

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: P596899

Luminaire Tested: **MSA-SA1D-835-U-SL3-HSS**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P596899  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-19)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 5/27/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA1D-835-U-SL3-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS  
EACH AND TYPE III SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4642 lumens  
Efficiency: N/A  
Efficacy: 69.3 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B0 - U0 - G2

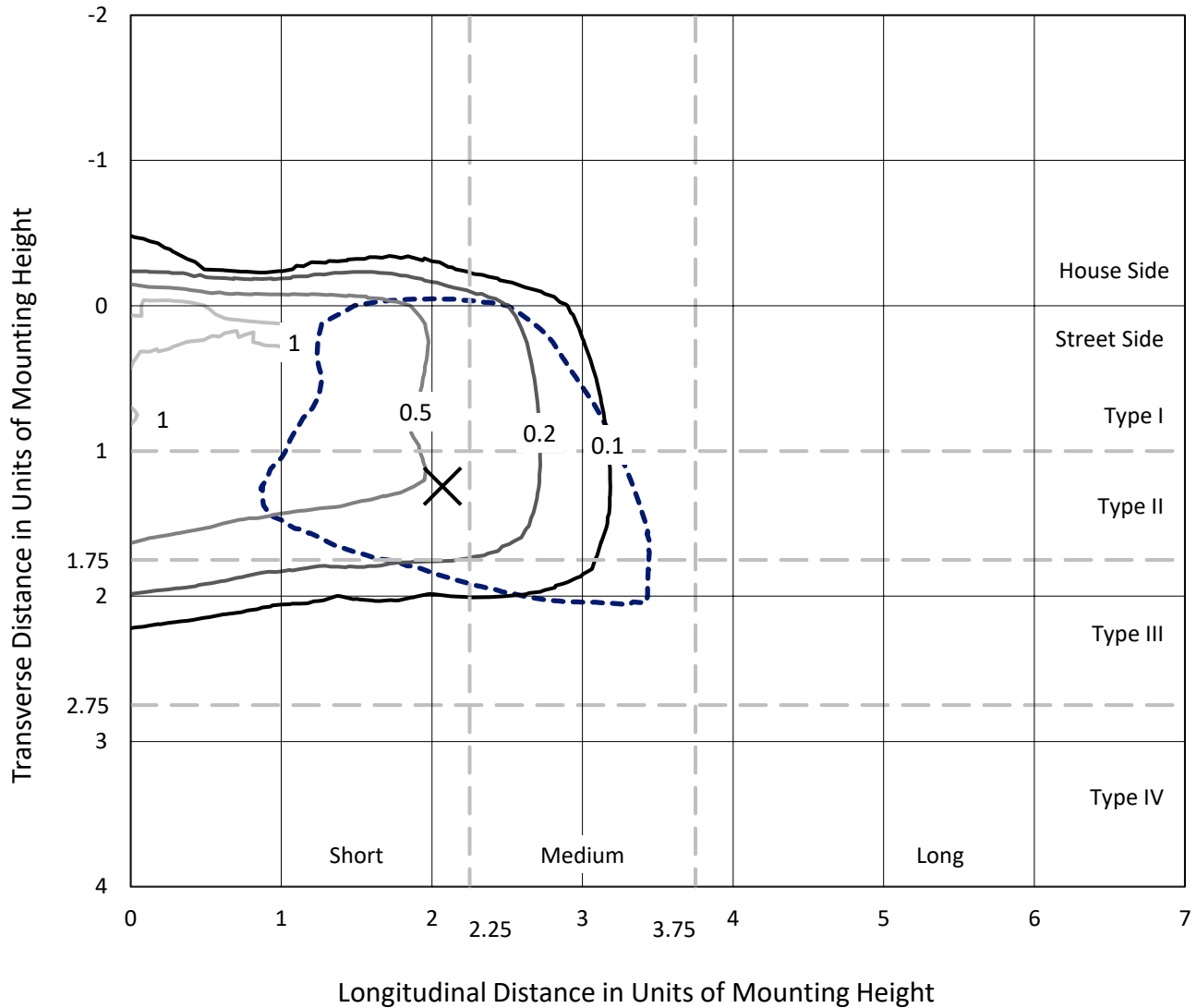
Input Watts (W): 67  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

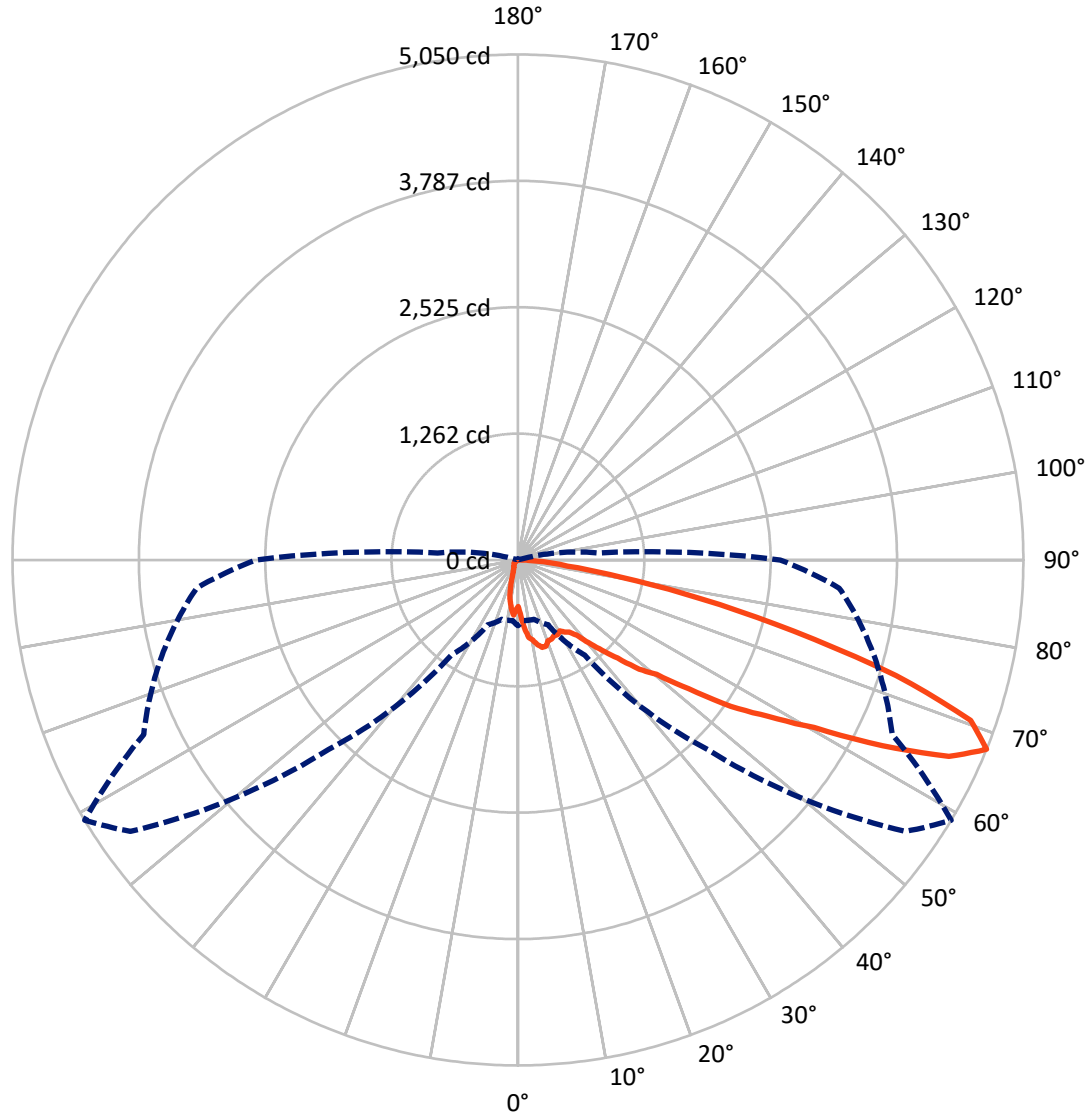
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.3 fc  
 Type III - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral    - - - Horizontal Cone Through 67.5-Deg Vertical

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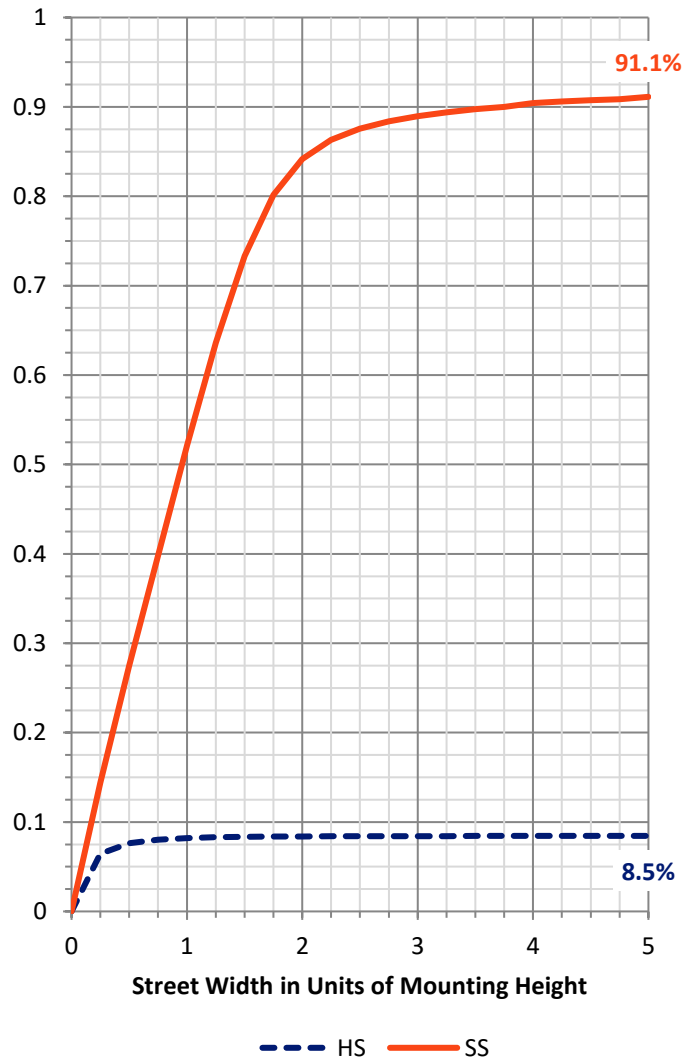
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	394.8	0.0	394.8
	% Fixture	8.5	0.0	8.5
<b>Street Side</b>	Lumens	4247.2	0.0	4247.2
	% Fixture	91.5	0.0	91.5
<b>Total</b>	Lumens	4642.0	0.0	4642.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	56.5	1.2
10°-20°	159.0	3.4
20°-30°	236.5	5.1
30°-40°	364.9	7.9
40°-50°	651.2	14.0
50°-60°	1158.8	25.0
60°-70°	1349.7	29.1
70°-80°	600.2	12.9
80°-90°	65.2	1.4
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°	4642.0	100.0
0°-180°	4642.0	100.0

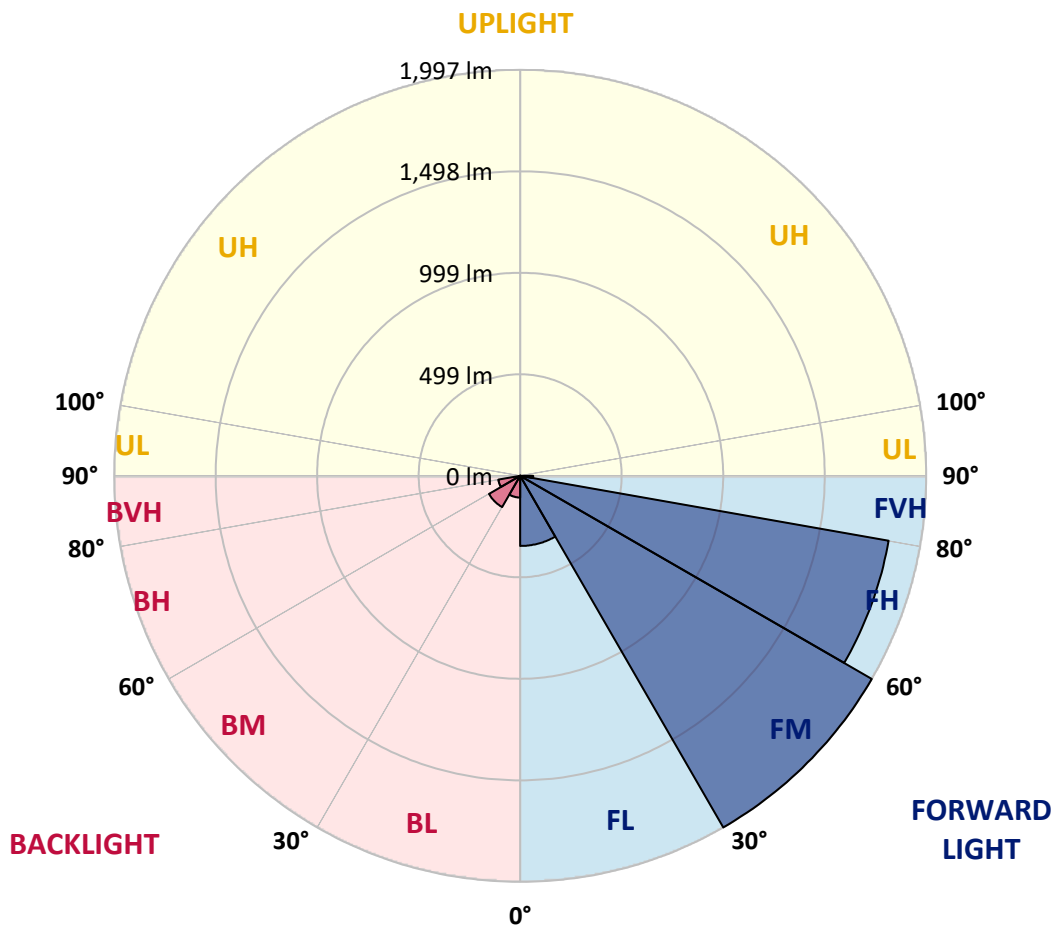


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	345.2	7.4			
FM (30°-60°)	1997.5	43.0			
FH (60°-80°)	1840.5	39.6			G2/5000
FVH (80°-90°)	64.0	1.4			G1/100
BL (0°-30°)	106.8	2.3	B0/110		
BM (30°-60°)	177.5	3.8	B0/220		
BH (60°-80°)	109.4	2.4	B0/110		G0/110
BVH (80°-90°)	1.2	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-G2**  
 Type III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	464.4	464.4	464.4	464.4	464.4	464.4	464.4	464.4	464.4	464.4	464.4
2.5°	605.5	582.7	550.2	559.9	568.6	576.8	563.2	555.4	551.6	518.3	560.1
5°	743.4	715.0	700.2	696.4	687.0	666.1	700.9	685.4	690.6	697.1	710.8
7.5°	785.5	772.6	751.2	759.2	723.5	720.4	768.6	782.0	799.6	787.6	804.1
10°	763.9	741.6	751.7	748.9	747.4	778.9	812.8	813.5	839.8	852.5	796.8
12.5°	721.1	723.7	759.9	757.1	804.1	867.1	874.8	866.6	909.6	887.5	879.1
15°	749.6	770.7	750.7	757.5	774.2	853.0	880.5	905.9	946.5	959.7	902.6
17.5°	783.9	786.0	749.6	741.1	783.2	819.8	884.7	905.6	909.6	1025.0	955.5
20°	765.3	783.4	739.9	686.6	751.9	801.7	867.5	861.0	887.8	1044.3	967.4
22.5°	814.7	788.8	733.1	692.9	715.0	760.4	816.1	859.1	899.3	998.2	983.0
25°	819.4	810.0	760.4	724.6	720.9	732.4	810.0	837.7	900.7	1039.6	969.8
27.5°	872.2	861.4	759.9	763.4	728.2	692.7	780.3	845.5	926.3	1014.4	997.8
30°	940.4	941.4	810.4	821.5	771.2	714.1	804.6	822.4	943.7	1054.6	1018.4
32.5°	1009.5	1038.0	910.3	851.8	836.1	795.2	774.5	857.0	924.7	1123.3	1070.2
35°	1114.6	1133.9	992.6	940.2	878.4	831.8	856.3	885.9	993.1	1214.2	1138.1
37.5°	1292.5	1257.7	1140.2	1049.0	1034.2	965.6	977.8	951.2	1062.9	1321.4	1272.5
40°	1392.6	1361.1	1238.9	1194.5	1100.0	1110.6	1072.0	1087.5	1164.2	1433.1	1395.0
42.5°	1497.0	1466.9	1359.7	1328.2	1238.2	1194.5	1177.1	1232.8	1319.5	1619.0	1570.6
45°	1601.8	1525.4	1480.1	1495.8	1455.4	1368.9	1348.7	1398.3	1489.2	1847.4	1755.8
47.5°	1690.2	1625.8	1591.7	1584.4	1568.7	1688.8	1606.5	1628.4	1668.6	2049.6	1986.6
50°	1849.6	1786.1	1732.7	1717.9	1794.6	1965.0	1838.0	1795.7	1876.1	2293.8	2254.1
52.5°	2079.7	1998.8	1914.0	1914.2	2058.8	2152.3	2212.5	2138.2	2153.2	2562.4	2544.8
55°	2264.6	2161.9	2091.7	2147.1	2362.7	2415.1	2644.7	2579.6	2560.1	2811.6	2790.0
57.5°	2290.0	2166.9	2133.5	2230.8	2525.8	2860.5	3107.5	2944.9	2915.0	3020.1	3063.1
60°	2053.1	1922.4	1947.6	2104.1	2578.9	3132.0	3532.5	3399.7	3210.0	3264.3	3293.9
62.5°	1531.3	1427.0	1497.5	1704.8	2374.2	3313.9	4024.4	4086.0	3552.2	3447.6	3441.3
65°	993.5	928.2	974.5	1144.4	1796.7	3293.2	4464.0	4731.0	3821.8	3597.1	3487.6
67.5°	657.2	607.6	614.2	714.8	1161.8	2678.3	4726.7	5049.5	4125.0	3682.0	3222.2
70°	489.8	450.8	453.2	507.7	689.6	1766.4	4360.3	4798.2	4235.7	3387.9	2600.8
72.5°	353.3	327.2	349.0	409.7	549.5	934.1	3250.0	3951.6	3693.5	2672.2	1752.3
75°	244.7	227.5	263.2	342.7	501.6	579.9	2147.6	2844.5	2588.8	1676.6	792.1
77.5°	135.6	130.4	181.9	279.2	455.3	475.3	1315.5	1869.1	1435.9	601.0	188.5
80°	59.2	57.4	88.1	209.7	382.7	429.4	740.6	1036.3	564.8	107.2	60.9
82.5°	25.4	24.4	37.6	126.2	278.1	359.1	456.7	498.8	194.4	33.1	34.6
85°	4.5	4.9	15.0	66.5	169.2	182.4	330.7	295.2	97.8	15.7	24.7
87.5°	0.0	0.0	2.4	12.9	31.7	52.2	143.4	103.4	18.6	5.2	4.2
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°	464.4	464.4	464.4	464.4	464.4	464.4	464.4	464.4	464.4	464.4	464.4
2.5°	566.0	552.8	502.8	496.4	489.6	479.5	475.7	454.1	451.3	479.0	479.0
5°	704.4	657.4	609.7	572.1	538.5	491.9	478.8	465.2	454.1	451.3	460.0
7.5°	777.5	720.2	645.2	549.5	472.0	404.5	376.3	356.6	334.5	341.0	344.6
10°	773.5	712.7	617.0	494.1	408.0	333.5	261.8	220.0	196.7	185.2	183.8
12.5°	812.8	755.4	598.0	449.9	340.1	237.2	164.8	134.9	117.8	118.0	116.6
15°	835.6	773.1	575.9	393.9	239.5	152.5	114.2	107.7	105.3	107.9	106.5
17.5°	875.8	791.6	525.8	310.5	164.8	115.2	105.1	102.5	105.5	110.9	109.5
20°	872.7	759.4	454.6	218.8	121.8	103.7	99.4	95.4	101.8	107.4	106.5
22.5°	869.9	727.9	387.6	161.5	101.8	94.5	91.0	89.3	92.6	99.2	100.6
25°	845.0	712.4	319.7	121.3	92.1	85.8	84.1	82.7	83.9	89.3	89.1
27.5°	875.5	673.2	246.8	101.8	85.3	77.8	76.4	74.0	71.7	76.4	77.1
30°	869.2	678.6	193.4	89.6	78.5	68.4	68.9	63.9	59.7	63.9	63.9
32.5°	892.2	639.1	154.9	81.3	71.7	64.4	58.5	53.4	50.3	52.9	53.4
35°	925.8	640.7	121.3	76.2	65.8	57.4	50.3	45.1	42.3	43.5	44.2
37.5°	1038.4	629.4	101.3	72.2	63.7	53.1	45.8	39.0	37.1	38.5	39.3
40°	1111.8	659.5	89.3	70.0	58.3	48.9	39.3	34.3	32.7	33.4	34.6
42.5°	1250.0	676.2	83.4	67.7	53.4	41.8	33.6	30.8	28.4	29.4	30.3
45°	1397.8	704.7	79.0	65.1	49.6	36.7	29.6	27.3	24.2	24.4	25.4
47.5°	1579.5	772.4	73.8	60.6	44.4	33.4	26.3	22.8	20.0	19.7	20.9
50°	1823.5	862.8	69.1	55.0	41.1	30.6	23.0	18.6	16.2	15.5	16.5
52.5°	2083.9	979.9	64.2	51.0	37.1	26.8	19.7	15.0	12.9	12.5	13.2
55°	2342.0	1092.2	59.5	48.4	32.9	23.0	16.7	12.5	10.6	10.1	10.6
57.5°	2636.0	1213.8	53.4	43.2	28.9	20.0	13.9	10.3	8.7	8.2	8.5
60°	2857.4	1256.5	48.2	37.6	25.1	17.6	11.8	8.2	7.1	6.6	6.8
62.5°	2962.5	1186.7	43.2	32.7	22.1	15.3	9.9	6.8	5.9	5.4	5.4
65°	2935.2	1032.1	38.3	28.0	19.0	12.7	7.8	5.9	5.2	4.5	4.2
67.5°	2620.3	807.6	32.7	23.5	16.0	10.3	6.6	5.6	4.7	4.2	3.5
70°	2078.0	584.8	26.6	19.5	13.4	8.5	5.2	5.2	4.5	4.2	3.3
72.5°	1362.1	368.1	21.6	15.7	11.0	6.6	4.0	4.7	4.2	4.2	3.1
75°	590.2	131.6	17.4	12.7	9.2	4.5	3.5	4.2	4.5	4.2	3.5
77.5°	138.2	40.9	13.6	10.1	7.5	3.1	3.5	4.2	4.5	4.0	3.1
80°	51.9	17.4	8.9	6.6	5.9	1.9	3.1	2.6	2.4	1.6	0.5
82.5°	31.5	7.3	4.7	3.3	2.8	0.5	1.4	0.9	0.5	0.5	0.0
85°	22.3	3.5	2.6	2.4	1.4	0.0	0.2	0.0	0.0	0.2	0.0
87.5°	3.1	0.9	1.2	1.2	0.9	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)