

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: P596832

Luminaire Tested: **MSA-SA1A-835-U-SL2**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P596832  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-16)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 5/27/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA1A-835-U-SL2  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II SPILL LIGHT ELIMINATOR OPTICS.  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

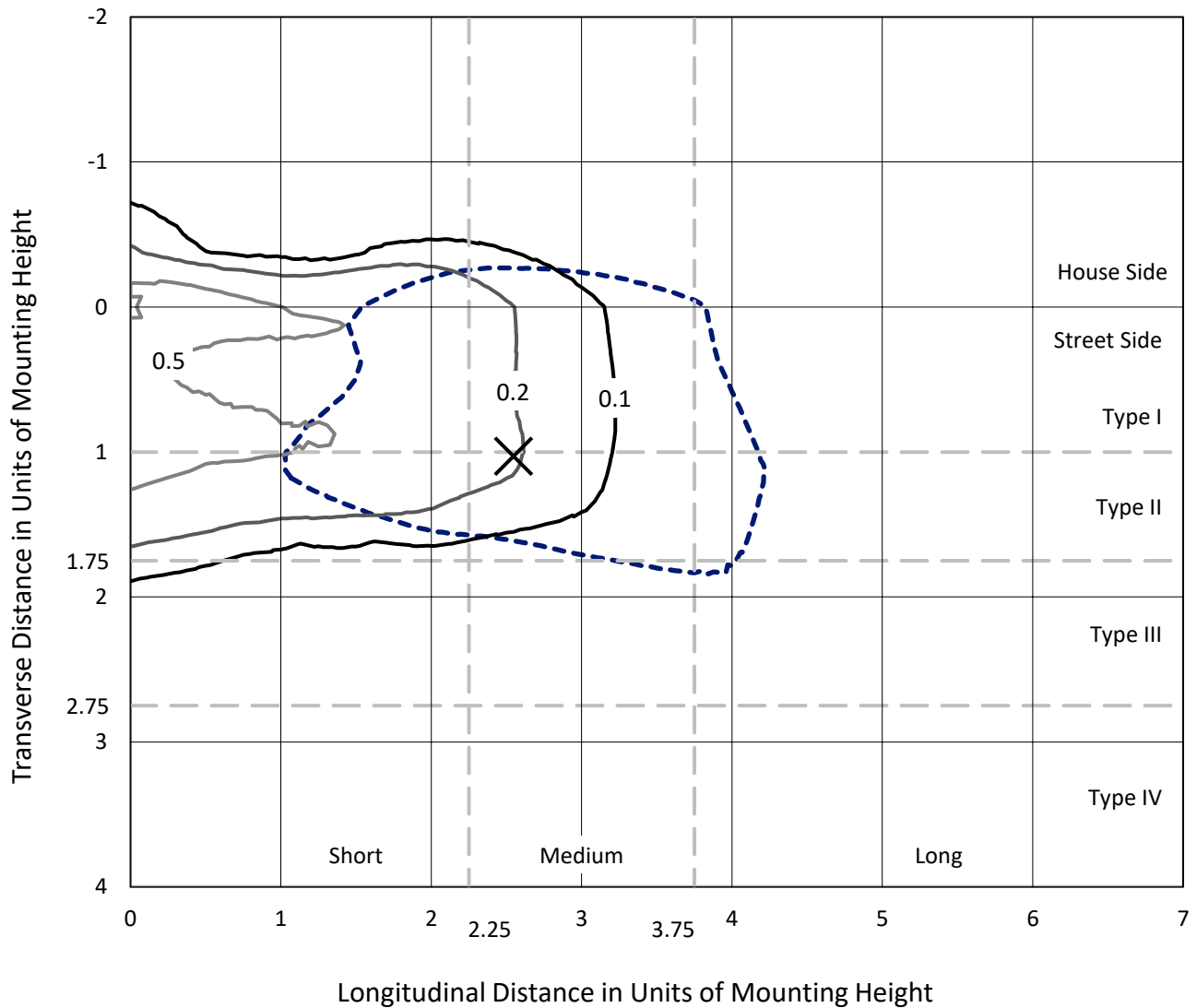
Lumens per Lamp: N/A  
Luminaire Lumens: 3310 lumens  
Efficiency: N/A  
Efficacy: 97.4 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Medium  
BUG Rating: B1 - U0 - G1  
  
Input Watts (W): 34  
Input Voltage (V): NR  
Input Current (Ain): NR  
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

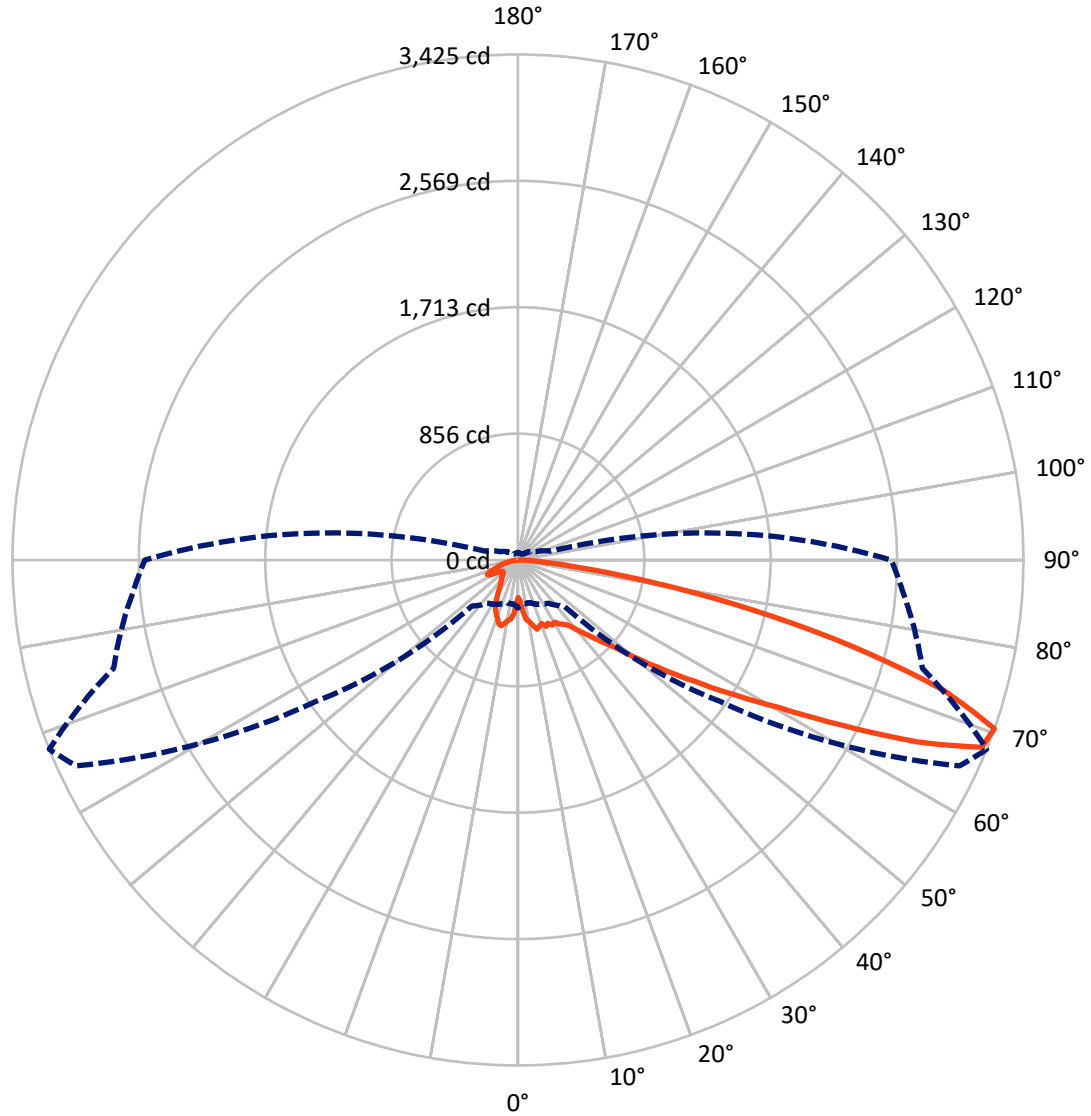
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.8 fc  
 Type III - Medium - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 68-Deg Lateral    - - - Horizontal Cone Through 70-Deg Vertical

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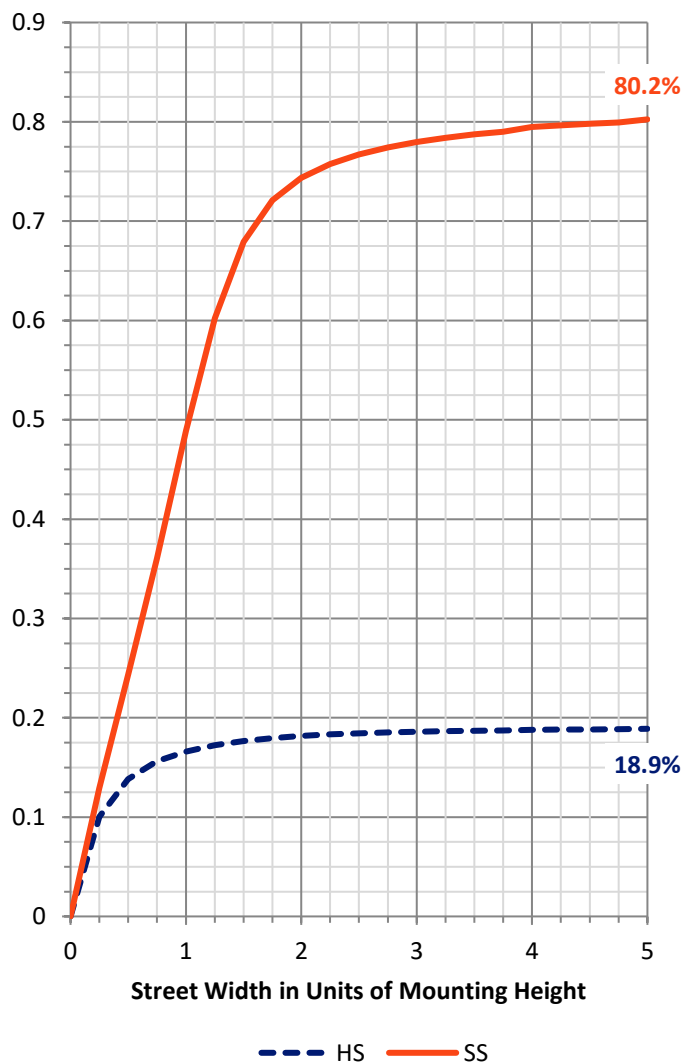
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	632.0	0.0	632.0
	% Fixture	19.1	0.0	19.1
<b>Street Side</b>	Lumens	2678.0	0.0	2678.0
	% Fixture	80.9	0.0	80.9
<b>Total</b>	Lumens	3310.0	0.0	3310.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	33.9	1.0
10°-20°	110.5	3.3
20°-30°	168.1	5.1
30°-40°	256.7	7.8
40°-50°	441.4	13.3
50°-60°	730.6	22.1
60°-70°	900.7	27.2
70°-80°	578.6	17.5
80°-90°	89.7	2.7
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°	3310.0	100.0
0°-180°	3310.0	100.0

**Coefficient of Utilization**



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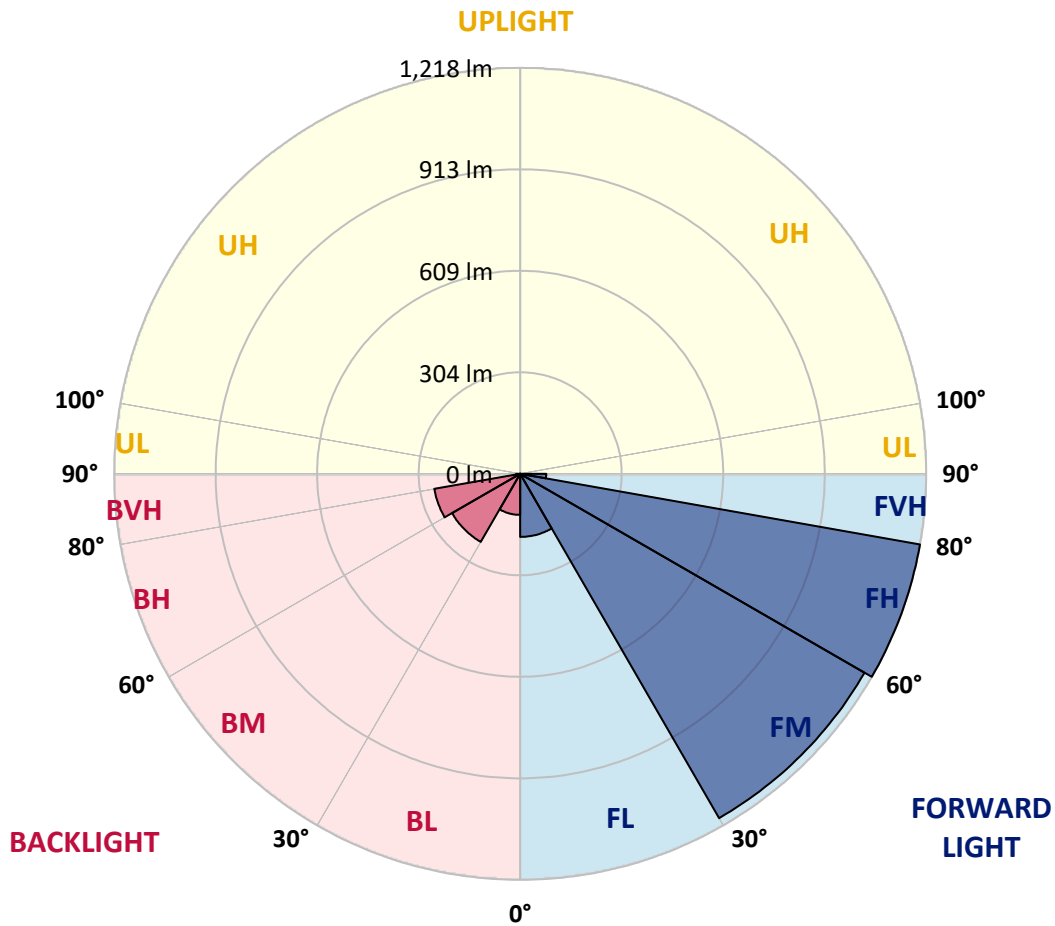
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	189.3	5.7			
FM (30°-60°)	1192.7	36.0			
FH (60°-80°)	1217.8	36.8			G1/1800
FVH (80°-90°)	78.2	2.4			G1/100
BL (0°-30°)	123.1	3.7	B1/500		
BM (30°-60°)	235.9	7.1	B1/1000		
BH (60°-80°)	261.4	7.9	B1/500		G1/500
BVH (80°-90°)	11.5	0.3			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G1**

Type III Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	253.8	253.8	253.8	253.8	253.8	253.8	253.8	253.8	253.8	253.8	253.8
2.5°	291.6	279.8	267.9	273.7	283.0	291.2	289.5	290.5	279.3	277.8	307.3
5°	343.6	323.3	322.9	323.2	324.0	314.6	337.6	349.5	352.1	364.3	393.3
7.5°	361.6	353.4	345.1	349.2	338.7	339.7	367.9	399.0	406.3	415.2	454.8
10°	357.8	350.1	352.6	353.3	355.2	370.8	389.0	418.8	425.0	453.3	463.5
12.5°	358.4	357.0	368.6	369.0	389.8	417.9	425.2	452.6	455.1	475.9	518.7
15°	377.4	386.9	380.4	383.9	387.9	421.6	431.9	471.3	486.2	513.0	545.1
17.5°	414.3	417.1	397.6	392.5	405.6	415.9	439.6	456.6	472.3	546.9	591.3
20°	422.9	430.4	407.1	380.7	408.5	422.8	439.3	447.0	459.2	551.9	614.8
22.5°	459.8	444.3	416.1	393.2	402.3	416.1	428.1	457.3	489.3	537.6	638.4
25°	480.7	471.7	446.6	422.0	414.2	414.6	437.6	463.8	474.9	558.6	643.1
27.5°	531.3	516.9	460.5	455.8	426.5	403.8	439.1	479.9	499.3	542.2	666.1
30°	594.6	583.6	509.7	503.4	458.8	419.2	458.5	491.8	489.0	552.9	682.0
32.5°	645.8	664.1	589.5	540.3	508.5	470.6	452.4	489.7	517.3	577.7	709.0
35°	719.0	736.2	651.7	618.4	549.6	494.4	495.0	518.2	535.3	606.6	739.2
37.5°	845.6	830.5	762.5	710.0	665.9	583.6	559.0	550.8	564.5	642.1	798.4
40°	936.9	924.1	844.1	814.1	728.4	680.6	613.0	605.2	629.5	678.7	846.7
42.5°	1045.1	1022.4	947.8	923.2	833.5	747.4	679.2	683.7	695.4	747.7	912.1
45°	1155.2	1100.1	1057.8	1055.9	996.0	877.0	785.5	781.9	782.3	849.2	985.5
47.5°	1242.6	1193.0	1144.7	1121.7	1091.5	1101.3	939.8	897.5	884.8	951.4	1095.6
50°	1301.8	1244.7	1190.0	1184.6	1265.2	1318.3	1084.7	1039.5	1047.4	1097.7	1242.5
52.5°	1303.0	1235.3	1178.2	1216.0	1406.0	1481.9	1334.3	1208.1	1233.3	1267.6	1434.1
55°	1212.4	1142.2	1105.1	1191.2	1461.0	1676.0	1685.1	1478.3	1449.2	1461.8	1663.1
57.5°	1021.4	950.5	928.9	1032.1	1356.6	1863.1	2108.7	1801.0	1715.7	1663.1	1897.7
60°	768.8	707.5	694.0	759.8	1124.7	1808.1	2451.7	2202.8	2028.9	1887.9	2133.1
62.5°	576.6	532.5	512.3	521.7	778.3	1629.3	2677.0	2710.4	2464.2	2133.4	2363.1
65°	468.5	432.9	414.9	402.7	484.0	1259.8	2636.3	3137.6	2972.6	2391.2	2542.1
67.5°	391.4	359.8	351.5	363.4	382.6	730.9	2317.6	3376.6	3387.8	2645.5	2646.6
70°	324.9	301.4	298.4	332.2	357.5	441.1	1674.0	3301.5	3425.3	2836.3	2622.1
72.5°	251.0	238.4	238.0	291.1	355.2	376.0	996.9	2852.1	3018.5	2775.3	2382.2
75°	174.1	165.4	172.1	239.2	347.0	381.4	568.9	2221.5	2346.0	2361.7	1908.3
77.5°	119.8	112.5	119.7	173.0	309.9	390.5	398.0	1606.3	1620.1	1583.7	1093.0
80°	83.4	78.3	83.8	122.5	241.2	386.5	338.8	1011.3	927.9	706.8	349.9
82.5°	51.7	50.1	56.2	87.3	169.8	351.6	321.1	521.8	398.4	195.1	125.0
85°	27.2	24.9	32.7	56.9	106.3	276.0	300.9	238.1	153.8	69.3	50.1
87.5°	8.0	7.2	12.6	23.0	45.0	123.7	172.2	101.0	57.4	20.4	15.7
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°	253.8	253.8	253.8	253.8	253.8	253.8	253.8	253.8	253.8	253.8	253.8
2.5°	309.3	307.8	287.3	289.9	294.4	295.5	295.3	287.9	280.0	302.0	301.3
5°	394.0	380.3	370.0	367.8	355.2	342.6	347.0	345.5	343.6	353.5	354.8
7.5°	454.9	436.0	424.0	393.4	364.3	339.1	347.2	349.7	344.7	362.7	368.1
10°	471.0	456.0	443.2	403.8	387.7	373.1	351.3	326.5	323.2	312.8	314.1
12.5°	512.4	510.3	466.4	431.8	410.9	381.7	334.7	304.6	278.9	280.1	272.6
15°	545.1	546.2	493.4	445.0	388.9	344.3	289.0	251.6	225.1	219.8	214.4
17.5°	589.0	586.8	495.7	429.2	358.1	292.7	225.0	187.8	183.4	186.5	181.8
20°	608.2	588.6	481.5	390.0	310.0	222.3	170.0	150.3	158.9	171.1	171.4
22.5°	625.3	591.9	474.2	358.4	246.0	161.7	136.5	132.9	143.0	159.4	160.8
25°	624.6	607.3	461.0	326.5	190.8	126.2	118.6	121.2	133.3	150.4	151.4
27.5°	656.1	595.5	426.8	284.7	143.7	108.1	110.0	114.8	120.5	136.9	140.1
30°	655.8	617.4	409.6	233.8	115.4	99.0	104.0	108.2	112.9	127.9	129.7
32.5°	671.3	603.2	399.2	181.9	103.5	96.8	98.1	102.2	109.0	119.1	120.4
35°	690.0	619.4	366.0	144.5	99.0	94.9	95.9	98.2	104.5	113.7	115.0
37.5°	750.0	622.4	352.8	121.8	98.8	94.1	93.9	95.2	102.2	110.7	114.4
40°	773.4	650.3	314.5	113.7	97.8	94.1	92.1	92.8	98.6	109.4	112.3
42.5°	829.5	659.5	286.1	111.0	97.8	92.4	89.4	90.5	97.2	106.8	111.4
45°	887.3	672.7	252.3	110.4	97.7	92.3	86.4	88.9	94.5	102.5	107.5
47.5°	969.6	720.1	218.5	108.7	96.6	93.0	85.8	85.6	90.5	97.4	102.1
50°	1103.8	794.1	192.3	106.7	96.7	92.4	84.4	82.4	85.6	91.7	96.3
52.5°	1290.7	920.1	182.0	105.6	95.6	90.2	82.0	79.0	80.8	85.6	90.0
55°	1507.6	1090.4	192.1	105.6	93.4	86.7	78.7	75.1	76.1	79.4	83.7
57.5°	1761.1	1301.9	241.0	104.0	90.6	82.6	74.7	70.5	70.8	73.7	77.6
60°	2025.9	1538.3	350.6	102.8	88.7	78.0	70.0	65.7	65.2	68.0	71.5
62.5°	2291.0	1756.3	465.9	105.7	88.1	74.1	65.0	60.7	60.5	63.0	65.9
65°	2501.9	1905.4	494.6	117.5	91.7	69.7	59.8	55.8	55.6	57.6	60.8
67.5°	2605.4	1927.0	375.7	132.2	99.3	65.5	54.9	51.1	50.8	53.1	55.8
70°	2528.8	1779.3	231.9	133.7	98.9	60.7	49.7	46.5	46.0	48.3	50.4
72.5°	2245.3	1556.4	176.2	118.3	85.6	53.8	44.6	41.8	41.0	43.1	45.0
75°	1802.2	1235.7	141.2	95.4	67.5	45.3	39.5	36.8	35.9	37.8	39.5
77.5°	1049.8	695.2	103.2	74.5	51.0	37.0	33.7	31.3	30.2	32.3	33.5
80°	341.3	231.6	64.8	53.5	37.3	29.0	27.3	25.6	24.5	25.9	26.3
82.5°	122.6	86.2	35.9	32.8	24.8	20.8	20.6	19.7	18.3	18.8	18.8
85°	54.3	39.3	21.3	17.6	14.8	11.1	13.0	12.3	10.9	10.7	10.3
87.5°	15.2	13.0	7.8	6.0	4.8	1.8	4.2	3.7	3.0	2.8	1.9
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)