

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: P596577

Luminaire Tested: **MSA-SA2A-827-U-T2-HSS**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596577
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-SA2A-827-U-T2-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) 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: 4407 lumens
Efficiency: N/A
Efficacy: 66.8 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B0 - U0 - G1

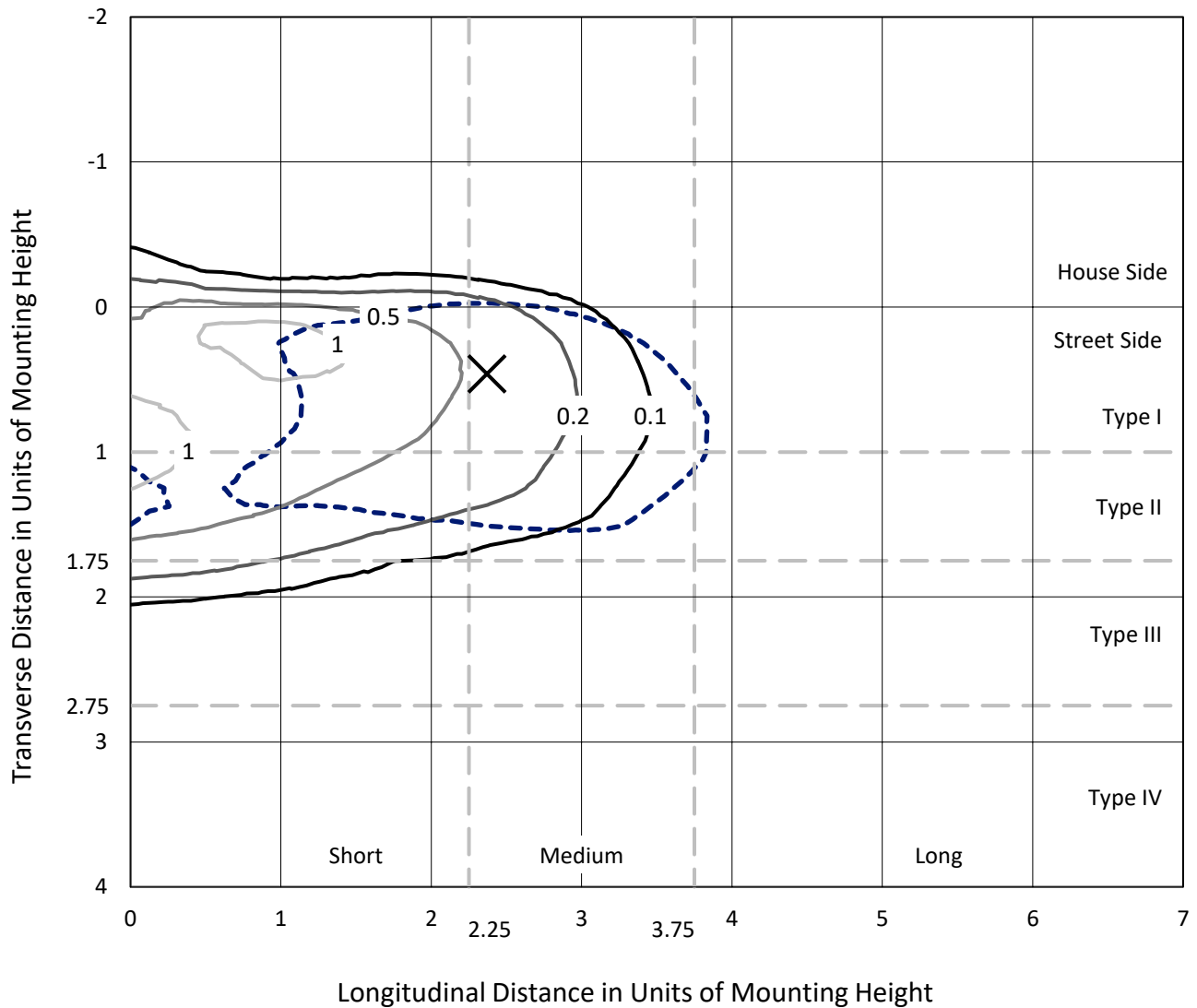
Input Watts (W): 66
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

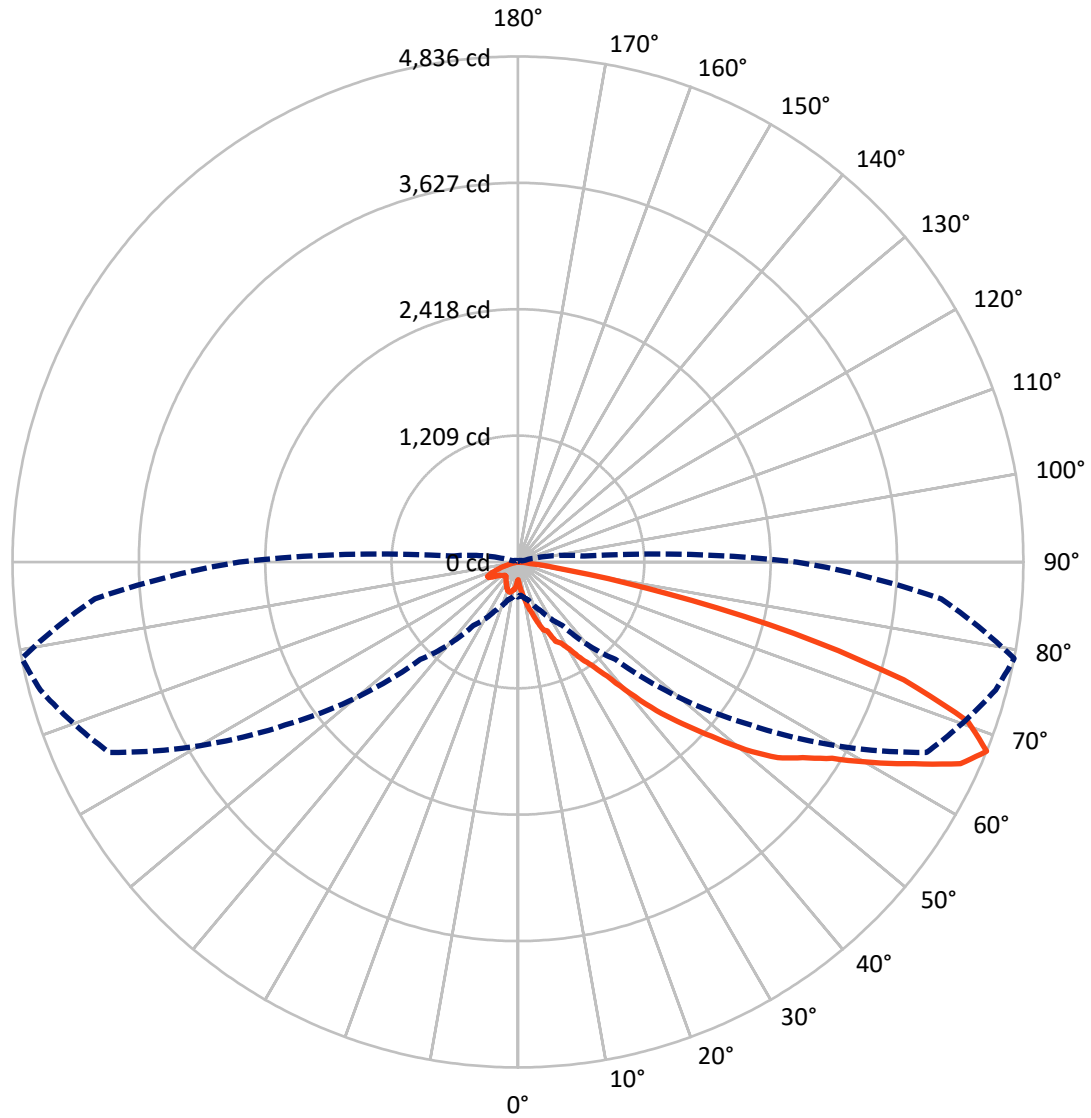
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.3 fc
 Type 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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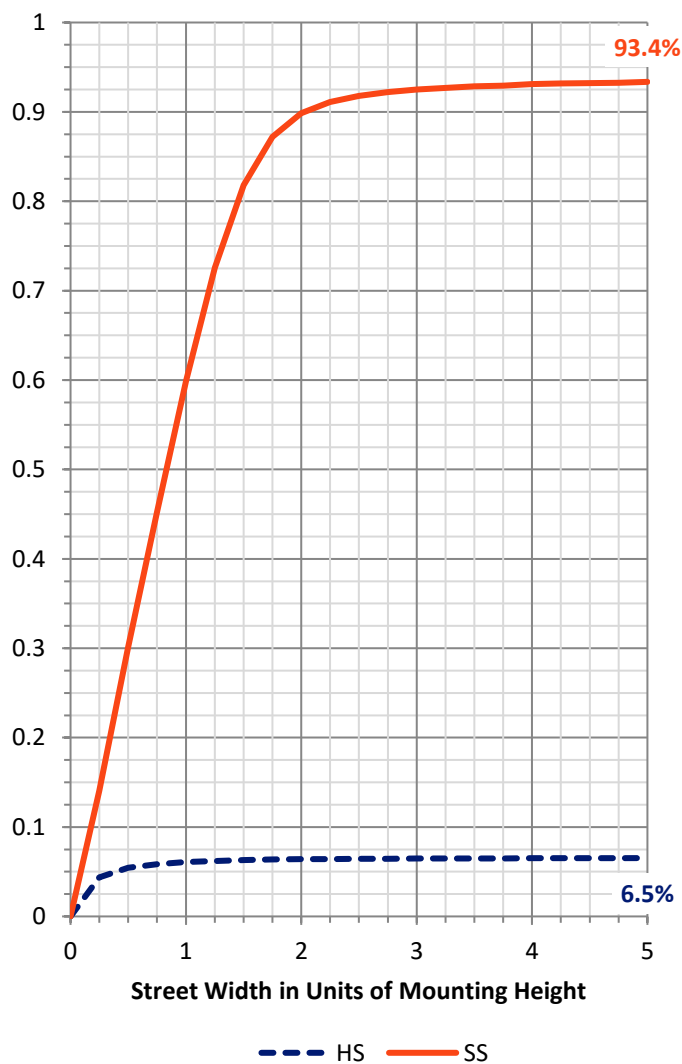
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	289.6	0.0	289.6
	% Fixture	6.6	0.0	6.6
Street Side	Lumens	4117.4	0.0	4117.4
	% Fixture	93.4	0.0	93.4
Total	Lumens	4407.0	0.0	4407.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	24.7	0.6
10°-20°	98.5	2.2
20°-30°	190.0	4.3
30°-40°	373.2	8.5
40°-50°	747.6	17.0
50°-60°	1194.9	27.1
60°-70°	1202.3	27.3
70°-80°	542.4	12.3
80°-90°	33.6	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°	4407.0	100.0
0°-180°	4407.0	100.0

Coefficient of Utilization



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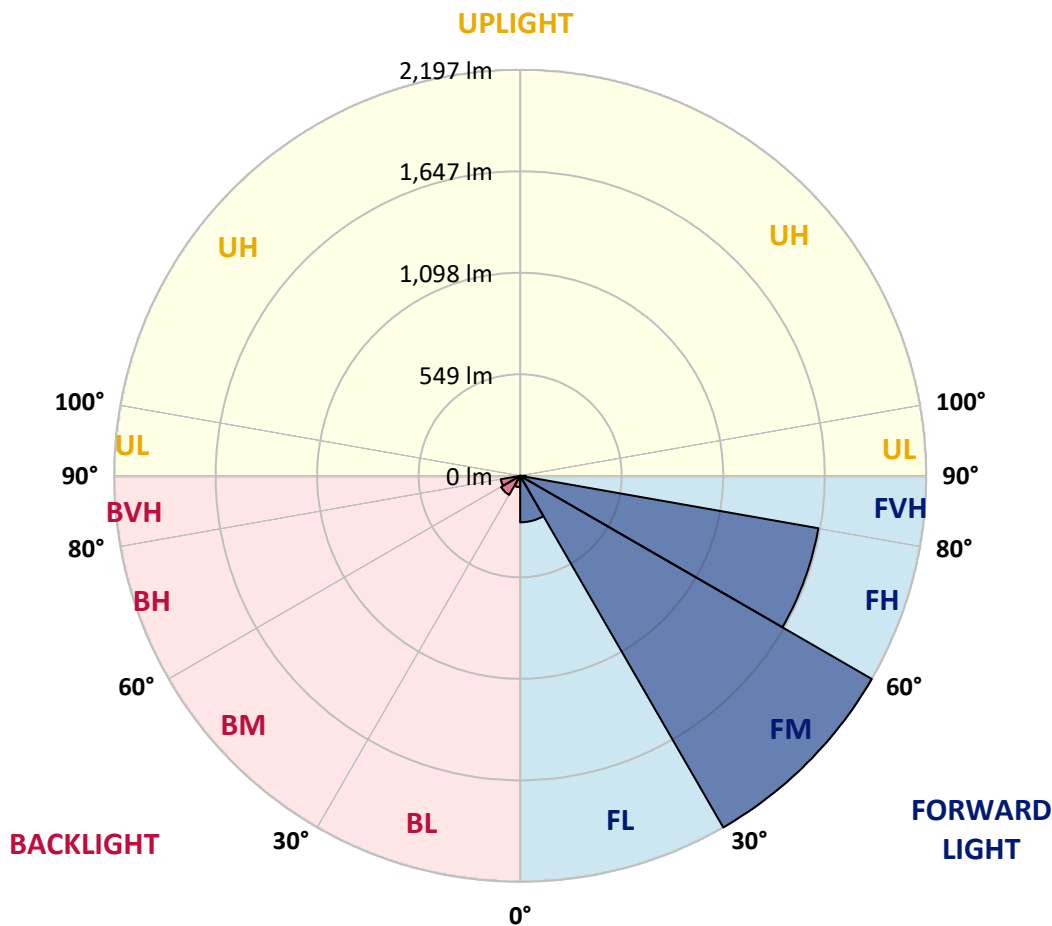
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	251.6	5.7			
FM (30°-60°)	2196.5	49.8			
FH (60°-80°)	1637.9	37.2			G1/1800
FVH (80°-90°)	31.4	0.7			G1/100
BL (0°-30°)	61.6	1.4	B0/110		
BM (30°-60°)	119.1	2.7	B0/220		
BH (60°-80°)	106.7	2.4	B0/110		G0/110
BVH (80°-90°)	2.1	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°	169.8	169.8	169.8	169.8	169.8	169.8	169.8	169.8	169.8	169.8	169.8
2.5°	229.3	221.1	207.7	215.2	214.8	218.6	211.4	203.3	190.5	203.3	204.3
5°	330.2	314.8	305.1	303.2	292.5	282.5	280.3	272.1	265.8	254.4	264.6
7.5°	411.3	404.2	387.0	385.1	358.8	344.2	348.9	345.2	321.2	309.3	319.2
10°	445.8	433.6	436.1	433.6	422.5	426.6	417.1	406.2	387.0	367.3	342.5
12.5°	459.2	457.2	477.4	474.9	501.2	532.8	511.6	493.4	448.9	444.1	410.3
15°	487.8	500.0	497.0	507.3	524.0	577.7	577.2	581.6	534.5	509.2	460.4
17.5°	513.3	522.3	507.7	519.4	565.1	597.6	641.1	624.1	629.5	603.7	528.1
20°	502.4	512.6	498.0	491.0	571.4	633.1	691.2	678.8	710.8	694.8	590.6
22.5°	570.7	551.5	514.8	491.9	552.0	632.4	708.9	760.6	755.0	715.7	648.6
25°	655.0	643.3	599.3	559.0	564.3	628.0	764.8	840.8	857.3	840.6	703.8
27.5°	768.7	766.0	676.1	658.6	606.6	608.8	773.5	941.9	904.2	878.0	768.2
30°	917.1	896.0	789.3	766.5	689.7	652.0	827.0	1029.1	1001.4	965.7	828.7
32.5°	1076.7	1079.9	943.8	868.5	806.8	762.1	805.8	1069.9	1121.6	1092.7	904.2
35°	1257.9	1272.0	1105.6	1017.2	897.2	831.3	896.7	1195.3	1288.1	1212.0	1005.5
37.5°	1537.1	1536.6	1342.2	1166.1	1078.9	1007.5	1048.0	1309.2	1492.6	1385.7	1187.2
40°	1782.7	1729.2	1548.5	1346.1	1210.1	1190.6	1161.2	1465.2	1711.0	1646.6	1348.8
42.5°	1966.1	1928.4	1710.0	1552.6	1384.0	1322.3	1311.9	1693.8	2033.4	1943.3	1579.3
45°	2185.5	2062.1	1901.2	1759.4	1587.6	1569.6	1545.1	1925.8	2408.5	2205.4	1779.8
47.5°	2382.0	2265.9	2113.8	1931.6	1734.3	1882.5	1788.3	2129.6	2681.3	2490.6	2000.8
50°	2547.4	2424.0	2253.7	2115.0	2030.5	2131.0	1973.9	2297.5	2976.0	2821.5	2207.6
52.5°	2631.7	2492.1	2360.4	2274.6	2326.4	2303.8	2225.5	2500.8	3227.2	3111.5	2390.7
55°	2562.5	2426.0	2370.8	2413.3	2570.5	2505.2	2511.5	2815.9	3464.3	3304.9	2550.1
57.5°	2255.4	2130.8	2155.3	2271.7	2572.9	2744.0	2837.5	3122.0	3654.5	3545.9	2796.0
60°	1706.1	1605.8	1696.7	1903.2	2331.0	2696.4	3068.8	3428.1	3926.4	3892.3	3168.1
62.5°	1042.0	987.5	1116.3	1373.8	1857.5	2462.9	3203.6	3836.2	4217.1	4253.3	3562.9
65°	531.5	507.0	614.4	840.8	1255.0	2023.2	3106.2	4089.8	4517.7	4651.3	3939.2
67.5°	334.8	319.0	376.3	512.8	740.5	1319.6	2719.7	4311.7	4730.0	4835.7	4064.8
70°	232.0	222.0	271.6	352.0	467.2	710.8	2019.3	4104.7	4561.6	4566.5	3760.9
72.5°	147.2	139.4	187.8	260.7	344.7	367.1	1157.6	3220.9	3904.7	3859.8	3045.7
75°	95.5	91.6	119.3	190.9	264.8	226.4	572.1	2173.3	2799.9	2729.4	2022.9
77.5°	68.5	66.1	79.9	127.5	188.5	158.4	256.5	1295.3	1605.3	1451.3	982.0
80°	41.3	41.1	57.8	79.9	134.1	111.8	118.6	588.2	622.4	507.5	300.0
82.5°	20.6	21.4	32.3	51.5	86.2	73.1	54.2	195.8	167.1	123.2	60.7
85°	4.9	6.1	17.0	35.5	43.2	29.2	25.8	51.3	45.9	34.7	17.7
87.5°	0.0	0.0	5.3	8.5	11.7	4.9	8.7	9.7	12.4	9.7	3.6
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°	169.8	169.8	169.8	169.8	169.8	169.8	169.8	169.8	169.8	169.8	169.8
2.5°	204.6	201.6	183.9	179.3	178.8	173.7	174.9	170.1	170.3	181.2	181.2
5°	260.7	243.7	226.7	211.6	201.4	186.8	181.5	179.3	177.3	181.7	184.4
7.5°	306.1	281.1	250.5	217.7	187.3	166.4	163.5	158.2	156.2	160.6	164.0
10°	326.3	295.2	253.1	205.3	176.9	159.9	145.8	138.2	136.8	136.5	137.7
12.5°	369.0	330.4	256.1	200.7	169.8	151.1	135.1	122.4	110.8	112.0	110.8
15°	403.3	357.6	256.1	189.5	152.8	134.1	105.9	99.6	97.9	100.6	98.4
17.5°	455.0	384.6	243.2	169.6	138.2	104.2	93.5	93.0	96.4	100.3	97.9
20°	486.1	388.2	221.6	146.7	113.5	90.4	86.5	82.6	87.5	90.6	89.4
22.5°	518.4	388.5	199.9	134.6	91.3	82.4	76.0	72.9	73.6	76.5	77.0
25°	532.3	379.0	179.8	118.6	82.8	73.6	67.1	63.6	62.4	63.9	63.4
27.5°	569.9	360.8	157.9	101.1	78.7	65.4	59.3	55.1	51.5	53.9	54.4
30°	575.3	354.9	146.0	89.9	73.4	57.8	52.5	48.1	45.4	48.8	48.8
32.5°	592.3	322.9	139.9	85.3	67.8	53.4	46.2	43.0	42.5	44.7	44.9
35°	618.5	308.8	130.9	81.6	62.7	48.3	41.5	40.1	39.6	41.3	41.3
37.5°	707.4	291.3	121.0	78.5	58.3	45.7	40.3	37.9	38.1	39.6	40.6
40°	766.5	293.5	106.2	74.6	53.2	43.2	37.9	36.2	36.0	36.7	37.4
42.5°	876.0	295.2	99.6	70.5	49.3	40.3	35.5	34.3	33.3	34.0	34.7
45°	998.5	304.2	96.2	67.1	47.1	38.6	33.3	32.6	30.4	30.9	31.8
47.5°	1116.5	337.0	92.1	62.2	45.2	37.7	31.1	29.4	27.9	27.7	28.7
50°	1250.6	368.8	87.5	56.8	43.2	36.2	28.9	26.2	25.3	25.3	26.0
52.5°	1370.7	399.1	83.1	53.2	41.8	33.5	27.0	24.3	23.6	23.6	24.5
55°	1497.0	431.0	79.2	49.8	39.8	30.9	25.3	22.8	22.6	22.1	22.8
57.5°	1720.0	500.5	74.3	46.9	37.2	28.7	23.8	21.4	20.9	20.2	20.9
60°	2044.8	607.1	68.0	44.0	34.0	27.2	22.6	19.7	18.9	17.7	18.0
62.5°	2362.3	693.3	60.7	40.3	31.1	25.8	20.6	17.7	16.5	15.1	15.3
65°	2634.4	727.4	53.0	36.0	28.2	22.4	18.0	15.5	13.8	11.9	11.7
67.5°	2666.5	642.3	45.4	31.8	25.3	18.9	15.3	13.8	11.2	9.5	9.0
70°	2399.7	478.6	37.9	28.2	21.9	16.0	13.1	12.1	10.4	9.0	8.3
72.5°	1910.9	353.2	31.8	25.0	19.2	13.6	11.2	11.4	10.4	8.7	7.8
75°	1263.8	202.1	26.0	20.9	16.0	10.9	10.2	10.2	10.0	8.3	7.3
77.5°	608.1	87.2	19.9	16.5	12.9	8.3	9.2	9.2	9.5	7.5	6.1
80°	172.5	26.2	12.4	11.2	9.5	5.6	7.3	7.0	6.3	4.4	2.7
82.5°	30.9	10.2	5.6	5.8	5.3	2.2	4.1	3.9	3.2	1.7	0.2
85°	8.5	3.9	3.2	3.4	2.7	0.7	1.7	2.2	1.7	1.0	0.0
87.5°	2.2	1.7	2.2	2.4	1.9	0.2	0.7	0.2	0.7	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)