

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: P596108

Luminaire Tested: **MSA-SA4A-AMB-U-SL4-HSS**

Issue Date: 4/29/2022

**Test Information**

Test Method: LM-79-08  
Report Number: P596108  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2109-400-22)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 4/29/2022  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA4A-AMB-U-SL4-HSS  
Description: POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH  
AND TYPE IV SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: (64) 1549K CCT, -21.5 CRI LEDS  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2306 lumens  
Efficiency: N/A  
Efficacy: 29.2 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B0 - U0 - G1

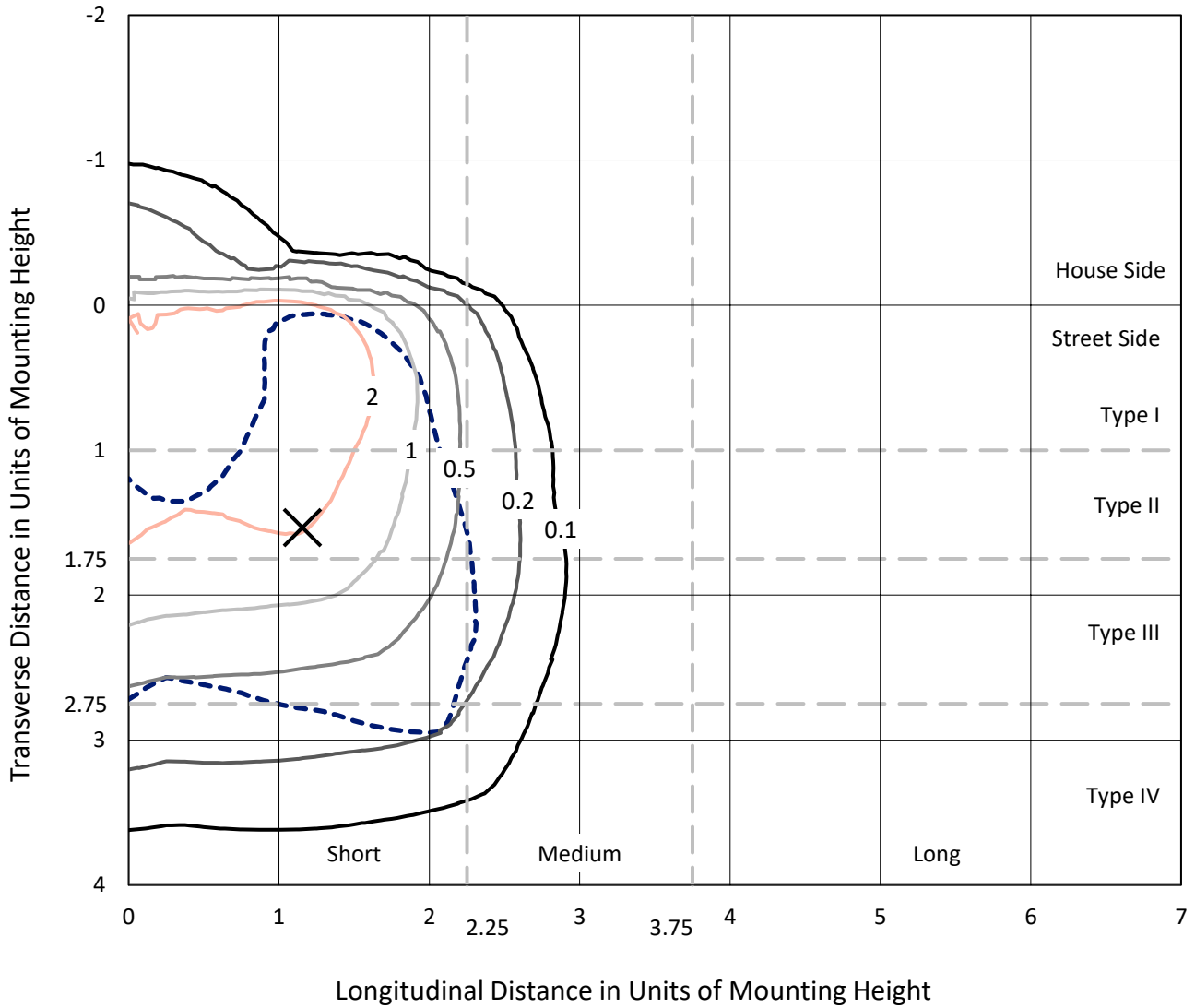
Input Watts (W): 79  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

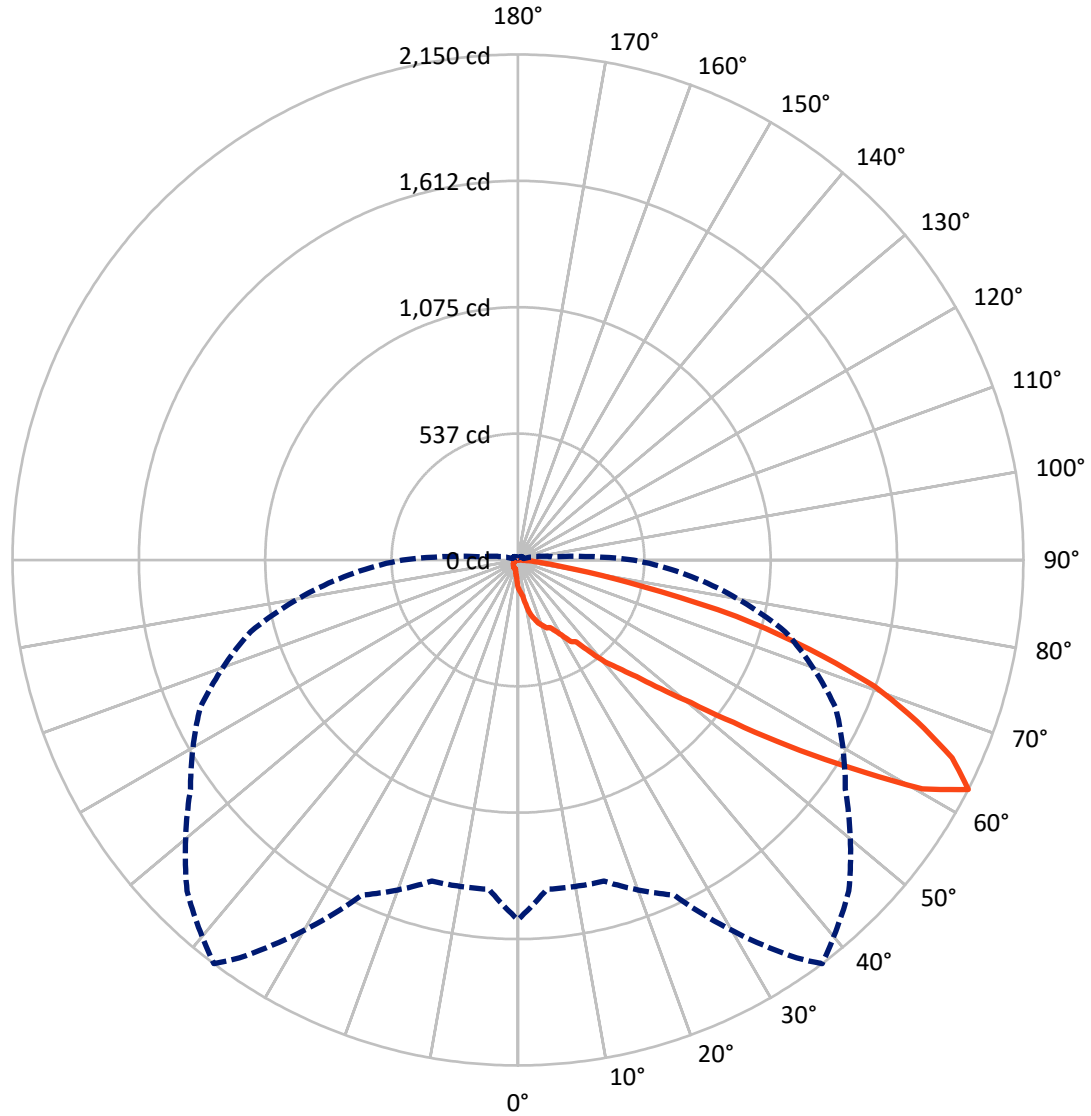
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 4.5 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 37-Deg Lateral    - - - Horizontal Cone Through 62.5-Deg Vertical

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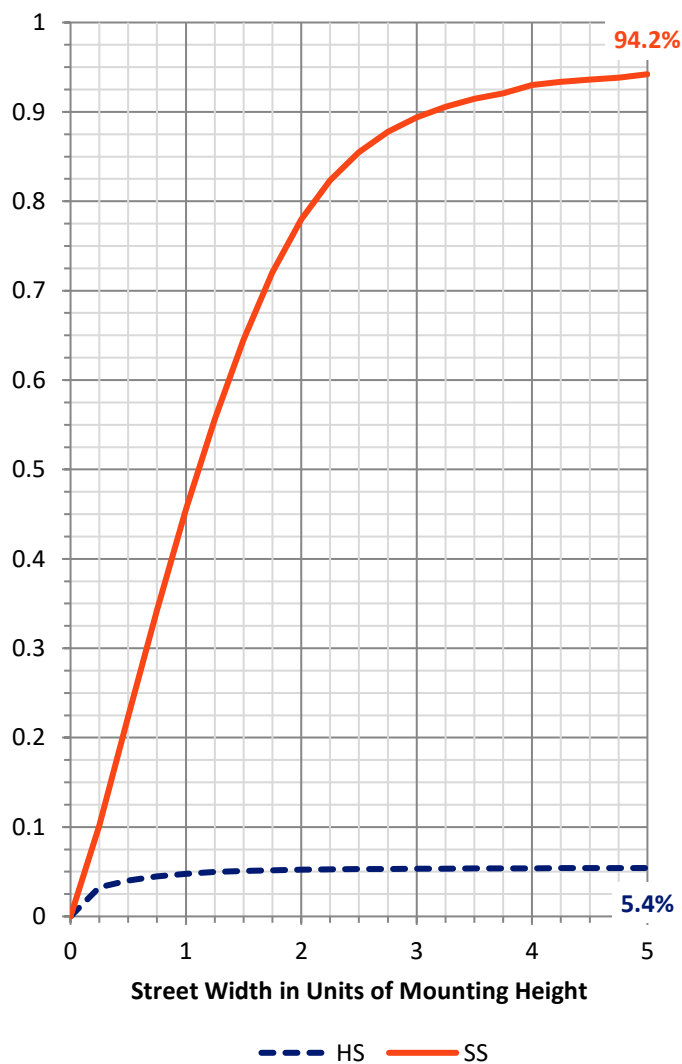
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	126.3	0.0	126.3
	% Fixture	5.5	0.0	5.5
<b>Street Side</b>	Lumens	2179.7	0.0	2179.7
	% Fixture	94.5	0.0	94.5
<b>Total</b>	Lumens	2306.0	0.0	2306.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	12.6	0.5
10°-20°	45.7	2.0
20°-30°	91.3	4.0
30°-40°	171.5	7.4
40°-50°	368.9	16.0
50°-60°	654.4	28.4
60°-70°	674.8	29.3
70°-80°	259.8	11.3
80°-90°	27.1	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°	2306.0	100.0
0°-180°	2306.0	100.0

**Coefficient of Utilization**



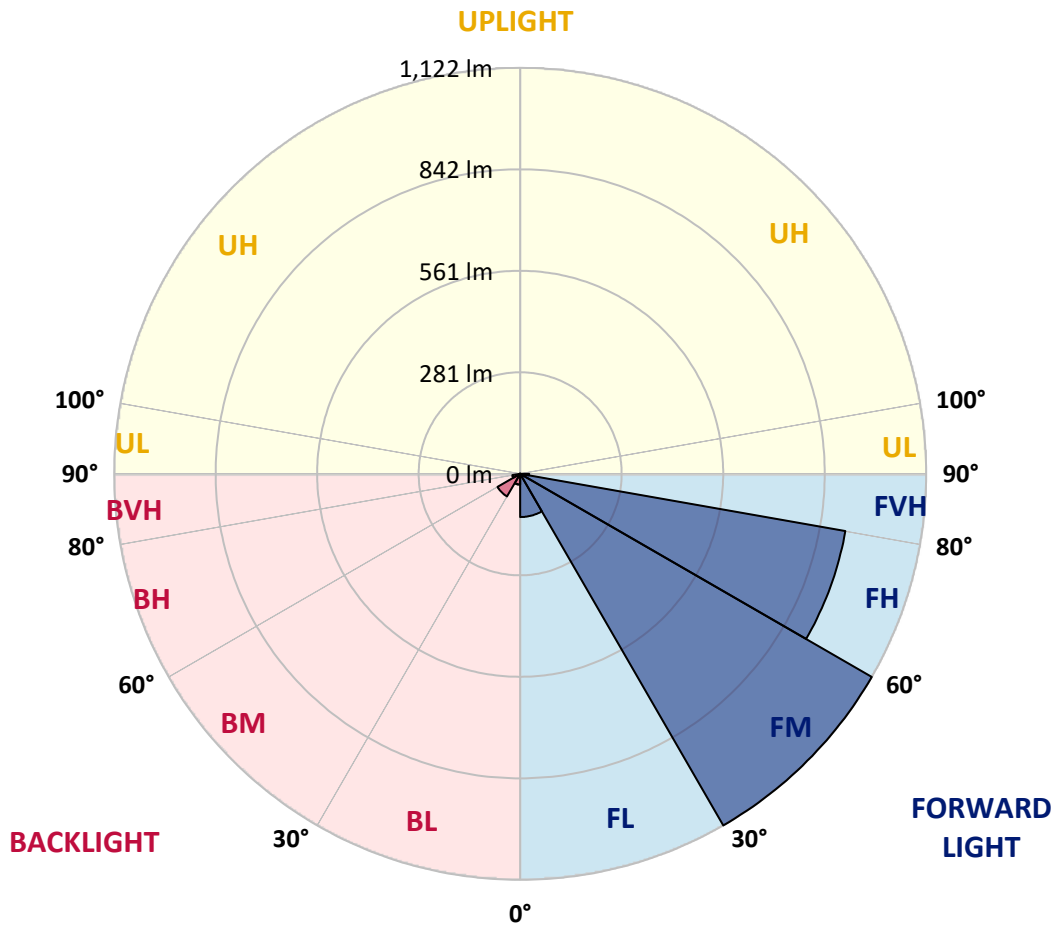
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	119.6	5.2			
FM (30°-60°)	1122.4	48.7			
FH (60°-80°)	912.8	39.6			G1/1800
FVH (80°-90°)	24.9	1.1			G1/100
BL (0°-30°)	29.9	1.3	B0/110		
BM (30°-60°)	72.3	3.1	B0/220		
BH (60°-80°)	21.8	0.9	B0/110		G0/110
BVH (80°-90°)	2.2	0.1			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 IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	37°	45°	55°	65°	75°	85°
0°	117.0	117.0	117.0	117.0	117.0	117.0	117.0	117.0	117.0	117.0	117.0
2.5°	181.0	154.0	151.0	131.0	132.0	130.0	135.0	132.0	123.0	126.0	126.0
5°	216.0	187.0	187.0	166.0	142.0	141.0	133.0	133.0	150.0	169.0	163.0
7.5°	236.0	219.0	218.0	192.0	158.0	158.0	154.0	160.0	178.0	187.0	178.0
10°	231.0	225.0	214.0	193.0	192.0	200.0	192.0	187.0	193.0	199.0	185.0
12.5°	219.0	222.0	237.0	224.0	233.0	238.0	234.0	224.0	226.0	215.0	198.0
15°	245.0	246.0	244.0	253.0	257.0	259.0	261.0	254.0	243.0	245.0	214.0
17.5°	273.0	277.9	270.0	279.9	286.9	281.9	280.9	273.0	261.0	272.0	241.0
20°	300.9	305.9	297.9	286.9	301.9	296.9	293.9	286.9	272.0	285.9	261.0
22.5°	340.9	330.9	313.9	308.9	314.9	313.9	304.9	286.9	283.9	294.9	286.9
25°	364.9	359.9	346.9	336.9	323.9	317.9	316.9	305.9	309.9	329.9	299.9
27.5°	396.9	401.9	359.9	370.9	350.9	342.9	322.9	319.9	340.9	336.9	318.9
30°	439.9	444.9	394.9	400.9	376.9	372.9	339.9	351.9	368.9	363.9	341.9
32.5°	513.9	504.9	450.9	422.9	410.9	412.9	386.9	363.9	394.9	414.9	381.9
35°	567.9	560.9	501.9	469.9	436.9	427.9	424.9	422.9	449.9	483.9	430.9
37.5°	667.9	645.9	566.9	512.9	504.9	492.9	496.9	497.9	540.9	594.9	539.9
40°	755.9	720.9	623.9	580.9	549.9	568.9	580.9	561.9	640.9	764.9	699.9
42.5°	862.8	813.9	673.9	636.9	628.9	628.9	619.9	642.9	820.9	994.8	855.8
45°	947.8	866.8	713.9	703.9	711.9	706.9	730.9	795.9	1076.8	1264.8	1028.8
47.5°	994.8	918.8	768.9	762.9	773.9	817.9	912.8	1016.8	1318.8	1535.7	1194.8
50°	1043.8	982.8	834.8	818.9	925.8	953.8	1113.8	1239.8	1542.7	1722.7	1279.8
52.5°	1113.8	1036.8	930.8	950.8	1120.8	1147.8	1284.8	1470.7	1720.7	1837.7	1299.8
55°	1232.8	1142.8	1075.8	1137.8	1367.8	1393.7	1573.7	1722.7	1896.7	1807.7	1221.8
57.5°	1359.8	1262.8	1209.8	1305.8	1594.7	1666.7	1820.7	1887.7	1870.7	1675.7	1096.8
60°	1493.7	1391.7	1349.8	1488.7	1865.7	1975.6	1955.6	1809.7	1738.7	1448.7	922.8
62.5°	1529.7	1405.7	1413.7	1572.7	2065.6	2149.6	1990.6	1699.7	1491.7	1176.8	719.9
65°	1468.7	1340.8	1404.7	1599.7	2067.6	2028.6	1925.7	1521.7	1178.8	888.8	552.9
67.5°	1277.8	1171.8	1259.8	1489.7	1838.7	1828.7	1737.7	1325.8	914.8	595.9	338.9
70°	1032.8	930.8	1054.8	1276.8	1604.7	1608.7	1448.7	1059.8	615.9	335.9	141.0
72.5°	772.9	711.9	833.8	1002.8	1331.8	1294.8	1123.8	731.9	302.9	133.0	51.0
75°	478.9	457.9	587.9	744.9	977.8	959.8	685.9	386.9	129.0	45.0	30.0
77.5°	266.0	235.0	321.9	442.9	577.9	539.9	335.9	197.0	69.0	32.0	23.0
80°	153.0	138.0	169.0	218.0	256.0	245.0	166.0	146.0	48.0	23.0	19.0
82.5°	68.0	62.0	100.0	110.0	116.0	114.0	93.0	127.0	30.0	15.0	17.0
85°	12.0	11.0	46.0	58.0	56.0	45.0	40.0	87.0	11.0	9.0	9.0
87.5°	2.0	2.0	4.0	12.0	10.0	7.0	5.0	13.0	5.0	4.0	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):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	117.0	117.0	117.0	117.0	117.0	117.0	117.0	117.0	117.0	117.0	117.0
2.5°	132.0	112.0	113.0	95.0	88.0	91.0	92.0	89.0	99.0	99.0	108.0
5°	162.0	144.0	125.0	102.0	82.0	71.0	71.0	81.0	88.0	90.0	95.0
7.5°	181.0	158.0	134.0	101.0	73.0	65.0	65.0	67.0	69.0	67.0	70.0
10°	177.0	159.0	129.0	89.0	76.0	65.0	52.0	46.0	43.0	43.0	43.0
12.5°	188.0	162.0	127.0	90.0	71.0	54.0	42.0	37.0	35.0	35.0	35.0
15°	194.0	175.0	127.0	84.0	60.0	44.0	38.0	37.0	36.0	37.0	37.0
17.5°	213.0	190.0	123.0	81.0	50.0	41.0	39.0	38.0	38.0	39.0	38.0
20°	230.0	200.0	119.0	66.0	44.0	40.0	39.0	38.0	39.0	40.0	40.0
22.5°	252.0	205.0	112.0	54.0	41.0	39.0	39.0	37.0	39.0	41.0	41.0
25°	260.0	209.0	103.0	48.0	40.0	38.0	37.0	37.0	38.0	41.0	40.0
27.5°	271.0	204.0	88.0	43.0	39.0	37.0	36.0	37.0	37.0	40.0	39.0
30°	279.9	211.0	76.0	41.0	38.0	35.0	36.0	36.0	36.0	39.0	39.0
32.5°	305.9	204.0	65.0	39.0	36.0	35.0	35.0	35.0	35.0	37.0	38.0
35°	328.9	212.0	58.0	38.0	35.0	33.0	32.0	33.0	33.0	35.0	36.0
37.5°	400.9	223.0	50.0	37.0	34.0	32.0	32.0	31.0	32.0	34.0	35.0
40°	488.9	242.0	46.0	36.0	33.0	32.0	31.0	30.0	30.0	32.0	33.0
42.5°	586.9	261.0	43.0	35.0	31.0	30.0	29.0	28.0	28.0	29.0	30.0
45°	678.9	270.0	41.0	34.0	30.0	29.0	28.0	27.0	25.0	26.0	26.0
47.5°	766.9	277.9	40.0	33.0	30.0	28.0	27.0	24.0	22.0	22.0	23.0
50°	809.9	276.0	37.0	31.0	29.0	28.0	25.0	22.0	19.0	19.0	19.0
52.5°	803.9	254.0	35.0	30.0	28.0	27.0	24.0	19.0	17.0	16.0	16.0
55°	762.9	231.0	33.0	28.0	28.0	26.0	22.0	17.0	15.0	14.0	13.0
57.5°	687.9	208.0	31.0	27.0	27.0	24.0	20.0	16.0	13.0	12.0	11.0
60°	598.9	184.0	29.0	25.0	25.0	23.0	18.0	14.0	11.0	10.0	9.0
62.5°	490.9	152.0	26.0	22.0	23.0	20.0	16.0	13.0	10.0	9.0	8.0
65°	365.9	103.0	23.0	20.0	20.0	18.0	14.0	11.0	9.0	8.0	7.0
67.5°	221.0	58.0	20.0	18.0	18.0	16.0	12.0	10.0	9.0	8.0	6.0
70°	86.0	30.0	17.0	16.0	16.0	14.0	11.0	9.0	9.0	8.0	6.0
72.5°	38.0	22.0	15.0	14.0	14.0	12.0	10.0	9.0	9.0	8.0	6.0
75°	27.0	17.0	13.0	12.0	12.0	9.0	9.0	9.0	9.0	8.0	6.0
77.5°	22.0	14.0	10.0	10.0	10.0	7.0	8.0	7.0	7.0	5.0	3.0
80°	19.0	10.0	8.0	8.0	7.0	4.0	6.0	6.0	6.0	5.0	2.0
82.5°	16.0	7.0	6.0	6.0	4.0	2.0	5.0	5.0	5.0	5.0	2.0
85°	8.0	5.0	4.0	4.0	3.0	1.0	4.0	5.0	5.0	5.0	2.0
87.5°	2.0	3.0	4.0	4.0	3.0	1.0	4.0	5.0	5.0	5.0	2.0
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)