

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: P596603

Luminaire Tested: **MSA-SA2B-827-U-T4FT-HSS**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P596603  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-13)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 5/27/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA2B-827-U-T4FT-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV FORWARD THROW OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5483 lumens  
Efficiency: N/A  
Efficacy: 64.5 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G2

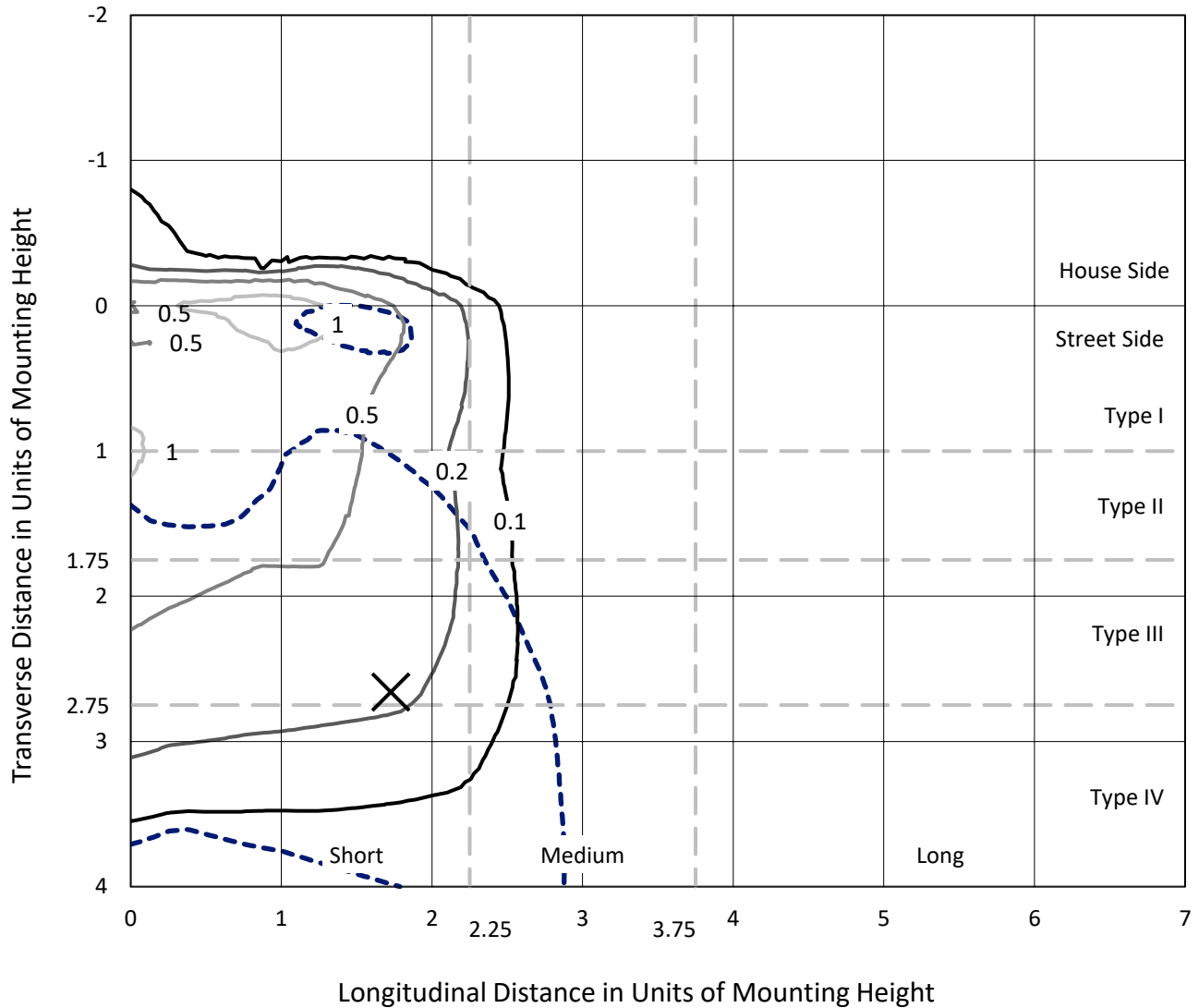
Input Watts (W): 85  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

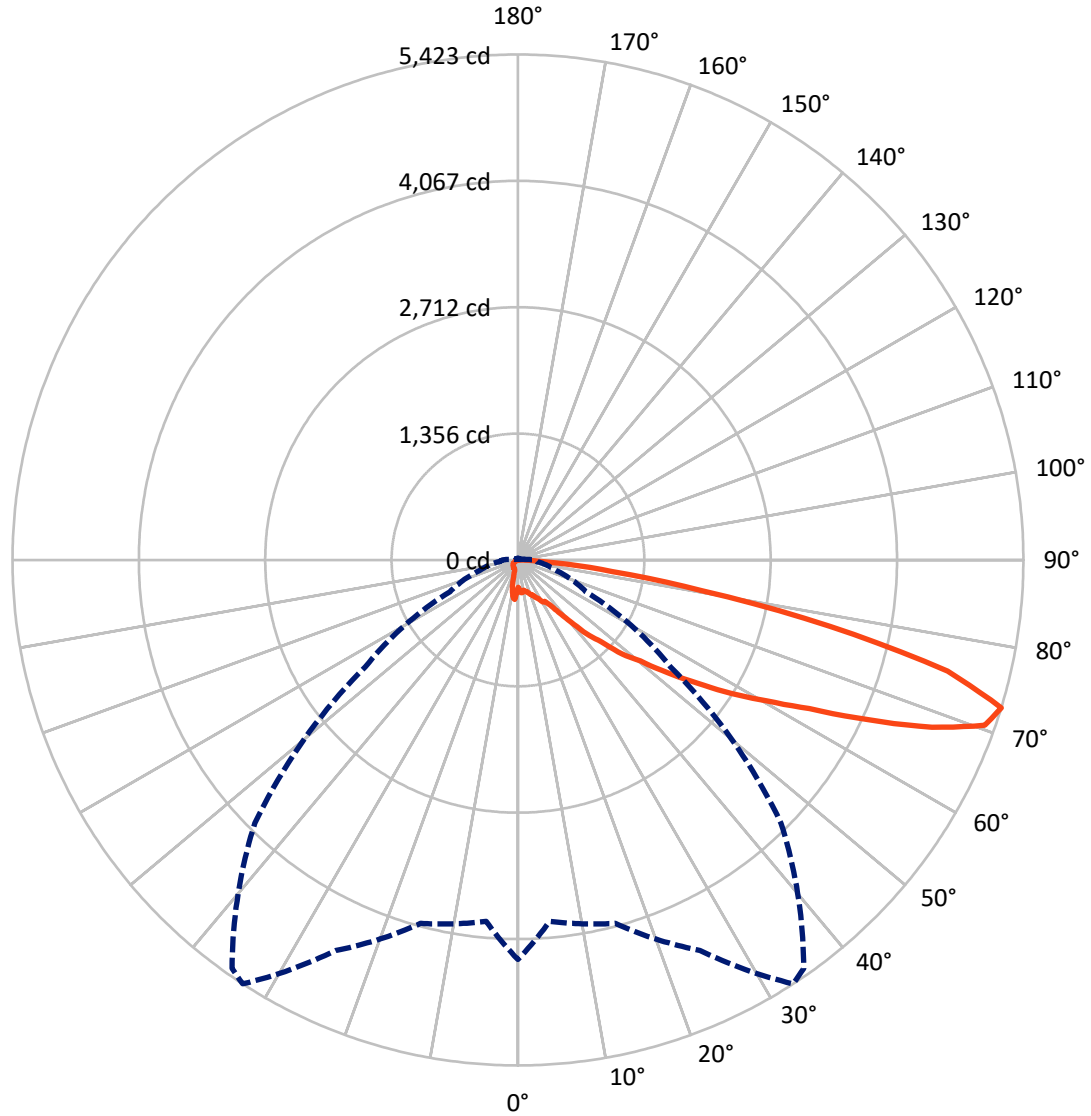
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.4 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 33-Deg Lateral      - - - Horizontal Cone Through 72.5-Deg Vertical

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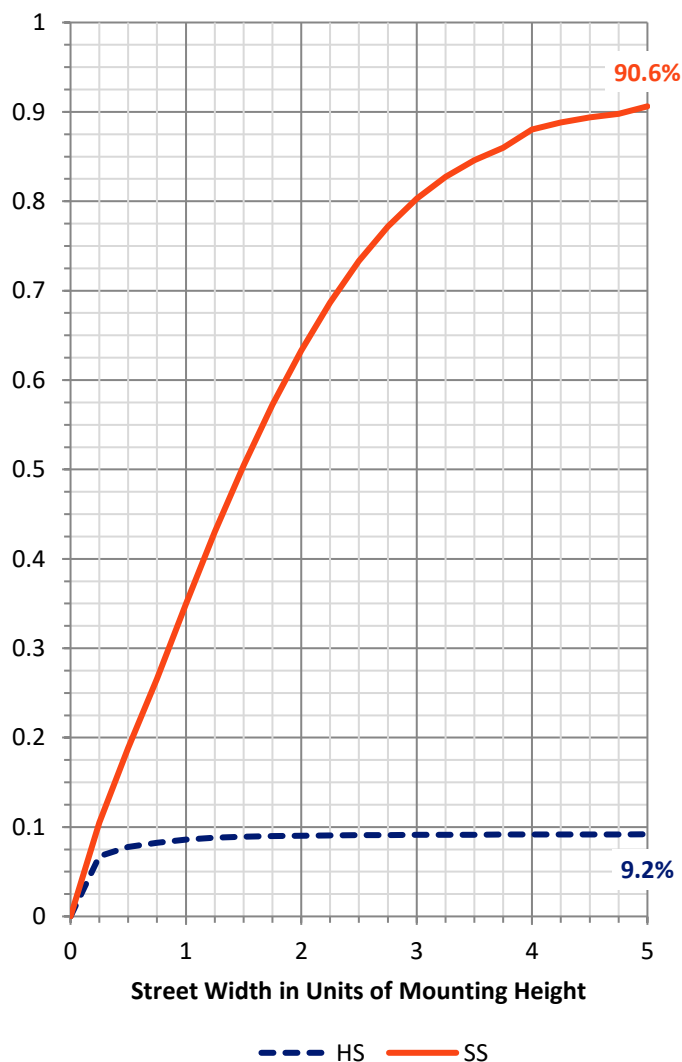
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	507.0	0.0	507.0
	% Fixture	9.2	0.0	9.2
<b>Street Side</b>	Lumens	4976.0	0.0	4976.0
	% Fixture	90.8	0.0	90.8
<b>Total</b>	Lumens	5483.0	0.0	5483.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	37.7	0.7
10°-20°	112.5	2.1
20°-30°	190.8	3.5
30°-40°	349.1	6.4
40°-50°	736.8	13.4
50°-60°	1232.7	22.5
60°-70°	1650.0	30.1
70°-80°	1077.8	19.7
80°-90°	95.6	1.7
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°	5483.0	100.0
0°-180°	5483.0	100.0

**Coefficient of Utilization**

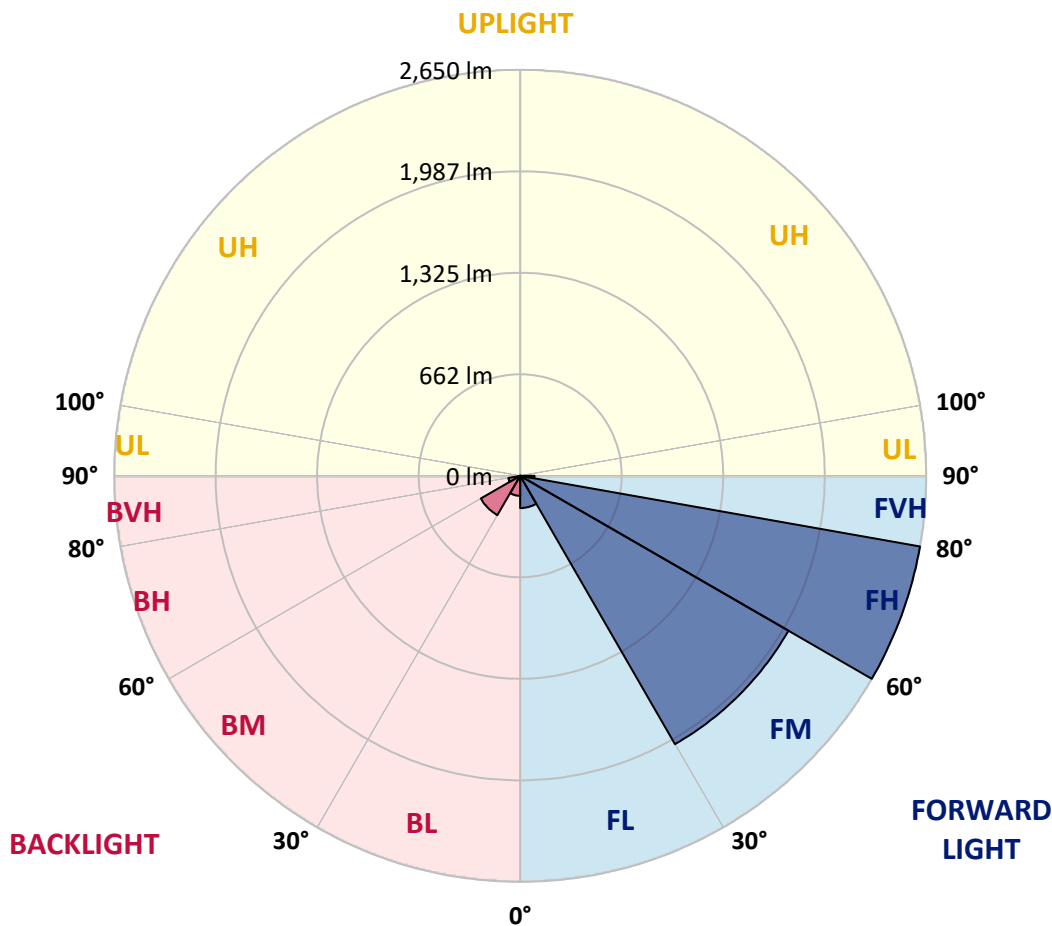


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	210.5	3.8			
FM (30°-60°)	2022.2	36.9			
FH (60°-80°)	2649.6	48.3			G2/5000
FVH (80°-90°)	93.7	1.7			G1/100
BL (0°-30°)	130.5	2.4	B1/500		
BM (30°-60°)	296.4	5.4	B1/1000		
BH (60°-80°)	78.3	1.4	B0/110		G0/110
BVH (80°-90°)	1.8	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G2**  
 Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	33°	35°	45°	55°	65°	75°	85°
0°	291.6	291.6	291.6	291.6	291.6	291.6	291.6	291.6	291.6	291.6	291.6
2.5°	347.6	334.3	314.8	316.0	319.3	322.1	329.4	326.3	320.6	320.2	347.6
5°	368.3	353.4	352.2	354.0	353.1	358.0	351.9	371.7	388.4	408.5	440.8
7.5°	358.3	351.3	342.5	351.6	351.3	348.9	352.8	393.0	433.5	459.1	512.3
10°	329.4	321.5	328.2	331.2	329.1	339.7	366.2	399.1	447.5	501.1	526.9
12.5°	321.2	326.0	328.5	328.5	348.9	354.3	394.8	425.9	483.4	525.7	600.9
15°	353.1	362.6	345.8	342.2	348.6	351.6	396.7	434.1	507.8	585.1	648.1
17.5°	404.0	403.4	377.5	363.2	373.2	380.5	405.5	449.3	492.5	631.7	723.0
20°	439.0	439.6	393.0	363.2	396.4	400.6	428.3	463.3	497.4	655.1	772.0
22.5°	484.0	467.9	416.4	387.5	410.1	414.0	444.4	472.2	522.4	652.4	834.7
25°	520.9	510.5	445.7	425.6	445.7	440.2	467.9	509.6	549.2	695.9	871.5
27.5°	578.1	560.4	466.4	470.0	468.8	472.8	479.2	543.1	596.4	698.0	956.8
30°	631.4	621.0	512.6	512.6	524.5	516.9	521.5	598.8	642.0	747.3	1052.7
32.5°	686.5	687.1	567.1	538.2	528.8	560.1	590.9	625.9	697.1	832.0	1199.4
35°	832.3	820.1	671.5	599.4	591.8	590.0	639.3	734.0	794.8	942.2	1397.0
37.5°	1126.0	1083.7	896.2	738.2	709.6	699.9	755.9	853.0	913.6	1104.1	1723.6
40°	1427.4	1349.8	1141.6	963.5	870.6	828.6	893.8	976.3	1084.0	1283.1	2025.9
42.5°	1692.0	1596.1	1326.3	1206.4	1085.6	1067.3	1006.1	1140.3	1327.6	1543.7	2322.1
45°	1949.8	1761.1	1490.7	1395.8	1249.0	1259.4	1238.7	1355.0	1580.5	1829.2	2584.8
47.5°	2127.3	1957.7	1692.3	1569.0	1510.2	1449.6	1614.0	1734.9	1805.8	2010.7	2811.9
50°	2318.4	2146.8	1865.5	1779.3	1702.0	1763.2	1976.6	1992.7	1986.9	2179.9	2966.5
52.5°	2565.3	2362.9	2064.3	1966.8	2010.7	2071.6	2317.8	2320.9	2148.0	2322.4	3078.0
55°	2793.6	2569.3	2329.1	2237.2	2328.8	2380.2	2653.3	2553.1	2241.7	2419.2	3132.8
57.5°	3115.4	2855.7	2681.3	2519.4	2705.1	2655.7	2948.3	2799.4	2347.1	2483.4	3112.7
60°	3522.1	3216.5	3041.7	2870.4	3069.4	3102.9	3236.3	2922.4	2387.9	2504.4	2991.8
62.5°	3935.8	3628.4	3398.5	3282.2	3508.1	3618.3	3502.9	2983.6	2338.8	2463.3	2718.1
65°	4449.1	4055.4	3787.0	3718.8	4137.3	4299.3	3818.3	2998.5	2244.2	2237.2	2185.4
67.5°	4800.7	4417.4	4171.1	4285.3	4790.9	4804.0	4101.4	3003.1	1925.4	1751.6	1434.4
70°	4884.1	4473.7	4363.5	4699.6	5312.4	5147.7	4192.7	2771.7	1428.0	1039.6	655.7
72.5°	4287.4	3892.3	4035.7	4621.4	5423.2	5347.7	3990.9	1999.7	804.0	415.8	201.2
75°	2629.9	2390.9	3027.4	3918.2	4760.5	4711.8	3113.6	1033.2	323.9	166.2	75.2
77.5°	1143.7	1062.1	1579.9	2599.7	3420.7	3377.2	1824.4	380.5	167.4	116.9	38.1
80°	378.4	367.1	598.5	1231.1	2003.7	1965.3	768.7	158.3	119.3	93.8	21.3
82.5°	89.8	89.2	208.8	566.5	1020.7	988.7	235.9	87.4	86.5	74.0	11.3
85°	22.5	23.1	57.8	231.7	414.6	365.6	61.5	43.5	60.9	50.2	5.8
87.5°	0.0	0.0	14.9	33.2	62.7	39.3	6.7	11.6	17.0	18.0	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



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**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	291.6	291.6	291.6	291.6	291.6	291.6	291.6	291.6	291.6	291.6	291.6
2.5°	353.7	350.4	323.0	329.7	340.0	339.1	345.8	340.6	336.1	358.6	356.5
5°	449.9	431.7	423.1	435.0	428.6	413.7	426.2	424.1	420.4	428.0	433.8
7.5°	522.1	505.3	497.7	472.8	436.5	407.9	412.5	401.8	391.8	403.7	415.8
10°	545.8	536.7	535.8	487.1	453.0	411.6	362.6	320.2	309.0	294.1	300.8
12.5°	610.4	615.8	581.4	524.5	458.8	379.3	292.2	232.3	207.9	192.1	193.0
15°	663.3	682.5	632.6	530.3	403.7	289.2	194.5	140.6	125.4	121.5	120.2
17.5°	742.2	760.7	648.4	489.2	325.4	196.0	125.1	109.6	110.5	113.2	112.6
20°	800.6	797.9	634.7	416.4	239.9	128.5	104.7	102.6	107.5	115.4	113.5
22.5°	856.9	838.1	626.2	349.2	155.3	103.2	101.1	100.8	105.3	112.9	115.1
25°	897.1	900.2	611.9	273.4	112.9	95.9	97.7	100.5	105.0	113.2	112.0
27.5°	1012.2	927.0	552.2	198.5	95.3	91.9	96.5	102.0	103.5	113.9	114.2
30°	1086.8	1028.0	513.2	133.6	88.0	84.9	94.1	101.4	103.2	116.6	117.5
32.5°	1216.8	1071.5	468.2	99.2	81.9	82.8	88.6	98.3	106.9	121.2	121.8
35°	1378.4	1211.3	386.6	89.2	79.8	78.2	81.0	92.2	106.2	121.8	124.8
37.5°	1686.2	1295.0	306.5	86.5	79.8	77.0	79.8	86.5	104.4	127.9	134.2
40°	1892.3	1465.5	221.0	85.8	78.2	75.8	76.7	83.4	99.2	124.2	133.6
42.5°	2146.1	1537.3	162.9	84.3	76.7	73.1	73.7	82.2	94.1	116.6	123.6
45°	2354.1	1589.7	128.2	83.7	73.1	71.8	73.1	81.3	89.2	100.2	106.5
47.5°	2512.1	1650.6	102.9	79.8	72.1	71.8	70.3	76.1	81.0	83.7	88.0
50°	2627.7	1636.9	85.2	73.7	69.1	70.9	68.2	69.1	70.3	68.8	73.7
52.5°	2698.7	1587.5	70.9	66.4	65.4	67.0	63.6	60.9	58.8	57.5	60.6
55°	2724.5	1488.6	60.3	56.9	59.1	59.7	56.9	52.1	48.4	46.6	49.0
57.5°	2675.5	1337.9	52.4	47.2	52.1	52.1	48.4	43.2	39.0	35.9	38.4
60°	2551.3	1171.4	46.6	39.3	44.4	44.7	40.5	35.0	31.7	28.6	30.1
62.5°	2320.0	990.0	40.8	34.1	38.4	38.7	33.5	28.3	25.9	22.5	23.7
65°	1857.3	757.1	34.7	30.1	33.2	32.3	27.7	24.0	21.0	18.0	18.6
67.5°	1205.5	467.3	30.1	27.4	28.0	27.1	23.4	21.0	17.7	15.2	15.5
70°	539.7	201.2	26.5	24.7	24.4	22.8	19.8	19.5	17.4	15.2	15.2
72.5°	166.5	75.8	22.8	22.2	21.0	19.2	17.4	18.6	17.0	14.6	14.3
75°	65.8	34.7	18.9	18.9	18.3	15.8	15.5	16.7	15.8	13.4	12.8
77.5°	34.4	21.9	15.5	16.1	15.8	12.2	14.0	15.2	14.6	11.3	9.4
80°	20.4	13.4	11.6	13.1	12.8	8.5	10.7	9.7	7.0	3.3	0.9
82.5°	11.3	6.1	5.2	7.6	7.6	3.0	5.5	4.9	2.7	0.0	0.0
85°	5.5	4.3	4.0	4.3	3.0	0.9	2.7	2.7	1.5	0.0	0.0
87.5°	2.7	2.4	1.8	1.5	1.2	0.0	0.9	1.2	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)