

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: P596885

Luminaire Tested: **MSA-SA1C-835-U-T2-HSS**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P596885  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-9)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 5/27/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA1C-835-U-T2-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3900 lumens  
Efficiency: N/A  
Efficacy: 66.1 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type II - Medium  
BUG Rating: B0 - U0 - G1

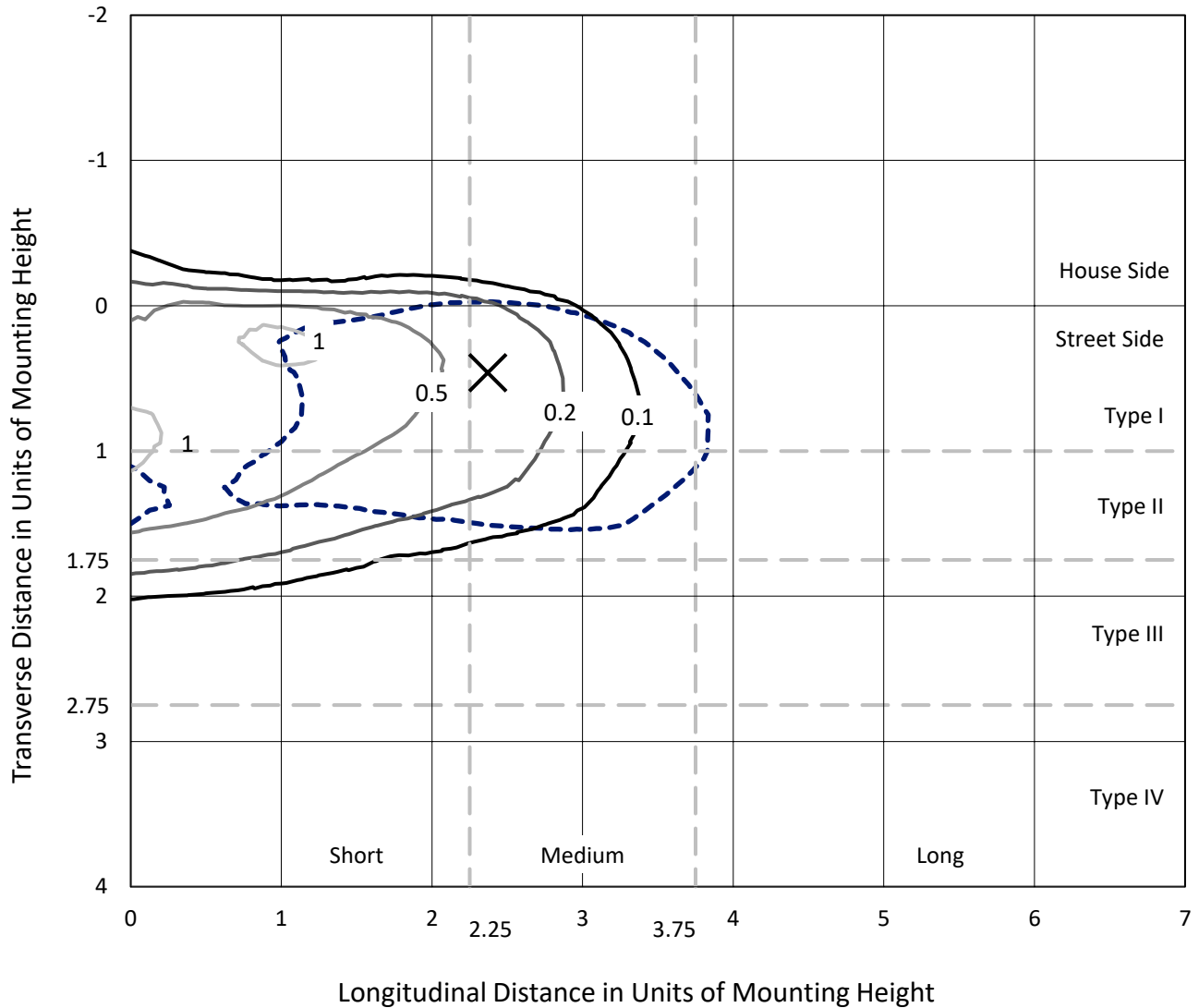
Input Watts (W): 59  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

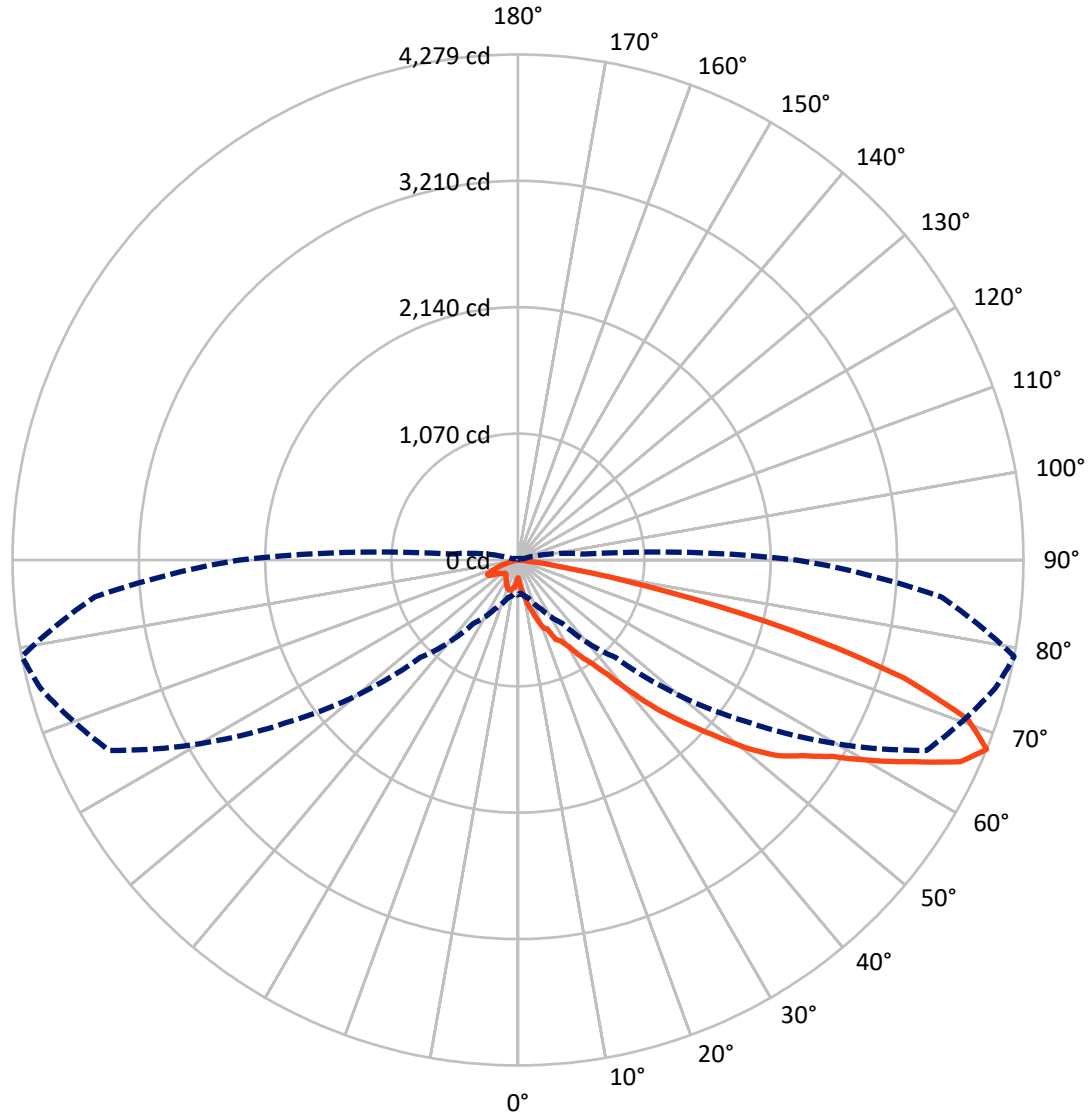
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.2 fc  
 Type II - Medium - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 79-Deg Lateral      - - - Horizontal Cone Through 67.5-Deg Vertical

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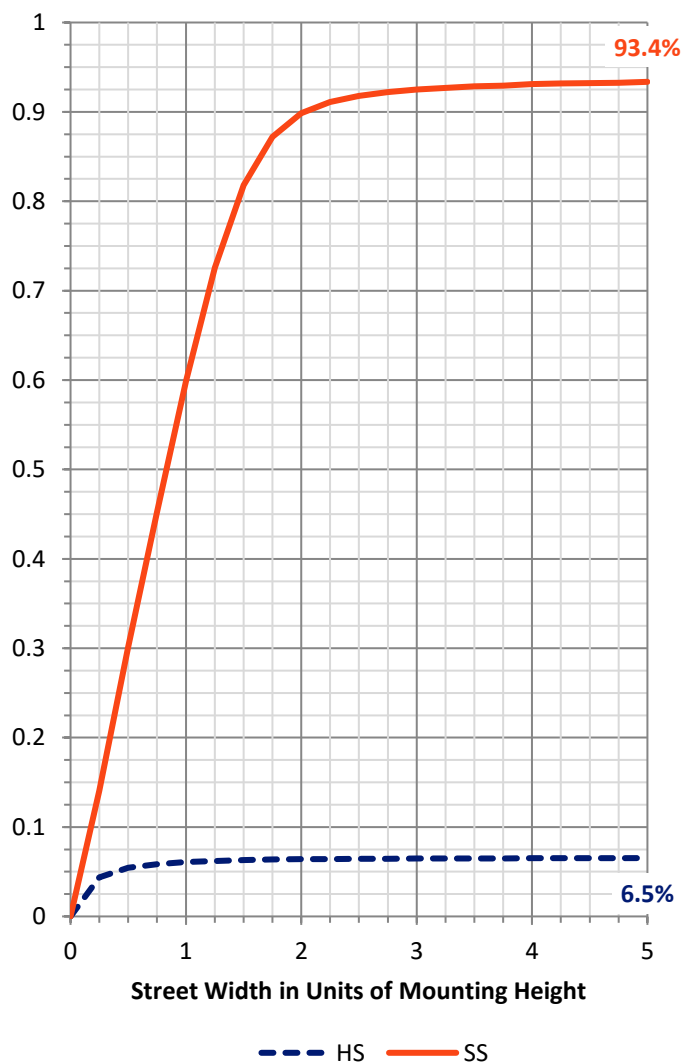
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	256.3	0.0	256.3
	% Fixture	6.6	0.0	6.6
<b>Street Side</b>	Lumens	3643.7	0.0	3643.7
	% Fixture	93.4	0.0	93.4
<b>Total</b>	Lumens	3900.0	0.0	3900.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	21.9	0.6
10°-20°	87.1	2.2
20°-30°	168.1	4.3
30°-40°	330.2	8.5
40°-50°	661.6	17.0
50°-60°	1057.4	27.1
60°-70°	1064.0	27.3
70°-80°	480.0	12.3
80°-90°	29.7	0.8
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°	3900.0	100.0
0°-180°	3900.0	100.0

**Coefficient of Utilization**



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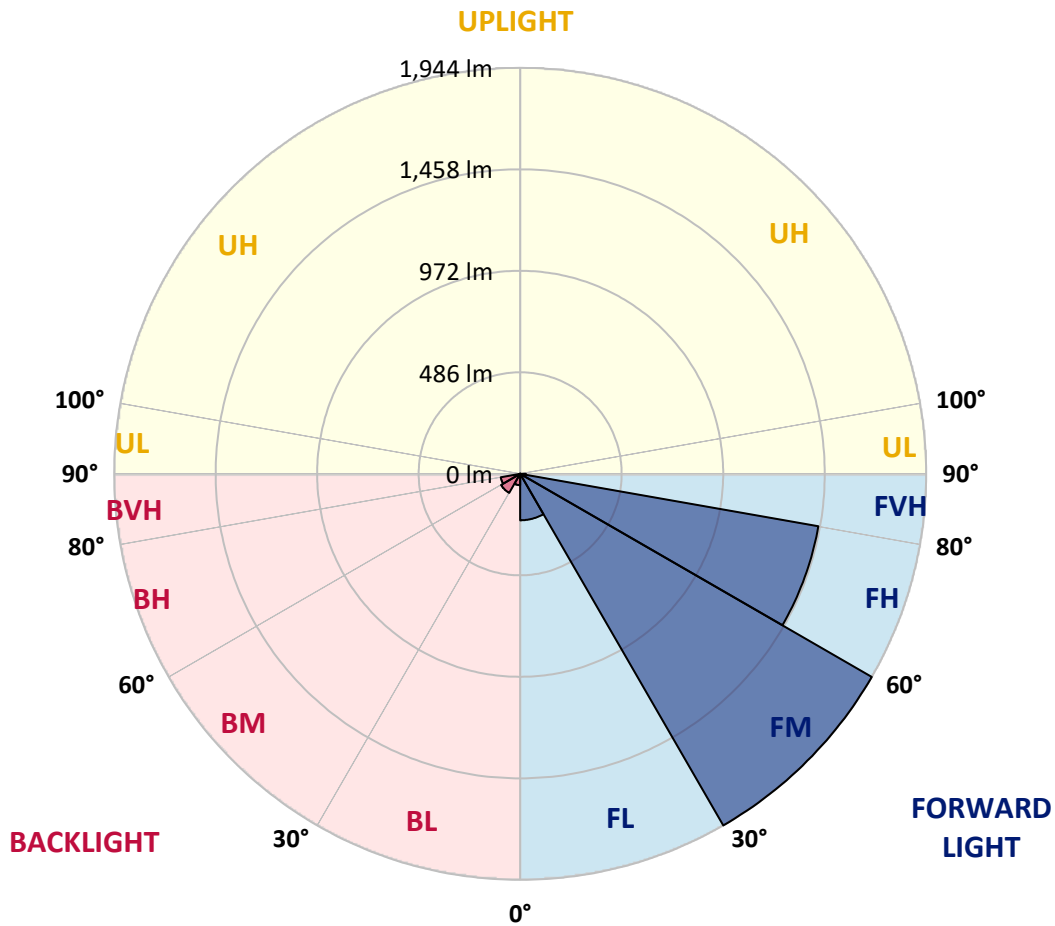
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	222.6	5.7			
FM (30°-60°)	1943.8	49.8			
FH (60°-80°)	1449.5	37.2			G1/1800
FVH (80°-90°)	27.8	0.7			G1/100
BL (0°-30°)	54.5	1.4	B0/110		
BM (30°-60°)	105.4	2.7	B0/220		
BH (60°-80°)	94.5	2.4	B0/110		G0/110
BVH (80°-90°)	1.9	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 II Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	79°	85°
0°	150.3	150.3	150.3	150.3	150.3	150.3	150.3	150.3	150.3	150.3	150.3
2.5°	202.9	195.6	183.8	190.5	190.1	193.5	187.0	179.9	168.6	179.9	180.8
5°	292.2	278.6	270.0	268.3	258.8	250.0	248.1	240.8	235.2	225.1	234.1
7.5°	364.0	357.7	342.5	340.8	317.5	304.6	308.7	305.5	284.2	273.7	282.5
10°	394.5	383.8	385.9	383.8	373.9	377.5	369.1	359.5	342.5	325.1	303.1
12.5°	406.3	404.6	422.5	420.3	443.5	471.5	452.8	436.6	397.3	393.0	363.1
15°	431.7	442.4	439.9	448.9	463.7	511.2	510.8	514.7	473.0	450.6	407.4
17.5°	454.3	462.2	449.3	459.6	500.1	528.9	567.4	552.3	557.0	534.2	467.4
20°	444.6	453.6	440.7	434.5	505.7	560.3	611.6	600.7	629.1	614.9	522.6
22.5°	505.0	488.0	455.6	435.4	488.5	559.6	627.3	673.1	668.2	633.4	574.0
25°	579.6	569.3	530.4	494.7	499.4	555.7	676.8	744.1	758.7	743.9	622.8
27.5°	680.2	677.9	598.3	582.8	536.8	538.8	684.5	833.5	800.2	777.0	679.8
30°	811.6	792.9	698.5	678.3	610.4	577.0	731.8	910.7	886.2	854.6	733.3
32.5°	952.8	955.6	835.2	768.6	714.0	674.4	713.1	946.8	992.6	967.0	800.2
35°	1113.2	1125.7	978.4	900.2	794.0	735.7	793.5	1057.7	1139.9	1072.6	889.8
37.5°	1360.2	1359.8	1187.8	1031.9	954.8	891.6	927.5	1158.6	1320.9	1226.3	1050.7
40°	1577.6	1530.3	1370.3	1191.3	1070.9	1053.7	1027.6	1296.6	1514.2	1457.2	1193.6
42.5°	1739.9	1706.6	1513.3	1374.0	1224.8	1170.2	1160.9	1498.9	1799.5	1719.7	1397.6
45°	1934.0	1824.8	1682.5	1556.9	1405.0	1389.0	1367.3	1704.2	2131.4	1951.7	1575.0
47.5°	2108.0	2005.2	1870.6	1709.4	1534.8	1665.9	1582.5	1884.6	2372.8	2204.1	1770.6
50°	2254.4	2145.2	1994.5	1871.7	1796.9	1885.9	1746.8	2033.1	2633.6	2496.9	1953.6
52.5°	2329.0	2205.4	2088.8	2012.9	2058.7	2038.7	1969.5	2213.1	2855.9	2753.6	2115.7
55°	2267.7	2146.9	2098.1	2135.7	2274.8	2217.0	2222.6	2491.9	3065.7	2924.7	2256.7
57.5°	1996.0	1885.7	1907.4	2010.4	2276.9	2428.3	2511.1	2762.8	3234.1	3138.0	2474.3
60°	1509.9	1421.1	1501.5	1684.2	2062.8	2386.2	2715.7	3033.7	3474.6	3444.6	2803.7
62.5°	922.1	873.9	987.9	1215.8	1643.8	2179.6	2835.1	3394.9	3732.0	3764.0	3153.0
65°	470.4	448.7	543.7	744.1	1110.6	1790.4	2748.8	3619.3	3997.9	4116.2	3486.0
67.5°	296.3	282.3	333.0	453.8	655.3	1167.8	2406.8	3815.6	4185.8	4279.4	3597.2
70°	205.3	196.5	240.4	311.5	413.4	629.1	1787.0	3632.5	4036.8	4041.1	3328.2
72.5°	130.3	123.4	166.2	230.7	305.1	324.8	1024.4	2850.3	3455.5	3415.7	2695.3
75°	84.5	81.1	105.6	169.0	234.3	200.4	506.3	1923.3	2477.7	2415.4	1790.2
77.5°	60.6	58.5	70.7	112.9	166.8	140.2	227.0	1146.3	1420.6	1284.3	869.0
80°	36.5	36.3	51.2	70.7	118.7	98.9	104.9	520.5	550.8	449.1	265.5
82.5°	18.3	18.9	28.6	45.6	76.3	64.7	47.9	173.3	147.9	109.0	53.7
85°	4.3	5.4	15.0	31.4	38.3	25.8	22.8	45.4	40.6	30.7	15.7
87.5°	0.0	0.0	4.7	7.5	10.3	4.3	7.7	8.6	11.0	8.6	3.2
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°	150.3	150.3	150.3	150.3	150.3	150.3	150.3	150.3	150.3	150.3	150.3
2.5°	181.0	178.4	162.7	158.7	158.2	153.7	154.8	150.5	150.7	160.4	160.4
5°	230.7	215.6	200.6	187.3	178.2	165.3	160.6	158.7	156.9	160.8	163.2
7.5°	270.9	248.7	221.7	192.6	165.8	147.3	144.7	140.0	138.2	142.1	145.1
10°	288.7	261.2	224.0	181.7	156.5	141.5	129.0	122.3	121.0	120.8	121.9
12.5°	326.6	292.4	226.6	177.6	150.3	133.7	119.5	108.4	98.0	99.1	98.0
15°	356.9	316.5	226.6	167.7	135.2	118.7	93.7	88.1	86.6	89.0	87.1
17.5°	402.7	340.3	215.2	150.1	122.3	92.2	82.8	82.3	85.4	88.8	86.6
20°	430.2	343.6	196.1	129.9	100.4	80.0	76.5	73.1	77.4	80.2	79.1
22.5°	458.8	343.8	176.9	119.1	80.8	72.9	67.3	64.5	65.1	67.7	68.2
25°	471.0	335.4	159.1	104.9	73.3	65.1	59.3	56.3	55.3	56.5	56.1
27.5°	504.4	319.3	139.7	89.4	69.7	57.8	52.5	48.8	45.6	47.7	48.2
30°	509.1	314.1	129.2	79.5	64.9	51.2	46.4	42.6	40.2	43.2	43.2
32.5°	524.1	285.7	123.8	75.5	60.0	47.3	40.8	38.1	37.6	39.6	39.8
35°	547.4	273.3	115.9	72.2	55.5	42.8	36.8	35.5	35.0	36.5	36.5
37.5°	626.0	257.8	107.1	69.4	51.6	40.4	35.7	33.5	33.8	35.0	35.9
40°	678.3	259.7	94.0	66.0	47.1	38.3	33.5	32.0	31.8	32.5	33.1
42.5°	775.2	261.2	88.1	62.3	43.6	35.7	31.4	30.3	29.5	30.1	30.7
45°	883.6	269.2	85.1	59.3	41.7	34.2	29.5	28.8	26.9	27.3	28.2
47.5°	988.1	298.2	81.5	55.0	40.0	33.3	27.5	26.0	24.7	24.5	25.4
50°	1106.8	326.4	77.4	50.3	38.3	32.0	25.6	23.2	22.4	22.4	23.0
52.5°	1213.0	353.2	73.5	47.1	37.0	29.7	23.9	21.5	20.9	20.9	21.7
55°	1324.8	381.4	70.1	44.1	35.3	27.3	22.4	20.2	20.0	19.6	20.2
57.5°	1522.1	442.9	65.8	41.5	32.9	25.4	21.1	18.9	18.5	17.8	18.5
60°	1809.6	537.3	60.2	38.9	30.1	24.1	20.0	17.4	16.8	15.7	15.9
62.5°	2090.6	613.6	53.7	35.7	27.5	22.8	18.3	15.7	14.6	13.3	13.5
65°	2331.3	643.7	46.9	31.8	24.9	19.8	15.9	13.8	12.3	10.5	10.3
67.5°	2359.7	568.4	40.2	28.2	22.4	16.8	13.5	12.3	9.9	8.4	8.0
70°	2123.7	423.5	33.5	24.9	19.3	14.2	11.6	10.7	9.2	8.0	7.3
72.5°	1691.1	312.6	28.2	22.1	17.0	12.0	9.9	10.1	9.2	7.7	6.9
75°	1118.4	178.9	23.0	18.5	14.2	9.7	9.0	9.0	8.8	7.3	6.4
77.5°	538.1	77.2	17.6	14.6	11.4	7.3	8.2	8.2	8.4	6.7	5.4
80°	152.6	23.2	11.0	9.9	8.4	4.9	6.4	6.2	5.6	3.9	2.4
82.5°	27.3	9.0	4.9	5.2	4.7	1.9	3.7	3.4	2.8	1.5	0.2
85°	7.5	3.4	2.8	3.0	2.4	0.6	1.5	1.9	1.5	0.9	0.0
87.5°	1.9	1.5	1.9	2.1	1.7	0.2	0.6	0.2	0.6	0.2	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)