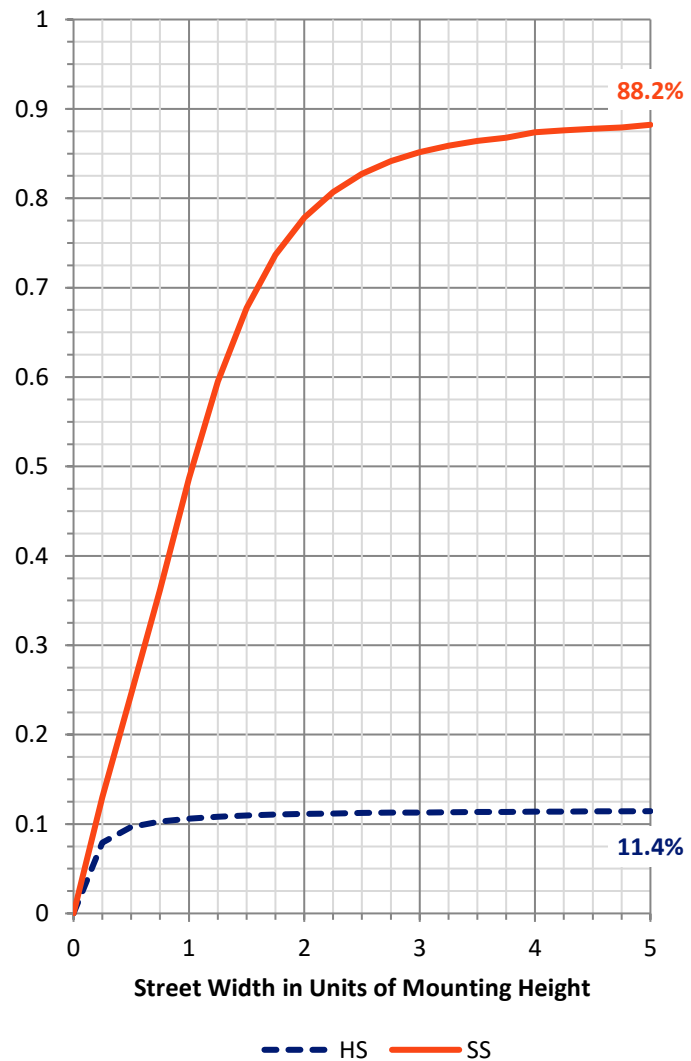
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	202.2	0.0	202.2
	% Fixture	11.6	0.0	11.6
Street Side	Lumens	1541.8	0.0	1541.8
	% Fixture	88.4	0.0	88.4
Total	Lumens	1744.0	0.0	1744.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	21.7	1.2
10°-20°	56.4	3.2
20°-30°	124.1	7.1
30°-40°	186.6	10.7
40°-50°	336.6	19.3
50°-60°	486.8	27.9
60°-70°	378.3	21.7
70°-80°	134.2	7.7
80°-90°	19.3	1.1
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°	1744.0	100.0
0°-180°	1744.0	100.0

Coefficient of Utilization

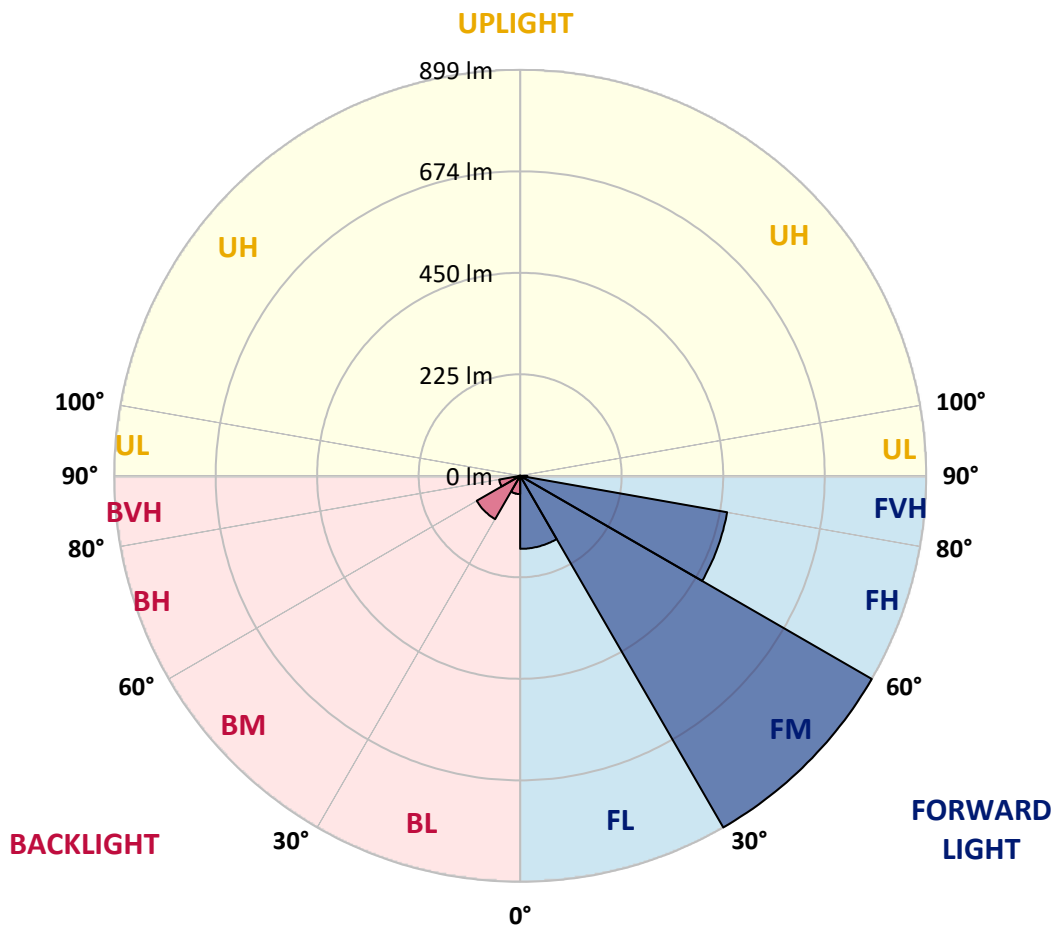


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	161.7	9.3			
FM (30°-60°)	899.0	51.6			
FH (60°-80°)	465.3	26.7			G0/660
FVH (80°-90°)	15.8	0.9			G1/100
BL (0°-30°)	40.5	2.3	B0/110		
BM (30°-60°)	110.9	6.4	B0/220		
BH (60°-80°)	47.3	2.7	B0/110		G0/110
BVH (80°-90°)	3.5	0.2			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B0-U0-G1
 Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	244.0	244.0	244.0	244.0	244.0	244.0	244.0	244.0	244.0	244.0	244.0
2.5°	338.0	335.0	325.0	313.0	273.0	265.0	269.0	264.0	252.0	265.0	262.0
5°	397.0	387.0	374.0	372.0	345.0	323.0	290.0	289.0	319.0	393.0	366.0
7.5°	377.0	387.0	373.0	421.0	415.0	385.0	393.0	397.0	416.0	413.0	375.0
10°	350.0	349.0	352.0	391.0	407.0	454.0	474.0	433.0	420.0	410.0	340.0
12.5°	317.0	313.0	333.0	425.0	470.0	507.0	525.0	491.0	444.0	391.0	336.0
15°	360.0	358.0	381.0	432.0	486.0	510.0	511.0	489.0	462.0	410.0	346.0
17.5°	440.0	437.0	473.0	483.0	507.0	499.0	492.0	491.0	473.0	482.0	426.0
20°	545.0	536.0	576.0	549.0	494.0	499.0	483.0	486.0	502.0	591.0	568.0
22.5°	782.0	783.0	800.0	665.0	570.0	529.0	531.0	530.0	628.0	799.0	736.0
25°	969.0	965.0	1007.0	827.0	626.0	524.0	514.0	553.0	711.0	894.0	869.0
27.5°	874.0	868.0	890.0	773.0	649.0	500.0	454.0	508.0	708.0	753.0	813.0
30°	876.0	866.0	890.0	717.0	620.0	513.0	457.0	521.0	638.0	736.0	869.0
32.5°	971.0	973.0	943.0	776.0	631.0	549.0	481.0	511.0	657.0	794.0	946.0
35°	1055.0	1051.0	1003.0	840.0	693.0	574.0	523.0	581.0	709.0	880.0	1015.0
37.5°	1212.0	1220.0	1127.0	927.0	744.0	667.0	600.0	653.0	768.0	947.0	1166.0
40°	1358.0	1377.1	1235.0	1015.0	881.0	771.0	760.0	769.0	858.0	982.0	1291.0
42.5°	1501.1	1507.1	1383.1	1150.0	1035.0	1047.0	985.0	936.0	964.0	1044.0	1377.1
45°	1601.1	1605.1	1443.1	1193.0	1212.0	1303.0	1336.0	1174.0	1112.0	1124.0	1436.1
47.5°	1695.1	1702.1	1480.1	1264.0	1409.1	1626.1	1636.1	1410.1	1235.0	1165.0	1469.1
50°	1732.1	1750.1	1533.1	1323.0	1542.1	1942.1	1921.1	1550.1	1320.0	1213.0	1449.1
52.5°	1777.1	1784.1	1578.1	1384.1	1690.1	2173.1	2092.1	1688.1	1394.1	1251.0	1477.1
55°	1840.1	1839.1	1642.1	1444.1	1726.1	2220.1	2114.1	1764.1	1461.1	1327.0	1538.1
57.5°	1874.1	1882.1	1695.1	1500.1	1676.1	2085.1	1921.1	1723.1	1434.1	1349.0	1557.1
60°	1829.1	1823.1	1703.1	1492.1	1536.1	1841.1	1647.1	1506.1	1357.0	1348.0	1493.1
62.5°	1698.1	1677.1	1619.1	1448.1	1272.0	1429.1	1368.0	1222.0	1176.0	1283.0	1392.1
65°	1485.1	1489.1	1450.1	1364.0	1110.0	1138.0	1103.0	984.0	952.0	1148.0	1168.0
67.5°	1259.0	1251.0	1258.0	1246.0	922.0	863.0	829.0	760.0	724.0	947.0	953.0
70°	956.0	930.0	996.0	1054.0	722.0	640.0	566.0	507.0	535.0	745.0	714.0
72.5°	599.0	627.0	704.0	856.0	532.0	418.0	316.0	319.0	376.0	585.0	513.0
75°	350.0	357.0	430.0	621.0	358.0	270.0	226.0	226.0	281.0	435.0	360.0
77.5°	216.0	220.0	240.0	399.0	239.0	218.0	186.0	199.0	204.0	283.0	241.0
80°	111.0	110.0	118.0	192.0	168.0	181.0	137.0	157.0	141.0	161.0	162.0
82.5°	42.0	39.0	44.0	88.0	96.0	95.0	57.0	84.0	84.0	115.0	98.0
85°	2.0	2.0	3.0	43.0	36.0	32.0	17.0	27.0	35.0	44.0	31.0
87.5°	1.0	1.0	2.0	2.0	4.0	4.0	3.0	6.0	6.0	9.0	5.0
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):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	244.0	244.0	244.0	244.0	244.0	244.0	244.0	244.0	244.0	244.0	244.0
2.5°	316.0	278.0	317.0	266.0	258.0	270.0	259.0	230.0	239.0	200.0	231.0
5°	380.0	339.0	314.0	281.0	240.0	209.0	200.0	192.0	203.0	182.0	204.0
7.5°	378.0	322.0	285.0	229.0	189.0	166.0	161.0	158.0	159.0	151.0	156.0
10°	323.0	276.0	238.0	197.0	181.0	158.0	138.0	120.0	112.0	98.0	93.0
12.5°	301.0	267.0	231.0	195.0	170.0	139.0	108.0	81.0	68.0	61.0	54.0
15°	310.0	276.0	231.0	186.0	140.0	101.0	69.0	53.0	44.0	40.0	38.0
17.5°	365.0	315.0	233.0	165.0	112.0	70.0	51.0	39.0	34.0	34.0	32.0
20°	497.0	386.0	225.0	135.0	80.0	53.0	39.0	34.0	32.0	31.0	30.0
22.5°	634.0	488.0	227.0	109.0	60.0	41.0	34.0	30.0	30.0	30.0	30.0
25°	743.0	546.0	226.0	87.0	48.0	36.0	31.0	29.0	28.0	28.0	28.0
27.5°	749.0	550.0	213.0	75.0	41.0	33.0	30.0	28.0	26.0	26.0	26.0
30°	825.0	677.0	215.0	64.0	37.0	30.0	28.0	26.0	24.0	25.0	24.0
32.5°	963.0	729.0	215.0	53.0	34.0	29.0	26.0	24.0	23.0	23.0	23.0
35°	1057.0	814.0	200.0	49.0	32.0	28.0	25.0	23.0	22.0	21.0	21.0
37.5°	1202.0	871.0	191.0	46.0	31.0	27.0	25.0	22.0	21.0	20.0	20.0
40°	1304.0	934.0	178.0	41.0	32.0	27.0	24.0	21.0	19.0	18.0	18.0
42.5°	1433.1	1016.0	171.0	37.0	30.0	26.0	23.0	21.0	18.0	17.0	17.0
45°	1554.1	1080.0	168.0	34.0	28.0	28.0	23.0	20.0	17.0	16.0	15.0
47.5°	1586.1	1135.0	174.0	31.0	27.0	28.0	22.0	19.0	16.0	15.0	14.0
50°	1607.1	1219.0	186.0	30.0	26.0	27.0	23.0	18.0	16.0	14.0	13.0
52.5°	1642.1	1290.0	205.0	30.0	26.0	26.0	24.0	19.0	16.0	14.0	13.0
55°	1713.1	1331.0	210.0	31.0	26.0	24.0	23.0	19.0	16.0	13.0	12.0
57.5°	1730.1	1317.0	197.0	31.0	26.0	24.0	22.0	19.0	16.0	13.0	11.0
60°	1612.1	1224.0	169.0	30.0	25.0	23.0	21.0	18.0	15.0	12.0	10.0
62.5°	1428.1	1082.0	126.0	28.0	24.0	22.0	19.0	16.0	13.0	10.0	9.0
65°	1192.0	860.0	87.0	25.0	22.0	20.0	17.0	15.0	12.0	9.0	8.0
67.5°	906.0	663.0	59.0	23.0	21.0	19.0	17.0	15.0	12.0	9.0	7.0
70°	663.0	441.0	39.0	21.0	20.0	19.0	16.0	13.0	11.0	8.0	7.0
72.5°	465.0	254.0	28.0	19.0	17.0	15.0	14.0	13.0	11.0	8.0	6.0
75°	320.0	162.0	23.0	17.0	15.0	13.0	13.0	13.0	12.0	10.0	7.0
77.5°	222.0	120.0	19.0	16.0	14.0	12.0	13.0	13.0	10.0	7.0	5.0
80°	156.0	68.0	14.0	13.0	12.0	11.0	10.0	10.0	8.0	5.0	3.0
82.5°	96.0	31.0	10.0	10.0	9.0	6.0	9.0	9.0	8.0	5.0	3.0
85°	25.0	8.0	7.0	8.0	7.0	5.0	7.0	8.0	7.0	6.0	3.0
87.5°	5.0	5.0	6.0	7.0	6.0	6.0	8.0	8.0	7.0	6.0	4.0
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):

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	244.0	244.0	244.0	244.0	244.0	244.0	244.0	244.0	244.0	244.0	244.0
2.5°	223.0	199.0	168.0	163.0	152.0	150.0	142.0	175.0	175.0	212.0	210.0
5°	191.0	177.0	155.0	117.0	101.0	108.0	127.0	154.0	164.0	188.0	182.0
7.5°	140.0	130.0	115.0	90.0	66.0	65.0	88.0	110.0	123.0	135.0	139.0
10°	87.0	85.0	74.0	68.0	64.0	56.0	57.0	75.0	89.0	99.0	102.0
12.5°	55.0	54.0	53.0	51.0	51.0	48.0	49.0	58.0	67.0	74.0	75.0
15°	38.0	38.0	39.0	41.0	43.0	43.0	43.0	47.0	51.0	53.0	56.0
17.5°	32.0	33.0	32.0	34.0	38.0	38.0	40.0	42.0	48.0	48.0	51.0
20°	30.0	29.0	29.0	31.0	33.0	35.0	38.0	49.0	56.0	55.0	53.0
22.5°	29.0	27.0	27.0	28.0	30.0	33.0	49.0	75.0	84.0	75.0	63.0
25°	27.0	26.0	25.0	26.0	28.0	32.0	69.0	99.0	128.0	115.0	96.0
27.5°	26.0	24.0	24.0	24.0	26.0	32.0	76.0	120.0	173.0	195.0	183.0
30°	24.0	22.0	22.0	23.0	23.0	28.0	65.0	123.0	207.0	245.0	269.0
32.5°	22.0	21.0	20.0	21.0	23.0	25.0	35.0	67.0	103.0	124.0	117.0
35°	21.0	19.0	19.0	19.0	21.0	23.0	27.0	35.0	47.0	49.0	50.0
37.5°	19.0	18.0	18.0	19.0	20.0	22.0	25.0	30.0	41.0	45.0	47.0
40°	18.0	17.0	17.0	17.0	19.0	20.0	24.0	29.0	39.0	46.0	47.0
42.5°	16.0	15.0	15.0	16.0	17.0	18.0	22.0	28.0	38.0	45.0	47.0
45°	15.0	14.0	14.0	15.0	16.0	17.0	21.0	26.0	38.0	44.0	47.0
47.5°	14.0	13.0	13.0	14.0	15.0	16.0	20.0	26.0	37.0	45.0	48.0
50°	13.0	12.0	12.0	13.0	14.0	15.0	18.0	25.0	37.0	44.0	47.0
52.5°	12.0	12.0	11.0	12.0	14.0	15.0	18.0	24.0	35.0	41.0	43.0
55°	12.0	11.0	11.0	12.0	13.0	15.0	17.0	23.0	33.0	38.0	41.0
57.5°	11.0	11.0	10.0	11.0	12.0	14.0	16.0	22.0	32.0	37.0	39.0
60°	10.0	10.0	10.0	10.0	12.0	13.0	15.0	21.0	30.0	35.0	38.0
62.5°	9.0	9.0	9.0	9.0	11.0	12.0	14.0	19.0	27.0	32.0	34.0
65°	8.0	8.0	8.0	8.0	10.0	10.0	12.0	18.0	25.0	28.0	30.0
67.5°	8.0	8.0	8.0	8.0	9.0	9.0	11.0	16.0	24.0	26.0	27.0
70°	8.0	8.0	7.0	7.0	8.0	9.0	11.0	15.0	22.0	24.0	25.0
72.5°	8.0	8.0	8.0	6.0	6.0	8.0	10.0	14.0	20.0	21.0	22.0
75°	9.0	9.0	8.0	6.0	5.0	7.0	9.0	13.0	18.0	18.0	19.0
77.5°	6.0	7.0	7.0	6.0	4.0	6.0	9.0	12.0	16.0	15.0	17.0
80°	5.0	6.0	6.0	5.0	3.0	5.0	7.0	10.0	12.0	12.0	13.0
82.5°	5.0	6.0	5.0	4.0	1.0	3.0	5.0	6.0	8.0	8.0	9.0
85°	5.0	5.0	5.0	3.0	0.0	3.0	4.0	5.0	6.0	5.0	7.0
87.5°	6.0	6.0	5.0	4.0	1.0	3.0	3.0	4.0	4.0	2.0	5.0
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):

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	244.0	244.0	244.0	244.0	244.0	244.0	244.0	244.0	244.0	244.0
2.5°	221.0	212.0	226.0	235.0	228.0	221.0	258.0	262.0	328.0	338.0
5°	203.0	196.0	189.0	184.0	203.0	247.0	294.0	304.0	373.0	397.0
7.5°	146.0	154.0	158.0	157.0	171.0	232.0	300.0	333.0	378.0	377.0
10°	115.0	130.0	144.0	158.0	169.0	195.0	263.0	310.0	339.0	350.0
12.5°	88.0	110.0	128.0	157.0	178.0	199.0	258.0	284.0	306.0	317.0
15°	64.0	76.0	98.0	133.0	160.0	197.0	256.0	318.0	343.0	360.0
17.5°	56.0	61.0	71.0	103.0	147.0	200.0	270.0	393.0	422.0	440.0
20°	54.0	58.0	67.0	88.0	132.0	181.0	315.0	472.0	502.0	545.0
22.5°	59.0	62.0	72.0	89.0	125.0	198.0	396.0	651.0	744.0	782.0
25°	70.0	78.0	111.0	142.0	175.0	246.0	456.0	818.0	915.0	969.0
27.5°	181.0	194.0	213.0	203.0	212.0	234.0	392.0	743.0	839.0	874.0
30°	261.0	220.0	173.0	140.0	140.0	154.0	364.0	764.0	850.0	876.0
32.5°	100.0	76.0	68.0	70.0	96.0	132.0	378.0	881.0	938.0	971.0
35°	49.0	52.0	57.0	66.0	90.0	138.0	399.0	962.0	1037.0	1055.0
37.5°	48.0	50.0	57.0	65.0	92.0	147.0	404.0	1124.0	1201.0	1212.0
40°	50.0	51.0	56.0	65.0	90.0	160.0	432.0	1245.0	1364.0	1358.0
42.5°	51.0	54.0	58.0	64.0	86.0	167.0	460.0	1343.0	1487.1	1501.1
45°	53.0	56.0	60.0	65.0	81.0	171.0	490.0	1423.1	1617.1	1601.1
47.5°	55.0	59.0	63.0	65.0	76.0	171.0	543.0	1503.1	1698.1	1695.1
50°	55.0	59.0	65.0	63.0	74.0	162.0	607.0	1565.1	1754.1	1732.1
52.5°	51.0	57.0	65.0	62.0	73.0	161.0	652.0	1608.1	1794.1	1777.1
55°	47.0	57.0	64.0	59.0	72.0	165.0	704.0	1633.1	1853.1	1840.1
57.5°	47.0	56.0	62.0	58.0	72.0	179.0	728.0	1613.1	1870.1	1874.1
60°	45.0	57.0	56.0	56.0	77.0	182.0	720.0	1475.1	1786.1	1829.1
62.5°	41.0	56.0	51.0	53.0	77.0	183.0	677.0	1307.0	1607.1	1698.1
65°	37.0	45.0	48.0	48.0	74.0	175.0	573.0	1101.0	1412.1	1485.1
67.5°	32.0	39.0	43.0	42.0	70.0	164.0	447.0	845.0	1174.0	1259.0
70°	29.0	34.0	37.0	37.0	62.0	150.0	331.0	597.0	870.0	956.0
72.5°	25.0	30.0	30.0	29.0	52.0	118.0	240.0	346.0	513.0	599.0
75°	21.0	24.0	24.0	22.0	35.0	78.0	129.0	224.0	313.0	350.0
77.5°	19.0	20.0	18.0	17.0	24.0	41.0	67.0	162.0	209.0	216.0
80°	16.0	15.0	14.0	13.0	17.0	21.0	30.0	82.0	105.0	111.0
82.5°	10.0	10.0	9.0	8.0	12.0	14.0	15.0	36.0	37.0	42.0
85°	7.0	6.0	6.0	3.0	7.0	8.0	6.0	2.0	2.0	2.0
87.5°	5.0	4.0	4.0	1.0	3.0	3.0	2.0	2.0	1.0	1.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)