

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: P596109

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

Issue Date: 4/29/2022

**Test Information**

Test Method: LM-79-08  
Report Number: P596109  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2109-400-21)  
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  
Description: POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH  
AND TYPE IV SPILL LIGHT ELIMINATOR OPTICS.  
Light Source: (64) 1549K CCT, -21.5 CRI LEDS  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2836 lumens  
Efficiency: N/A  
Efficacy: 35.9 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B0 - U0 - G1

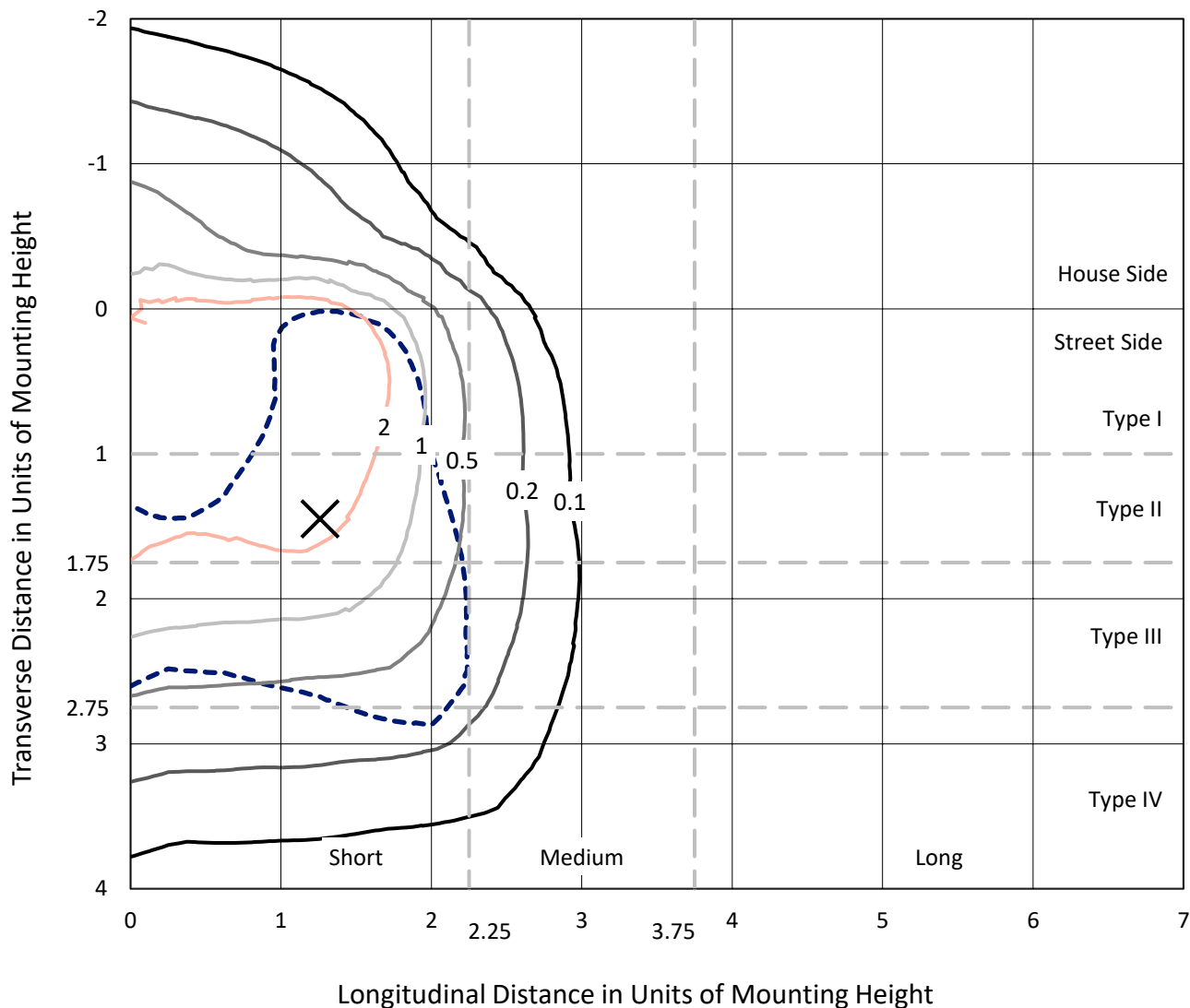
Input Watts (W): 79  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

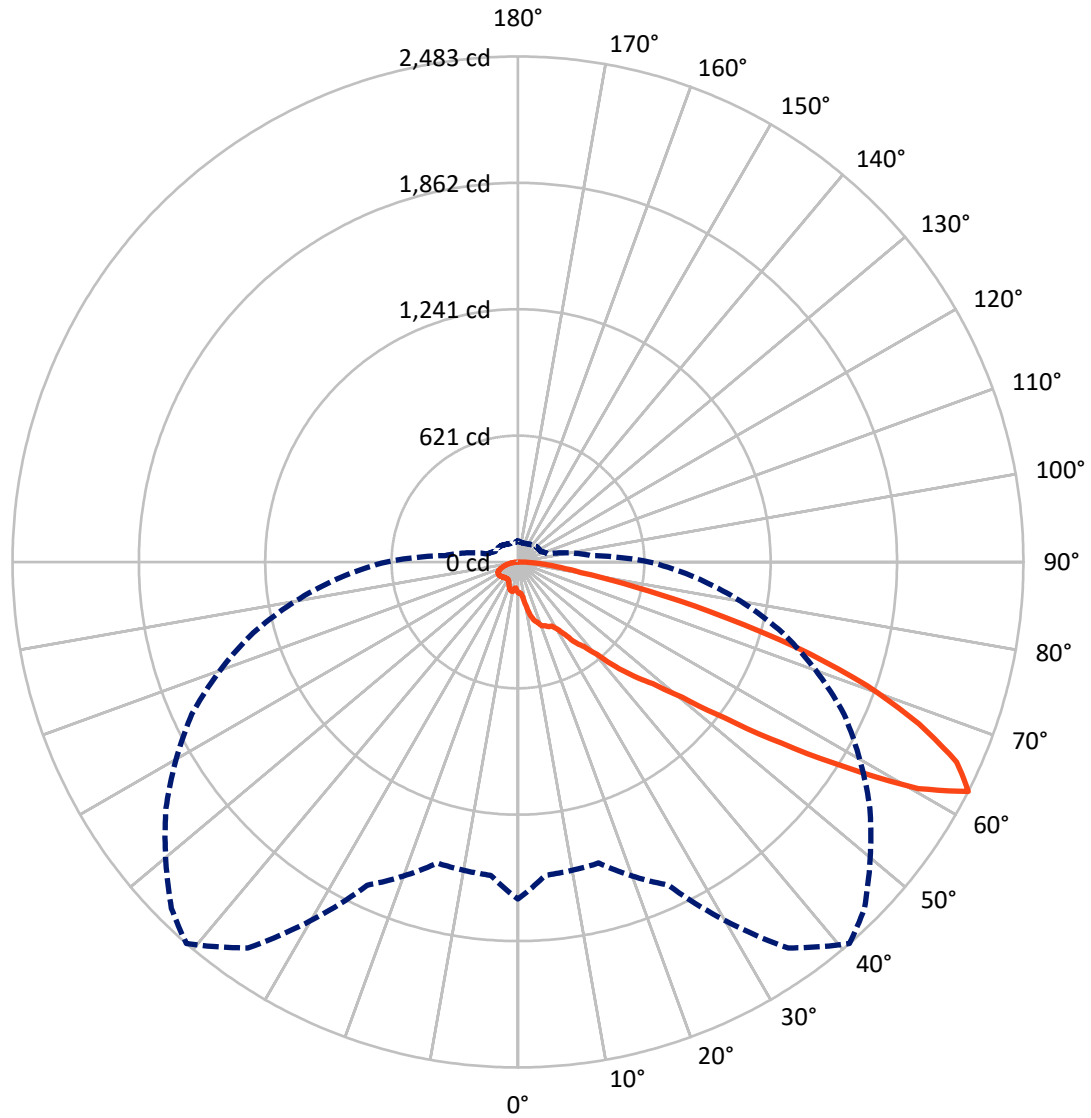
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 4.9 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 41-Deg Lateral    - - - Horizontal Cone Through 62.5-Deg Vertical

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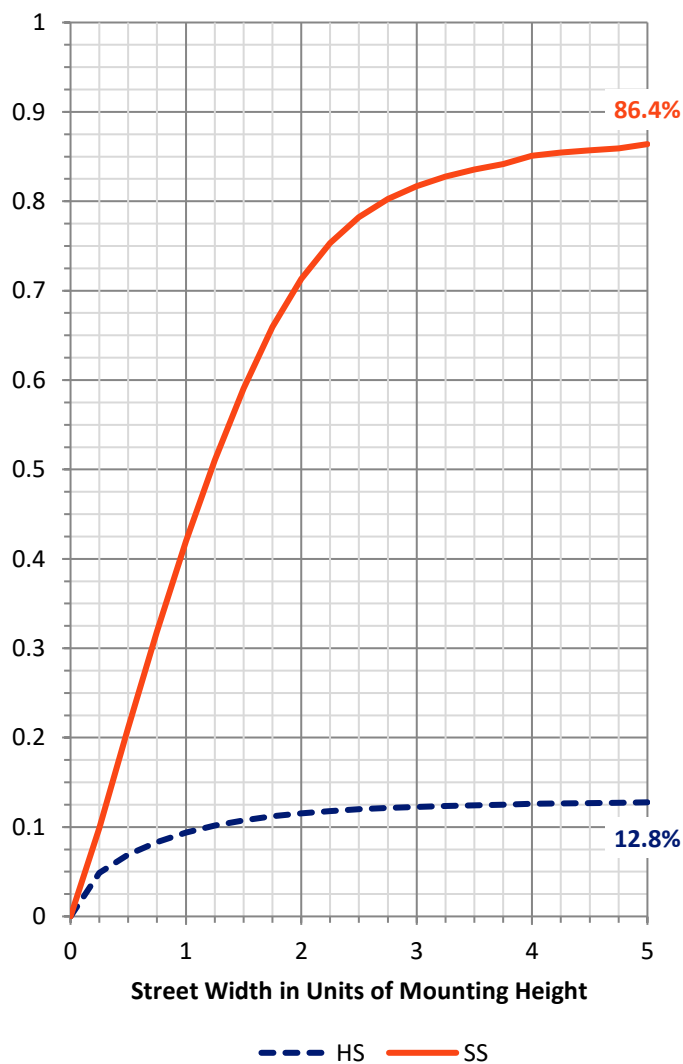
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	366.0	0.0	366.0
	% Fixture	12.9	0.0	12.9
<b>Street Side</b>	Lumens	2470.1	0.0	2470.1
	% Fixture	87.1	0.0	87.1
<b>Total</b>	Lumens	2836.0	0.0	2836.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	17.2	0.6
10°-20°	62.9	2.2
20°-30°	117.7	4.2
30°-40°	208.5	7.4
40°-50°	426.4	15.0
50°-60°	797.3	28.1
60°-70°	815.5	28.8
70°-80°	332.7	11.7
80°-90°	57.8	2.0
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°	2836.0	100.0
0°-180°	2836.0	100.0

**Coefficient of Utilization**

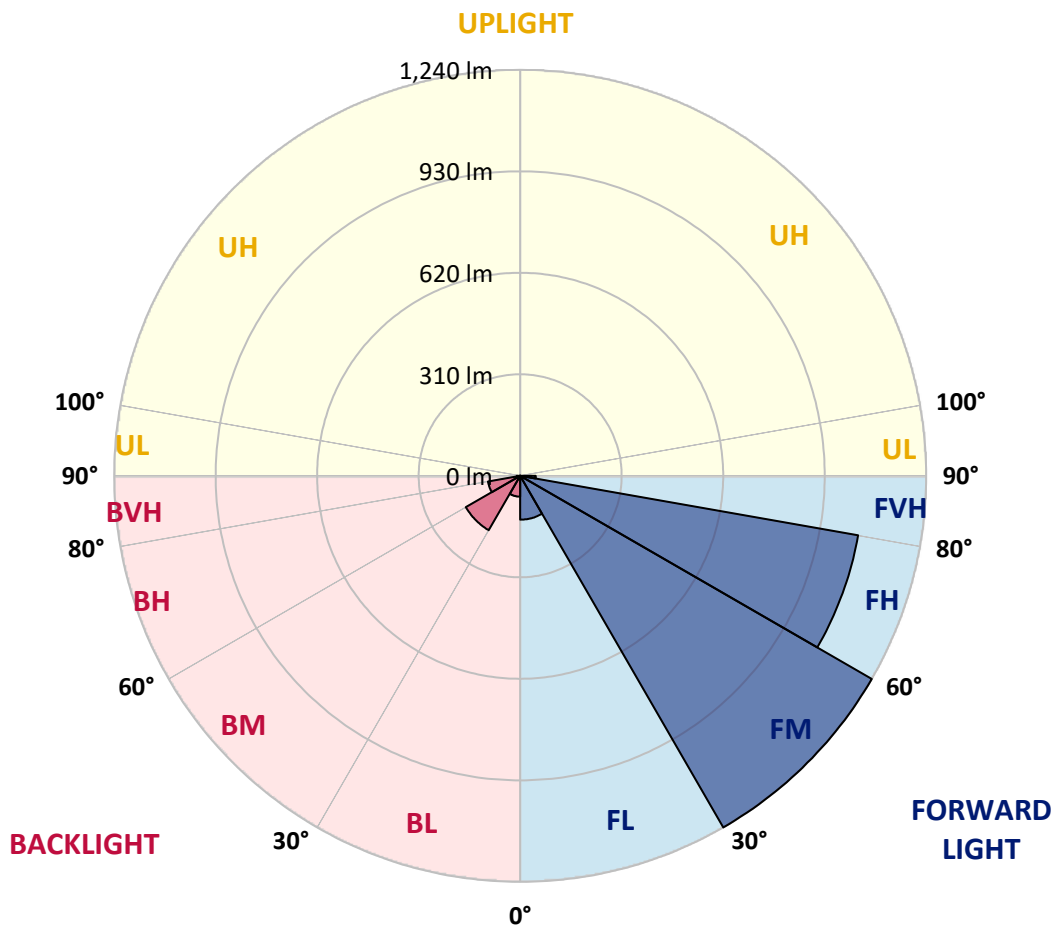


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	134.0	4.7			
FM (30°-60°)	1240.5	43.7			
FH (60°-80°)	1048.3	37.0			G1/1800
FVH (80°-90°)	47.3	1.7			G1/100
BL (0°-30°)	63.8	2.2	B0/110		
BM (30°-60°)	191.8	6.8	B0/220		
BH (60°-80°)	100.0	3.5	B0/110		G0/110
BVH (80°-90°)	10.5	0.4			G1/100
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°	41°	45°	55°	65°	75°	85°
0°	151.0	151.0	151.0	151.0	151.0	151.0	151.0	151.0	151.0	151.0	151.0
2.5°	203.0	177.0	170.0	154.0	153.0	153.0	157.0	153.0	151.0	157.0	175.0
5°	239.0	212.0	210.0	189.0	163.0	156.0	155.0	159.0	178.0	211.0	206.0
7.5°	257.0	246.0	243.0	217.0	182.0	174.0	172.0	193.0	212.0	229.0	230.0
10°	257.0	251.0	241.0	218.0	216.0	219.0	223.0	216.0	227.0	241.0	235.0
12.5°	246.0	246.0	263.0	254.0	262.0	267.0	270.0	260.0	261.0	255.0	251.0
15°	267.0	271.0	273.0	280.0	288.0	297.0	297.0	290.0	287.0	282.0	268.0
17.5°	295.0	300.0	296.0	309.0	318.0	312.0	315.0	308.0	298.0	312.0	295.0
20°	323.0	328.0	324.0	316.0	336.0	334.0	328.0	321.0	308.0	329.0	318.0
22.5°	362.0	352.0	339.0	336.0	343.0	340.0	336.0	321.0	319.0	338.0	346.0
25°	387.0	386.0	365.0	358.0	357.0	352.0	347.0	338.0	346.0	371.0	359.0
27.5°	424.0	425.0	384.0	403.0	380.0	356.0	354.0	351.0	374.0	382.0	380.0
30°	469.0	470.0	425.0	424.0	407.0	384.0	370.0	383.0	405.0	409.0	412.0
32.5°	535.9	533.9	474.0	455.0	439.0	424.0	415.0	390.0	430.0	459.0	452.0
35°	592.9	585.9	532.9	501.0	473.0	486.0	453.0	454.0	485.0	534.9	501.0
37.5°	692.9	678.9	600.9	548.9	546.9	526.9	525.9	537.9	576.9	633.9	611.9
40°	786.9	747.9	653.9	614.9	588.9	596.9	620.9	602.9	674.9	797.9	767.9
42.5°	887.9	836.9	712.9	680.9	670.9	701.9	660.9	678.9	818.9	1008.9	926.9
45°	969.9	902.9	747.9	748.9	759.9	800.9	779.9	817.9	1038.9	1296.9	1141.9
47.5°	1032.9	964.9	810.9	799.9	823.9	892.9	935.9	1020.9	1305.9	1602.8	1372.9
50°	1084.9	1032.9	878.9	870.9	963.9	1043.9	1121.9	1239.9	1616.8	1928.8	1584.8
52.5°	1156.9	1103.9	993.9	1010.9	1165.9	1273.9	1331.9	1600.8	1923.8	2229.8	1700.8
55°	1300.9	1209.9	1148.9	1191.9	1436.9	1572.8	1652.8	1930.8	2226.8	2310.8	1656.8
57.5°	1443.9	1338.9	1299.9	1400.9	1689.8	1905.8	2030.8	2226.8	2285.8	2194.8	1462.9
60°	1608.8	1497.9	1468.9	1643.8	2026.8	2259.8	2284.8	2234.8	2153.8	1861.8	1197.9
62.5°	1655.8	1544.8	1530.8	1751.8	2314.8	2482.8	2406.8	2110.8	1766.8	1345.9	873.9
65°	1595.8	1481.9	1520.9	1773.8	2365.8	2368.8	2329.8	1813.8	1273.9	932.9	623.9
67.5°	1418.9	1289.9	1369.9	1662.8	2148.8	2124.8	2048.8	1441.9	903.9	664.9	442.0
70°	1078.9	996.9	1113.9	1353.9	1841.8	1819.8	1618.8	1108.9	626.9	440.0	259.0
72.5°	834.9	761.9	841.9	1066.9	1478.9	1424.9	1199.9	779.9	394.0	236.0	139.0
75°	611.9	537.9	623.9	774.9	1068.9	970.9	818.9	475.0	210.0	122.0	95.0
77.5°	398.0	346.0	410.0	481.0	687.9	584.9	452.0	286.0	128.0	82.0	75.0
80°	224.0	205.0	241.0	280.0	365.0	313.0	257.0	214.0	96.0	63.0	57.0
82.5°	139.0	134.0	162.0	179.0	203.0	188.0	174.0	188.0	72.0	42.0	38.0
85°	83.0	83.0	109.0	112.0	128.0	121.0	134.0	149.0	41.0	25.0	24.0
87.5°	21.0	22.0	32.0	34.0	34.0	34.0	37.0	56.0	11.0	8.0	6.0
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°	151.0	151.0	151.0	151.0	151.0	151.0	151.0	151.0	151.0	151.0	151.0
2.5°	179.0	157.0	161.0	146.0	140.0	140.0	142.0	138.0	151.0	146.0	161.0
5°	222.0	196.0	187.0	160.0	137.0	125.0	131.0	150.0	163.0	163.0	177.0
7.5°	241.0	218.0	203.0	165.0	137.0	127.0	134.0	142.0	152.0	158.0	168.0
10°	234.0	219.0	199.0	166.0	159.0	151.0	136.0	126.0	130.0	129.0	133.0
12.5°	248.0	230.0	208.0	184.0	172.0	156.0	136.0	122.0	115.0	112.0	112.0
15°	253.0	243.0	217.0	190.0	170.0	149.0	130.0	115.0	107.0	102.0	101.0
17.5°	275.0	266.0	223.0	192.0	164.0	144.0	125.0	112.0	105.0	102.0	99.0
20°	299.0	279.0	220.0	180.0	156.0	134.0	117.0	107.0	104.0	106.0	107.0
22.5°	320.0	284.0	216.0	164.0	139.0	123.0	112.0	104.0	103.0	106.0	106.0
25°	331.0	293.0	208.0	154.0	126.0	110.0	104.0	102.0	102.0	107.0	106.0
27.5°	347.0	290.0	194.0	143.0	116.0	103.0	102.0	101.0	100.0	106.0	106.0
30°	355.0	305.0	184.0	132.0	109.0	99.0	98.0	100.0	101.0	108.0	108.0
32.5°	387.0	301.0	181.0	125.0	104.0	98.0	98.0	99.0	103.0	109.0	111.0
35°	415.0	318.0	175.0	119.0	102.0	97.0	99.0	99.0	104.0	112.0	114.0
37.5°	489.0	339.0	174.0	118.0	103.0	99.0	98.0	100.0	106.0	114.0	117.0
40°	579.9	377.0	172.0	119.0	104.0	101.0	99.0	101.0	106.0	114.0	118.0
42.5°	694.9	426.0	176.0	122.0	107.0	102.0	101.0	102.0	106.0	113.0	117.0
45°	834.9	473.0	180.0	123.0	109.0	106.0	102.0	103.0	105.0	111.0	115.0
47.5°	982.9	531.9	190.0	127.0	113.0	109.0	103.0	102.0	103.0	108.0	112.0
50°	1116.9	590.9	195.0	132.0	118.0	111.0	105.0	102.0	101.0	105.0	110.0
52.5°	1168.9	603.9	196.0	135.0	123.0	114.0	106.0	102.0	99.0	102.0	108.0
55°	1116.9	569.9	192.0	136.0	125.0	116.0	108.0	103.0	98.0	101.0	106.0
57.5°	988.9	514.9	186.0	135.0	125.0	116.0	108.0	102.0	97.0	99.0	104.0
60°	827.9	444.0	172.0	131.0	125.0	116.0	108.0	101.0	96.0	98.0	103.0
62.5°	645.9	359.0	154.0	123.0	120.0	114.0	105.0	99.0	96.0	99.0	104.0
65°	494.0	270.0	132.0	113.0	113.0	108.0	102.0	95.0	93.0	95.0	99.0
67.5°	329.0	188.0	115.0	104.0	103.0	101.0	97.0	88.0	83.0	83.0	85.0
70°	196.0	128.0	98.0	92.0	92.0	90.0	88.0	79.0	73.0	72.0	73.0
72.5°	125.0	102.0	85.0	80.0	80.0	78.0	77.0	71.0	65.0	63.0	64.0
75°	97.0	88.0	74.0	69.0	69.0	68.0	67.0	61.0	57.0	55.0	54.0
77.5°	82.0	75.0	62.0	58.0	58.0	55.0	55.0	51.0	47.0	44.0	42.0
80°	62.0	61.0	49.0	46.0	48.0	43.0	44.0	41.0	36.0	31.0	29.0
82.5°	43.0	46.0	36.0	33.0	33.0	29.0	32.0	29.0	26.0	22.0	19.0
85°	29.0	31.0	23.0	19.0	17.0	13.0	17.0	17.0	15.0	12.0	10.0
87.5°	4.0	6.0	6.0	6.0	5.0	2.0	6.0	6.0	6.0	6.0	3.0
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)