

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: P596929

Luminaire Tested: **MSA-SA2A-835-U-T2-HSS**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596929
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-835-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: 4942 lumens
Efficiency: N/A
Efficacy: 74.9 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B1 - U0 - G2

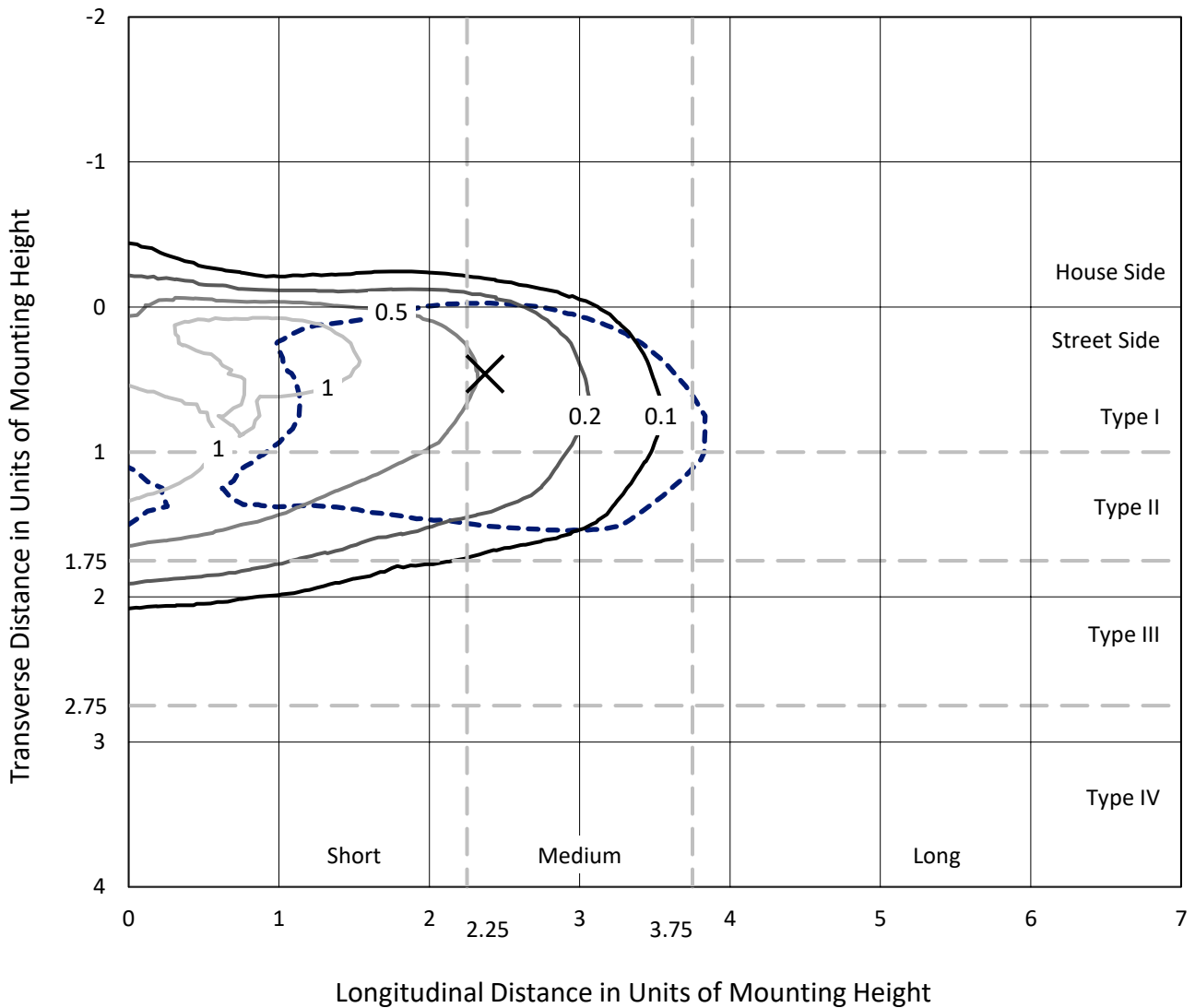
Input Watts (W): 66
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

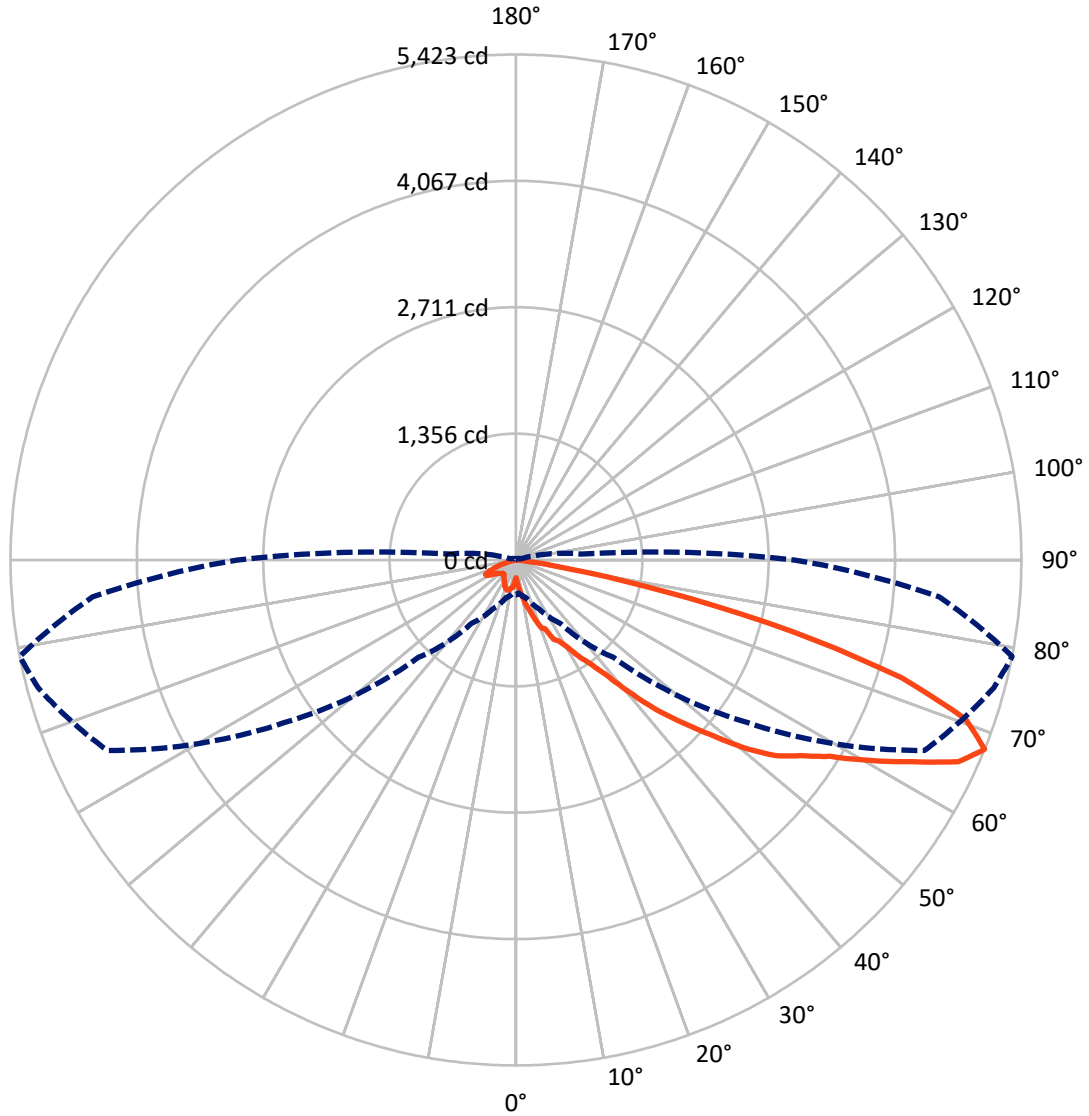
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.5 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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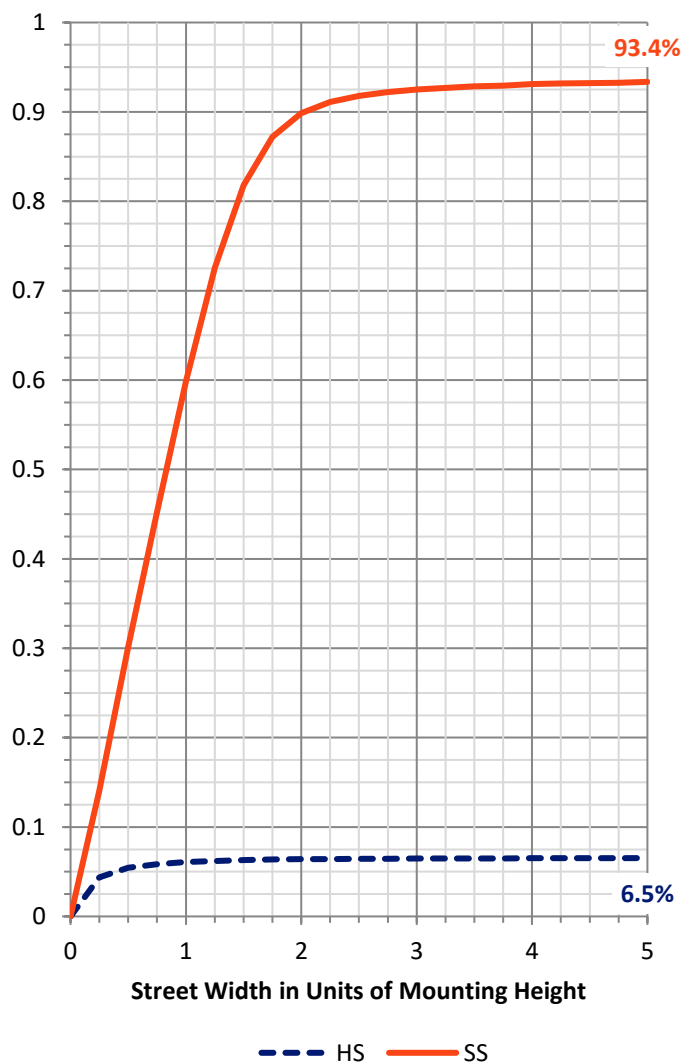
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	324.7	0.0	324.7
	% Fixture	6.6	0.0	6.6
Street Side	Lumens	4617.3	0.0	4617.3
	% Fixture	93.4	0.0	93.4
Total	Lumens	4942.0	0.0	4942.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	27.7	0.6
10°-20°	110.4	2.2
20°-30°	213.0	4.3
30°-40°	418.5	8.5
40°-50°	838.3	17.0
50°-60°	1340.0	27.1
60°-70°	1348.2	27.3
70°-80°	608.2	12.3
80°-90°	37.6	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°	4942.0	100.0
0°-180°	4942.0	100.0

Coefficient of Utilization



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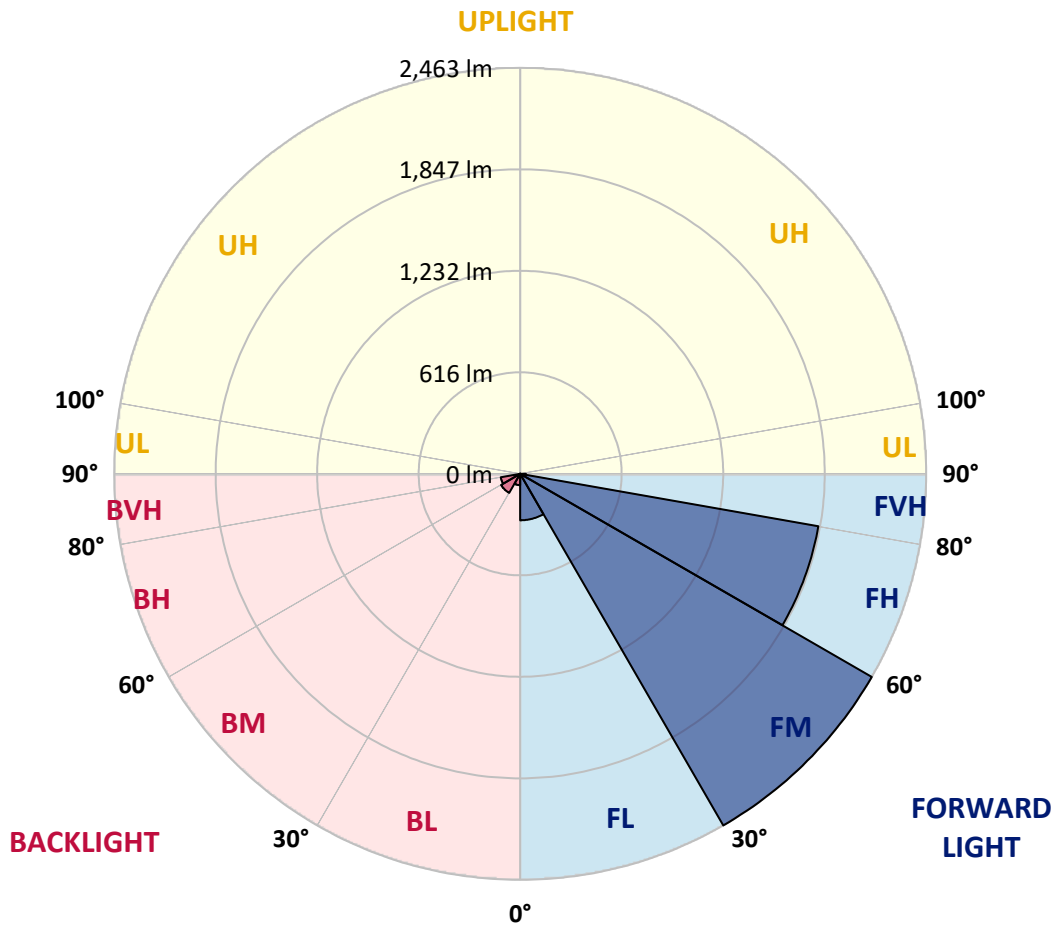
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	282.1	5.7			
FM (30°-60°)	2463.2	49.8			
FH (60°-80°)	1836.7	37.2			G2/5000
FVH (80°-90°)	35.2	0.7			G1/100
BL (0°-30°)	69.0	1.4	B0/110		
BM (30°-60°)	133.6	2.7	B0/220		
BH (60°-80°)	119.7	2.4	B1/500		G1/500
BVH (80°-90°)	2.4	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 II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	79°	85°
0°	190.4	190.4	190.4	190.4	190.4	190.4	190.4	190.4	190.4	190.4	190.4
2.5°	257.2	247.9	232.9	241.4	240.8	245.2	237.0	228.0	213.6	228.0	229.1
5°	370.2	353.1	342.2	340.0	328.0	316.8	314.4	305.1	298.0	285.2	296.7
7.5°	461.2	453.3	434.0	431.8	402.4	386.0	391.2	387.1	360.2	346.8	358.0
10°	499.9	486.3	489.0	486.3	473.8	478.4	467.8	455.5	434.0	411.9	384.1
12.5°	514.9	512.7	535.3	532.6	562.0	597.4	573.7	553.3	503.4	498.0	460.1
15°	547.0	560.7	557.4	568.8	587.6	647.8	647.3	652.2	599.3	571.0	516.3
17.5°	575.6	585.7	569.4	582.5	633.7	670.2	718.9	699.9	705.9	677.0	592.3
20°	563.4	574.8	558.5	550.6	640.8	710.0	775.1	761.2	797.1	779.1	662.3
22.5°	639.9	618.4	577.3	551.7	619.0	709.1	794.9	853.0	846.7	802.6	727.4
25°	734.5	721.4	672.1	626.9	632.9	704.2	857.6	942.9	961.4	942.6	789.2
27.5°	862.0	859.0	758.2	738.6	680.3	682.7	867.4	1056.2	1014.0	984.6	861.4
30°	1028.4	1004.7	885.1	859.5	773.4	731.2	927.3	1154.0	1123.0	1082.9	929.3
32.5°	1207.4	1210.9	1058.4	973.9	904.7	854.6	903.6	1199.8	1257.8	1225.4	1014.0
35°	1410.6	1426.4	1239.8	1140.7	1006.1	932.3	1005.5	1340.4	1444.4	1359.2	1127.6
37.5°	1723.7	1723.1	1505.2	1307.7	1209.9	1129.8	1175.3	1468.1	1673.8	1553.9	1331.4
40°	1999.1	1939.2	1736.5	1509.5	1357.0	1335.2	1302.2	1643.0	1918.7	1846.5	1512.5
42.5°	2204.8	2162.5	1917.6	1741.1	1552.0	1482.8	1471.1	1899.4	2280.2	2179.2	1771.1
45°	2450.8	2312.4	2132.0	1972.9	1780.3	1760.2	1732.7	2159.5	2700.9	2473.1	1995.8
47.5°	2671.2	2540.9	2370.4	2166.1	1944.9	2111.1	2005.4	2388.1	3006.8	2792.9	2243.7
50°	2856.7	2718.3	2527.3	2371.8	2277.0	2389.8	2213.5	2576.4	3337.3	3164.0	2475.6
52.5°	2951.2	2794.6	2646.9	2550.8	2608.8	2583.4	2495.7	2804.4	3619.0	3489.3	2681.0
55°	2873.6	2720.5	2658.6	2706.3	2882.6	2809.3	2816.4	3157.7	3884.8	3706.1	2859.7
57.5°	2529.2	2389.5	2417.0	2547.5	2885.3	3077.1	3182.0	3501.0	4098.2	3976.4	3135.4
60°	1913.3	1800.8	1902.6	2134.2	2614.0	3023.7	3441.3	3844.3	4403.0	4364.9	3552.8
62.5°	1168.4	1107.4	1251.8	1540.6	2083.0	2761.9	3592.5	4301.9	4729.1	4769.7	3995.4
65°	596.1	568.6	689.0	942.9	1407.4	2268.8	3483.3	4586.3	5066.1	5215.9	4417.4
67.5°	375.4	357.7	422.0	575.1	830.4	1479.8	3049.8	4835.1	5304.2	5422.7	4558.3
70°	260.2	249.0	304.6	394.8	523.9	797.1	2264.4	4603.0	5115.4	5120.9	4217.5
72.5°	165.1	156.4	210.6	292.3	386.6	411.6	1298.1	3611.9	4378.8	4328.4	3415.4
75°	107.1	102.7	133.8	214.1	296.9	253.9	641.6	2437.2	3139.7	3060.7	2268.5
77.5°	76.8	74.1	89.6	143.0	211.4	177.6	287.7	1452.6	1800.2	1627.5	1101.2
80°	46.3	46.0	64.8	89.6	150.4	125.3	132.9	659.6	698.0	569.1	336.5
82.5°	23.2	24.0	36.2	57.8	96.7	82.0	60.8	219.6	187.4	138.1	68.1
85°	5.4	6.8	19.1	39.8	48.5	32.7	28.9	57.5	51.5	39.0	19.9
87.5°	0.0	0.0	6.0	9.5	13.1	5.4	9.8	10.9	13.9	10.9	4.1
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°	190.4	190.4	190.4	190.4	190.4	190.4	190.4	190.4	190.4	190.4	190.4
2.5°	229.4	226.1	206.2	201.1	200.5	194.8	196.1	190.7	191.0	203.2	203.2
5°	292.3	273.2	254.2	237.3	225.8	209.5	203.5	201.1	198.9	203.8	206.8
7.5°	343.3	315.2	280.9	244.1	210.0	186.6	183.3	177.4	175.2	180.1	183.9
10°	365.9	331.0	283.9	230.2	198.3	179.3	163.5	155.0	153.4	153.1	154.5
12.5°	413.8	370.5	287.1	225.0	190.4	169.5	151.5	137.3	124.2	125.6	124.2
15°	452.2	401.0	287.1	212.5	171.4	150.4	118.8	111.7	109.8	112.8	110.3
17.5°	510.3	431.3	272.7	190.2	155.0	116.9	104.9	104.3	108.2	112.5	109.8
20°	545.1	435.3	248.5	164.5	127.2	101.3	97.0	92.6	98.1	101.6	100.3
22.5°	581.4	435.6	224.2	150.9	102.4	92.4	85.3	81.7	82.5	85.8	86.4
25°	596.9	425.0	201.6	132.9	92.9	82.5	75.2	71.4	70.0	71.6	71.1
27.5°	639.1	404.6	177.1	113.3	88.3	73.3	66.5	61.8	57.8	60.5	61.0
30°	645.1	398.0	163.7	100.8	82.3	64.8	58.8	53.9	50.9	54.8	54.8
32.5°	664.2	362.1	156.9	95.6	76.0	59.9	51.8	48.2	47.7	50.1	50.4
35°	693.6	346.3	146.8	91.5	70.3	54.2	46.6	45.0	44.4	46.3	46.3
37.5°	793.3	326.6	135.7	88.0	65.4	51.2	45.2	42.5	42.8	44.4	45.5
40°	859.5	329.1	119.1	83.6	59.7	48.5	42.5	40.6	40.3	41.1	42.0
42.5°	982.4	331.0	111.7	79.0	55.3	45.2	39.8	38.4	37.3	38.1	39.0
45°	1119.7	341.1	107.9	75.2	52.9	43.3	37.3	36.5	34.1	34.6	35.7
47.5°	1252.1	377.9	103.3	69.7	50.7	42.2	34.9	33.0	31.3	31.1	32.1
50°	1402.5	413.5	98.1	63.7	48.5	40.6	32.4	29.4	28.3	28.3	29.1
52.5°	1537.0	447.6	93.2	59.7	46.9	37.6	30.2	27.2	26.4	26.4	27.5
55°	1678.7	483.3	88.8	55.8	44.7	34.6	28.3	25.6	25.3	24.8	25.6
57.5°	1928.8	561.2	83.4	52.6	41.7	32.1	26.7	24.0	23.4	22.6	23.4
60°	2293.0	680.8	76.3	49.3	38.1	30.5	25.3	22.1	21.2	19.9	20.2
62.5°	2649.1	777.5	68.1	45.2	34.9	28.9	23.2	19.9	18.5	16.9	17.2
65°	2954.2	815.7	59.4	40.3	31.6	25.1	20.2	17.4	15.5	13.3	13.1
67.5°	2990.2	720.3	50.9	35.7	28.3	21.2	17.2	15.5	12.5	10.6	10.1
70°	2691.1	536.7	42.5	31.6	24.5	18.0	14.7	13.6	11.7	10.1	9.3
72.5°	2142.9	396.1	35.7	28.1	21.5	15.3	12.5	12.8	11.7	9.8	8.7
75°	1417.2	226.7	29.1	23.4	18.0	12.3	11.4	11.4	11.2	9.3	8.2
77.5°	681.9	97.8	22.3	18.5	14.4	9.3	10.4	10.4	10.6	8.4	6.8
80°	193.4	29.4	13.9	12.5	10.6	6.3	8.2	7.9	7.1	4.9	3.0
82.5°	34.6	11.4	6.3	6.5	6.0	2.5	4.6	4.4	3.5	1.9	0.3
85°	9.5	4.4	3.5	3.8	3.0	0.8	1.9	2.5	1.9	1.1	0.0
87.5°	2.5	1.9	2.5	2.7	2.2	0.3	0.8	0.3	0.8	0.3	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)