

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: P596847

Luminaire Tested: **MSA-SA1A-835-U-T4W-HSS**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P596847  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-15)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 5/27/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA1A-835-U-T4W-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2512 lumens  
Efficiency: N/A  
Efficacy: 73.9 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B0 - U0 - G1

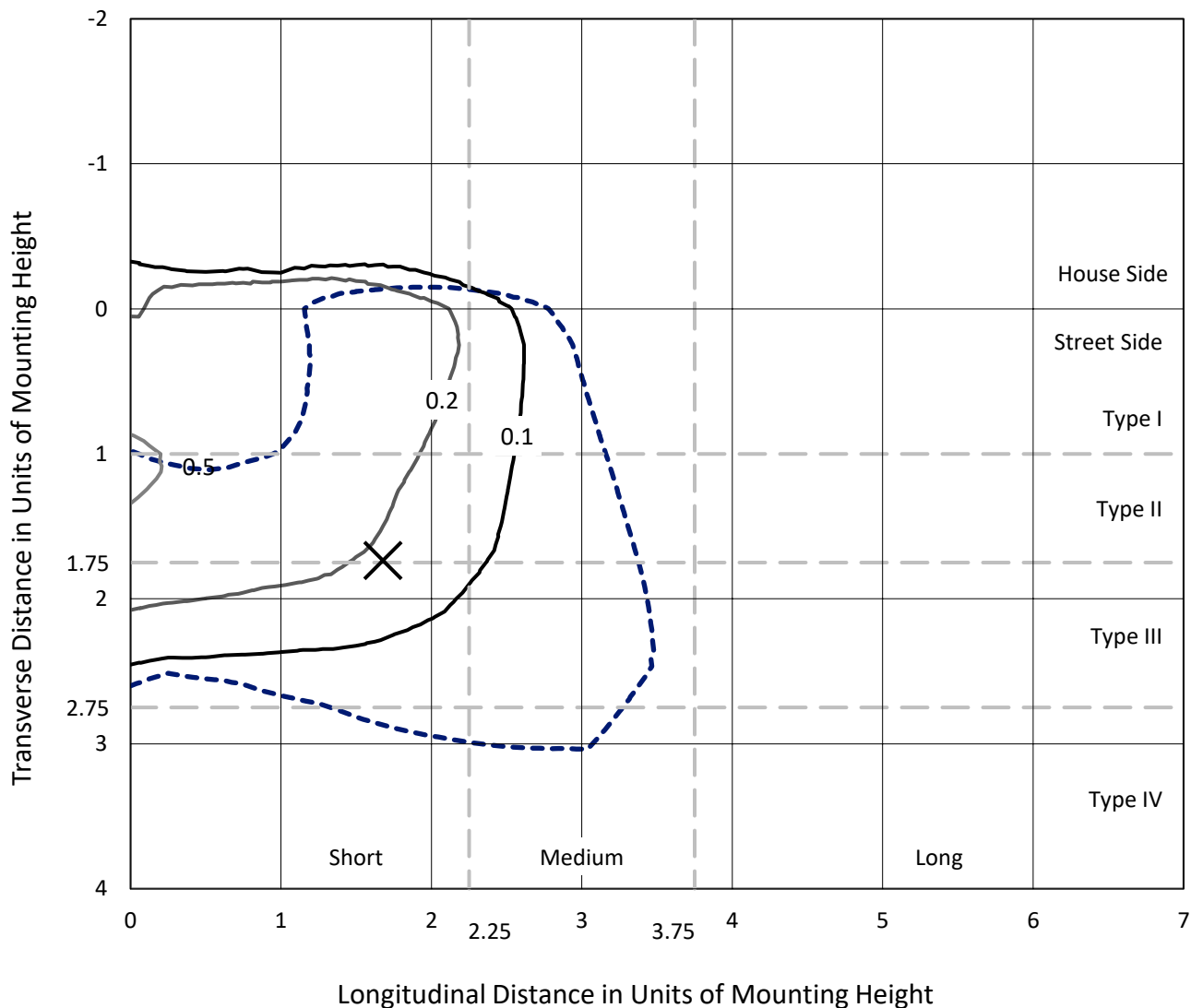
Input Watts (W): 34  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

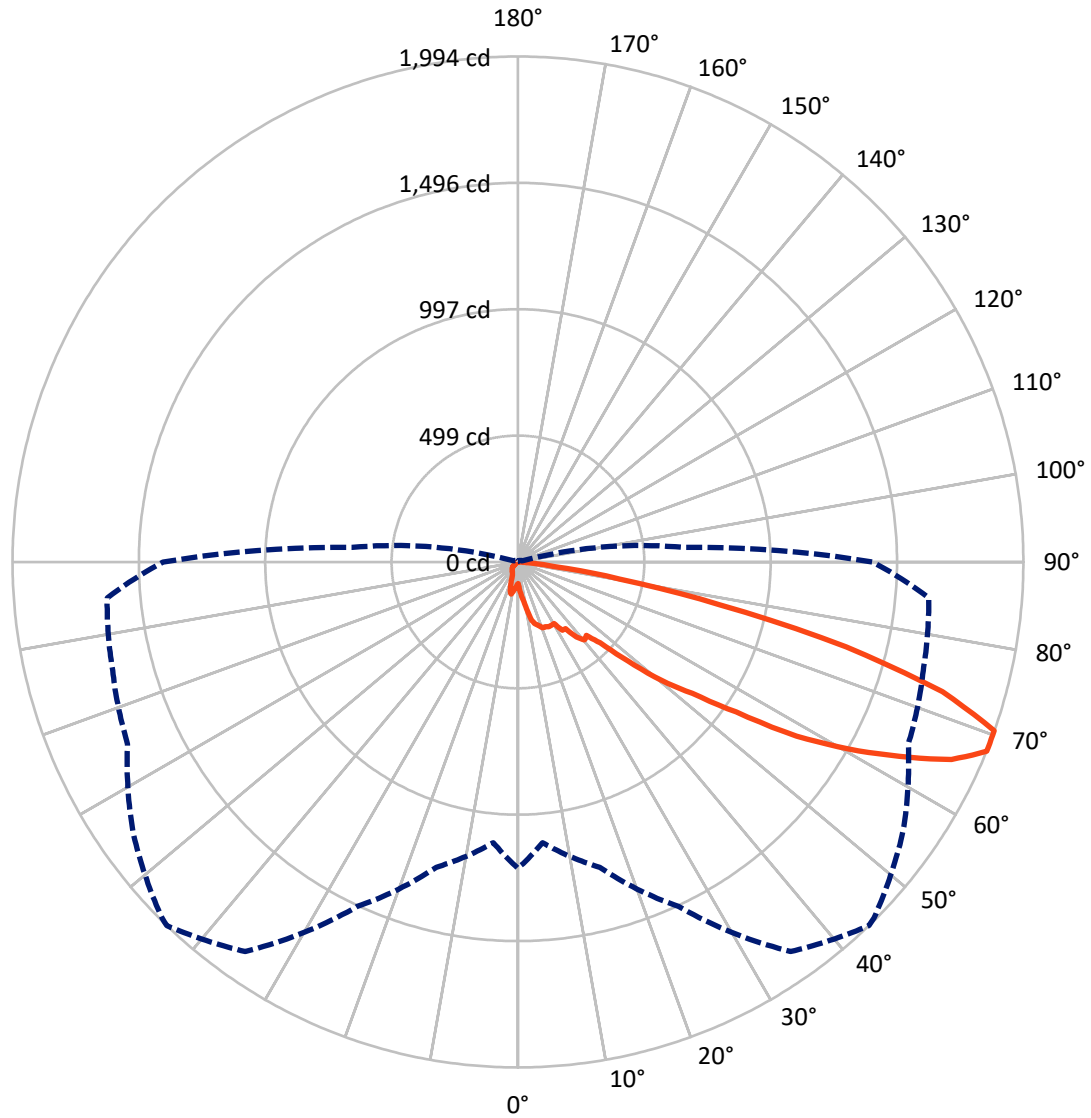
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.6 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 44-Deg Lateral    - - - Horizontal Cone Through 67.5-Deg Vertical

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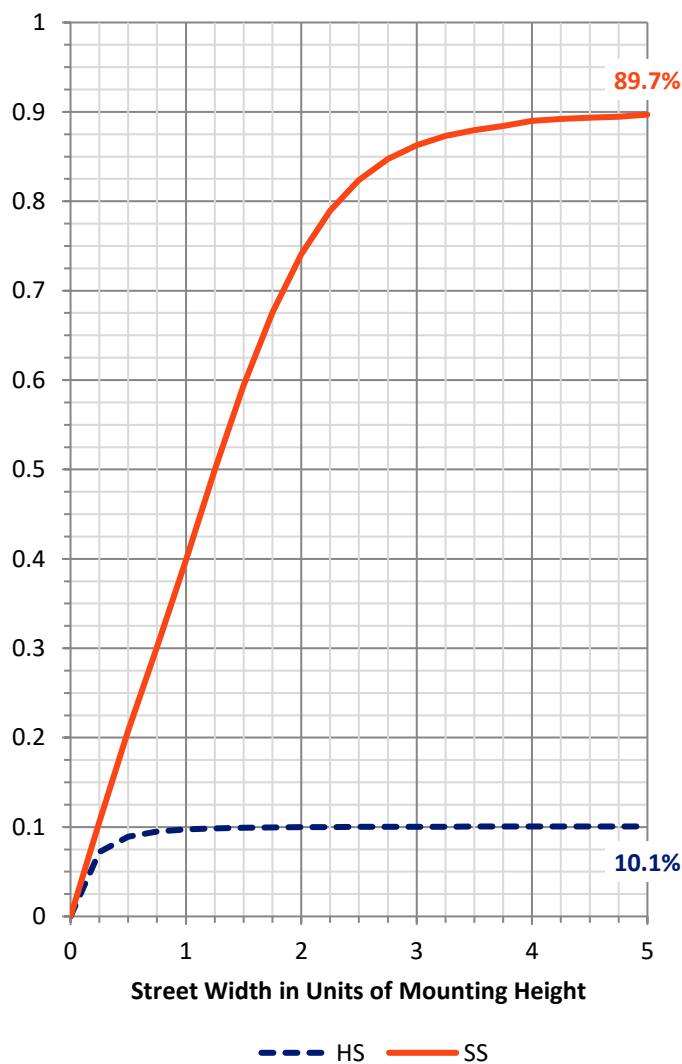
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	255.2	0.0	255.2
	% Fixture	10.2	0.0	10.2
<b>Street Side</b>	Lumens	2256.8	0.0	2256.8
	% Fixture	89.8	0.0	89.8
<b>Total</b>	Lumens	2512.0	0.0	2512.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	12.5	0.5
10°-20°	52.5	2.1
20°-30°	93.0	3.7
30°-40°	151.2	6.0
40°-50°	302.6	12.0
50°-60°	620.8	24.7
60°-70°	852.8	33.9
70°-80°	400.8	16.0
80°-90°	25.7	1.0
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°	2512.0	100.0
0°-180°	2512.0	100.0

**Coefficient of Utilization**

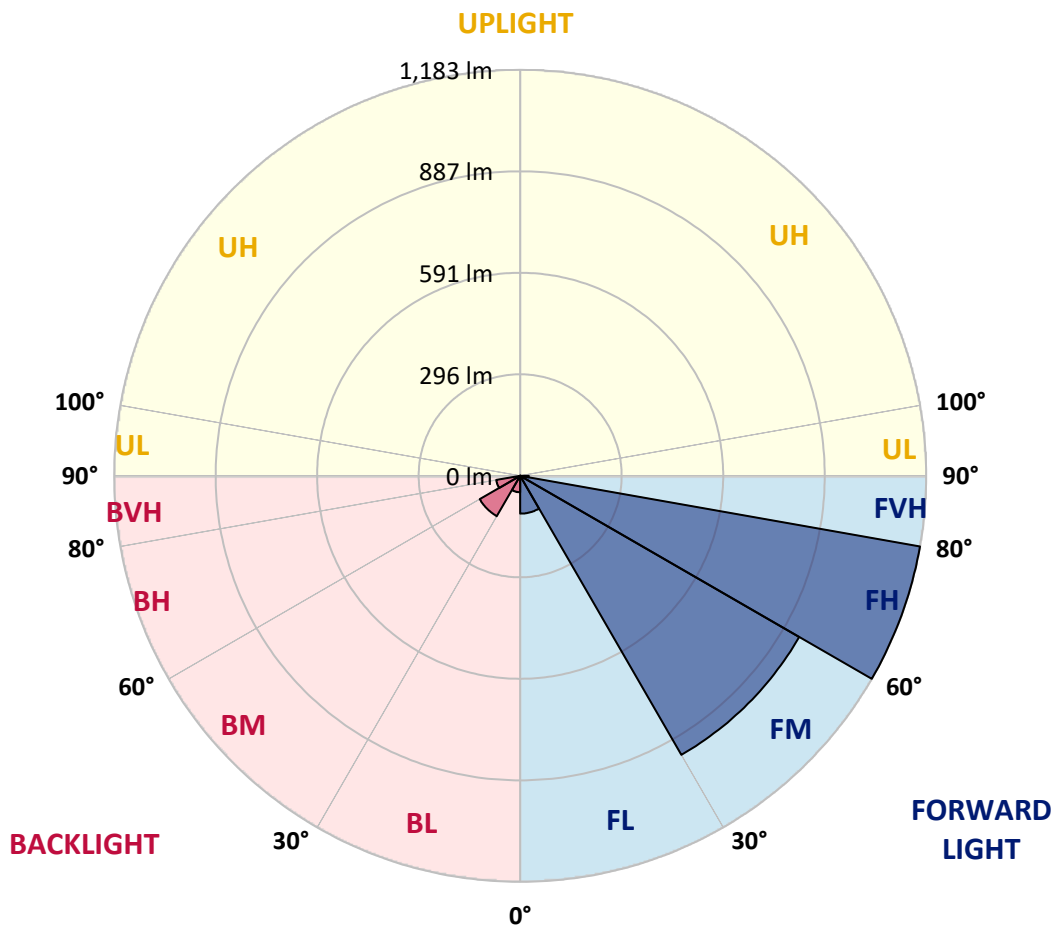


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	110.2	4.4			
FM (30°-60°)	938.7	37.4			
FH (60°-80°)	1182.8	47.1			G1/1800
FVH (80°-90°)	25.1	1.0			G1/100
BL (0°-30°)	47.9	1.9	B0/110		
BM (30°-60°)	135.9	5.4	B0/220		
BH (60°-80°)	70.8	2.8	B0/110		G0/110
BVH (80°-90°)	0.5	0.0			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°	44°	45°	55°	65°	75°	85°
0°	84.6	84.6	84.6	84.6	84.6	84.6	84.6	84.6	84.6	84.6	84.6
2.5°	107.6	104.2	99.2	100.3	100.8	102.4	102.5	100.6	95.0	93.5	100.3
5°	150.8	142.4	140.9	137.7	131.3	127.9	127.0	130.5	126.1	124.7	126.5
7.5°	192.7	185.5	177.6	173.3	160.0	151.8	151.4	152.8	153.6	148.8	151.3
10°	220.5	212.6	211.0	200.9	189.4	187.4	186.6	181.3	177.0	173.4	161.4
12.5°	245.7	245.6	248.6	234.1	232.3	234.2	233.5	214.7	210.4	195.3	191.8
15°	279.3	287.6	274.4	262.2	246.7	253.3	251.5	239.5	236.6	226.3	211.5
17.5°	314.0	316.2	294.2	275.5	271.5	262.8	264.6	260.3	245.6	253.8	239.1
20°	314.9	319.7	296.2	265.3	277.6	277.2	277.3	273.2	253.8	272.9	259.4
22.5°	326.5	314.6	292.7	273.0	275.2	277.3	279.5	274.4	270.2	275.0	277.5
25°	321.8	317.1	296.0	283.0	280.9	282.6	283.1	289.6	287.0	298.4	292.1
27.5°	334.0	327.2	289.5	291.9	284.5	282.6	279.3	301.0	308.8	299.8	316.4
30°	354.9	353.9	300.7	304.2	298.5	281.5	290.3	318.7	328.4	322.9	343.1
32.5°	387.6	390.9	333.6	311.1	314.0	321.6	318.3	318.7	343.2	355.6	371.6
35°	434.0	432.2	365.5	337.4	322.2	323.4	328.1	350.7	382.4	381.6	398.7
37.5°	525.1	505.5	422.2	364.3	368.9	375.1	371.6	402.0	405.0	406.1	446.9
40°	659.5	633.3	511.5	421.0	376.9	404.5	402.8	410.3	430.7	438.3	497.7
42.5°	836.5	801.3	668.8	525.1	415.7	396.7	407.0	421.1	489.5	511.3	576.4
45°	1032.1	960.9	825.6	673.6	512.9	454.1	461.8	488.1	583.0	619.0	690.9
47.5°	1158.8	1096.2	980.8	805.2	614.3	583.4	584.1	589.8	692.9	759.6	856.0
50°	1269.0	1202.3	1095.3	942.8	793.7	735.3	722.0	695.8	832.8	924.1	1031.0
52.5°	1424.4	1346.5	1209.7	1104.1	998.3	860.6	855.9	864.8	997.7	1093.7	1210.4
55°	1564.6	1469.9	1339.3	1272.8	1231.6	1044.8	1048.9	1063.7	1209.5	1260.4	1369.9
57.5°	1626.5	1524.0	1456.8	1426.9	1404.8	1296.5	1282.9	1274.1	1376.6	1396.0	1537.1
60°	1667.1	1569.5	1539.1	1546.0	1612.8	1497.8	1485.5	1433.9	1514.8	1530.8	1687.0
62.5°	1641.4	1552.5	1559.0	1616.8	1765.0	1689.4	1653.8	1567.6	1627.9	1640.7	1794.6
65°	1480.1	1387.4	1471.1	1610.8	1881.1	1879.3	1862.8	1691.0	1690.5	1707.0	1802.9
67.5°	1209.0	1111.7	1247.1	1499.2	1876.2	1994.4	1986.6	1854.8	1699.5	1655.4	1627.0
70°	840.5	756.2	909.6	1238.1	1709.0	1993.5	1981.1	1964.7	1628.3	1424.9	1261.5
72.5°	436.7	390.3	533.3	853.1	1362.3	1751.6	1792.7	1765.8	1390.3	1035.3	742.9
75°	148.4	133.1	220.0	452.8	905.6	1337.5	1385.7	1358.4	944.3	555.5	293.8
77.5°	57.5	53.5	78.8	183.8	454.3	815.0	867.4	839.6	506.4	203.5	69.1
80°	32.7	31.6	43.5	82.8	200.3	405.4	442.3	401.1	182.6	68.6	18.0
82.5°	13.9	14.3	24.2	44.7	100.7	143.1	159.6	145.6	76.5	47.0	6.6
85°	3.0	3.7	11.5	24.9	42.2	40.9	42.8	47.5	47.0	34.5	2.9
87.5°	0.0	0.0	3.6	6.8	10.1	6.6	5.3	9.3	14.4	13.9	1.2
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):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	84.6	84.6	84.6	84.6	84.6	84.6	84.6	84.6	84.6	84.6	84.6
2.5°	101.5	100.1	91.4	90.9	91.4	89.9	89.8	86.6	86.9	94.1	94.6
5°	126.5	119.5	112.1	109.7	107.5	102.5	105.3	105.3	105.3	109.8	111.2
7.5°	149.0	139.8	129.2	120.4	111.8	105.6	109.8	112.9	114.7	120.6	123.4
10°	159.3	150.2	140.7	128.1	121.5	119.1	114.1	111.5	114.7	113.4	115.0
12.5°	181.2	172.9	156.7	143.6	138.7	130.6	115.9	105.7	98.9	97.8	97.5
15°	202.5	197.4	175.6	158.2	140.9	122.3	97.2	83.7	76.5	75.2	75.4
17.5°	229.5	222.2	190.2	165.1	135.7	102.4	75.1	63.4	62.9	65.9	66.2
20°	247.5	235.5	197.5	159.4	118.8	77.4	58.7	56.0	60.4	65.9	65.4
22.5°	264.7	251.7	207.2	154.4	92.1	58.7	54.0	54.3	58.0	64.0	65.5
25°	276.1	271.4	219.1	142.8	70.2	50.8	51.7	53.7	56.9	62.6	62.6
27.5°	310.3	288.3	217.7	120.2	54.0	47.4	49.3	51.9	53.6	60.4	61.1
30°	331.1	323.9	225.0	97.2	47.4	42.9	46.7	49.0	50.1	57.9	58.2
32.5°	356.5	340.6	233.7	71.8	44.0	42.7	41.8	43.6	46.8	53.6	54.0
35°	387.6	382.9	221.2	56.4	42.9	39.9	38.2	39.2	41.3	45.8	46.8
37.5°	450.9	422.9	213.7	48.3	42.9	38.9	37.1	34.6	34.9	38.1	39.9
40°	504.2	495.6	192.8	47.0	41.0	37.5	33.1	30.1	28.0	29.0	29.6
42.5°	602.1	562.4	165.8	46.3	39.2	33.9	28.1	24.9	21.7	22.0	23.1
45°	721.0	635.2	141.7	45.6	38.0	30.3	23.7	19.9	16.6	16.8	17.9
47.5°	879.7	741.5	112.5	43.5	35.7	27.0	19.1	15.2	13.3	13.7	14.7
50°	1060.1	834.7	88.9	40.3	33.1	23.8	15.5	12.3	11.6	12.1	13.2
52.5°	1221.2	903.4	73.4	37.4	29.4	19.4	13.0	10.9	10.7	10.9	11.8
55°	1364.4	943.3	61.4	34.1	25.2	15.7	11.8	10.1	10.0	9.8	10.4
57.5°	1498.8	954.8	47.9	28.8	20.5	13.6	10.9	9.4	9.1	8.7	9.1
60°	1596.7	935.1	35.2	23.1	16.8	12.3	10.3	8.4	8.0	7.3	7.6
62.5°	1643.9	881.2	26.6	18.6	14.3	11.2	9.1	7.3	6.8	6.0	6.1
65°	1599.0	792.5	20.9	15.7	12.2	9.4	7.8	6.2	5.5	4.7	4.7
67.5°	1400.3	657.4	17.7	13.6	10.3	8.0	6.4	5.7	4.6	3.9	3.7
70°	1027.8	472.9	15.2	11.9	8.9	6.9	5.4	5.1	4.4	3.7	3.5
72.5°	580.1	267.6	13.0	10.5	7.5	5.8	4.6	4.7	4.3	3.5	3.2
75°	221.4	90.2	10.8	8.7	6.1	4.4	3.9	3.9	3.9	2.9	2.5
77.5°	54.9	23.0	8.6	7.1	4.8	2.9	3.2	3.3	3.3	2.5	1.8
80°	15.1	7.8	5.1	5.1	3.5	1.7	2.2	2.2	1.8	0.8	0.0
82.5°	5.5	2.9	1.8	2.2	1.5	0.6	0.8	0.6	0.4	0.0	0.0
85°	2.4	1.5	1.1	1.2	0.7	0.0	0.1	0.3	0.0	0.0	0.0
87.5°	1.0	0.7	0.6	0.6	0.3	0.0	0.0	0.0	0.0	0.0	0.0
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)