

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: P367515

Luminaire Tested: **MSA-SA2C-830-U-T2-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367515
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-9)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA2C-830-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: 7393 lumens
Efficiency: N/A
Efficacy: 65.4 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B1 - U0 - G2

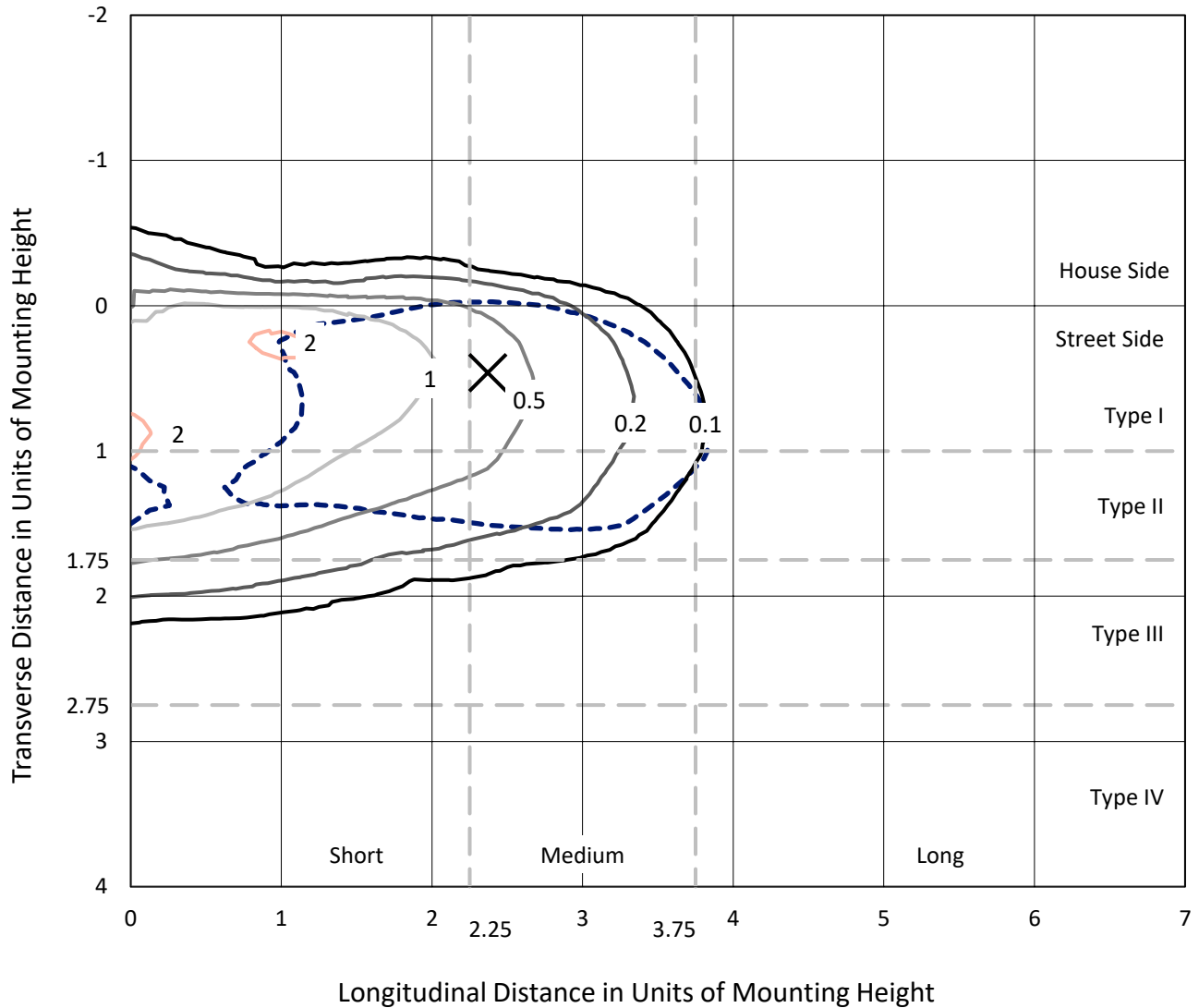
Input Watts (W): 113
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

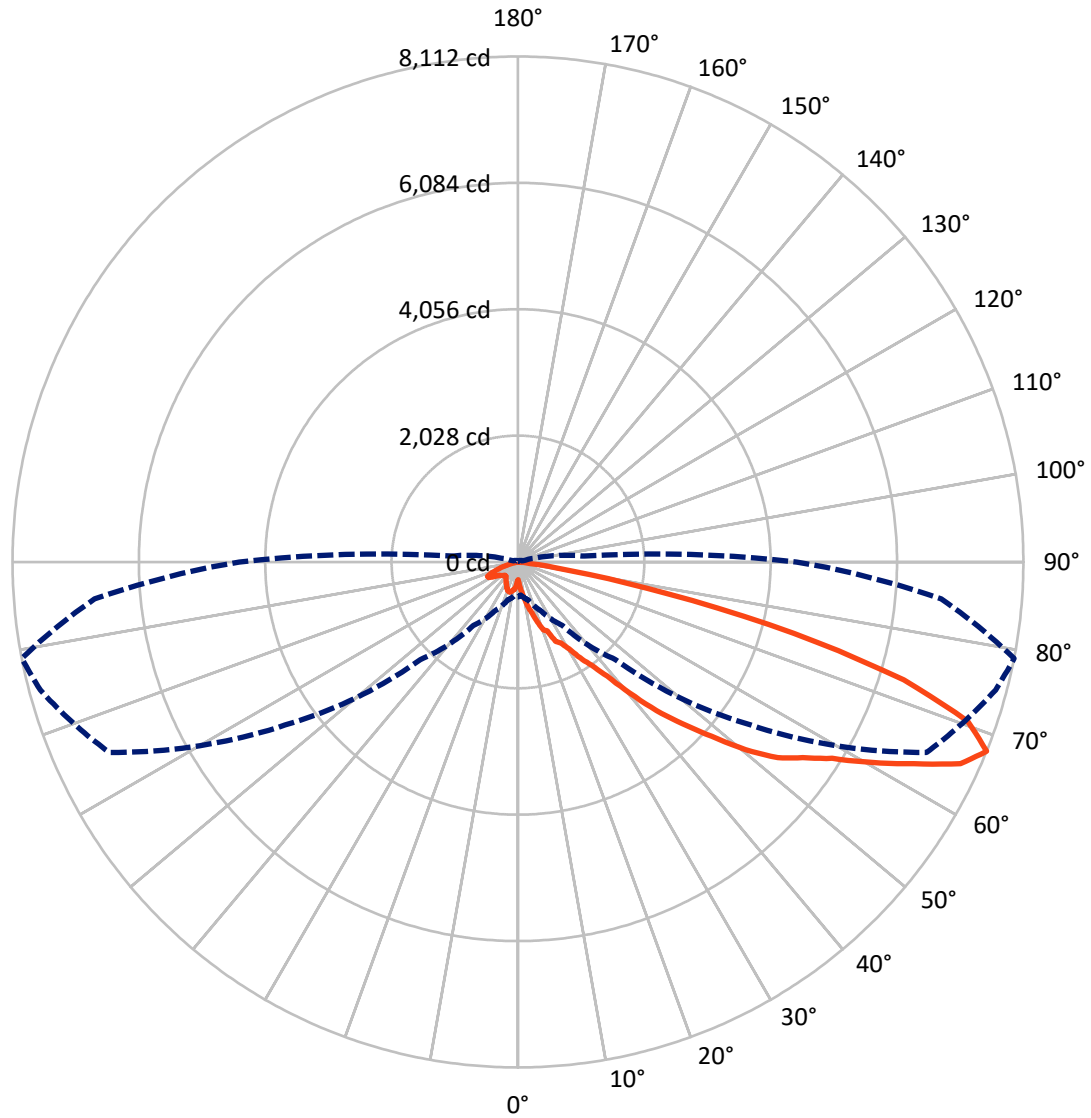
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.2 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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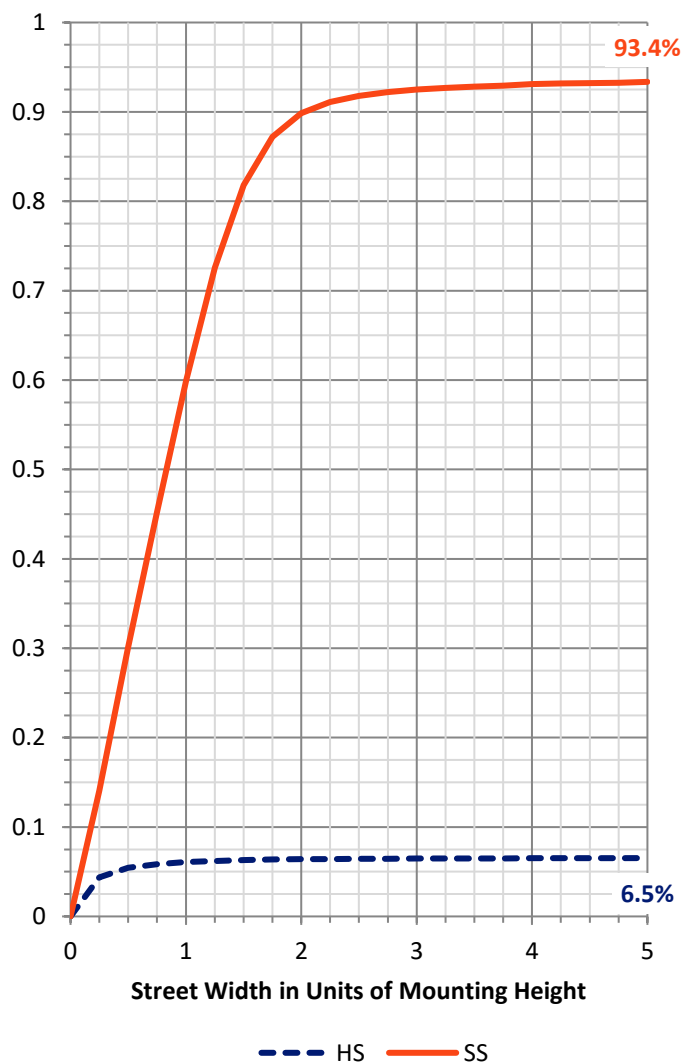
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	485.8	0.0	485.8
	% Fixture	6.6	0.0	6.6
Street Side	Lumens	6907.2	0.0	6907.2
	% Fixture	93.4	0.0	93.4
Total	Lumens	7393.0	0.0	7393.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	41.4	0.6
10°-20°	165.2	2.2
20°-30°	318.7	4.3
30°-40°	626.0	8.5
40°-50°	1254.1	17.0
50°-60°	2004.5	27.1
60°-70°	2016.9	27.3
70°-80°	909.9	12.3
80°-90°	56.3	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°	7393.0	100.0
0°-180°	7393.0	100.0

Coefficient of Utilization



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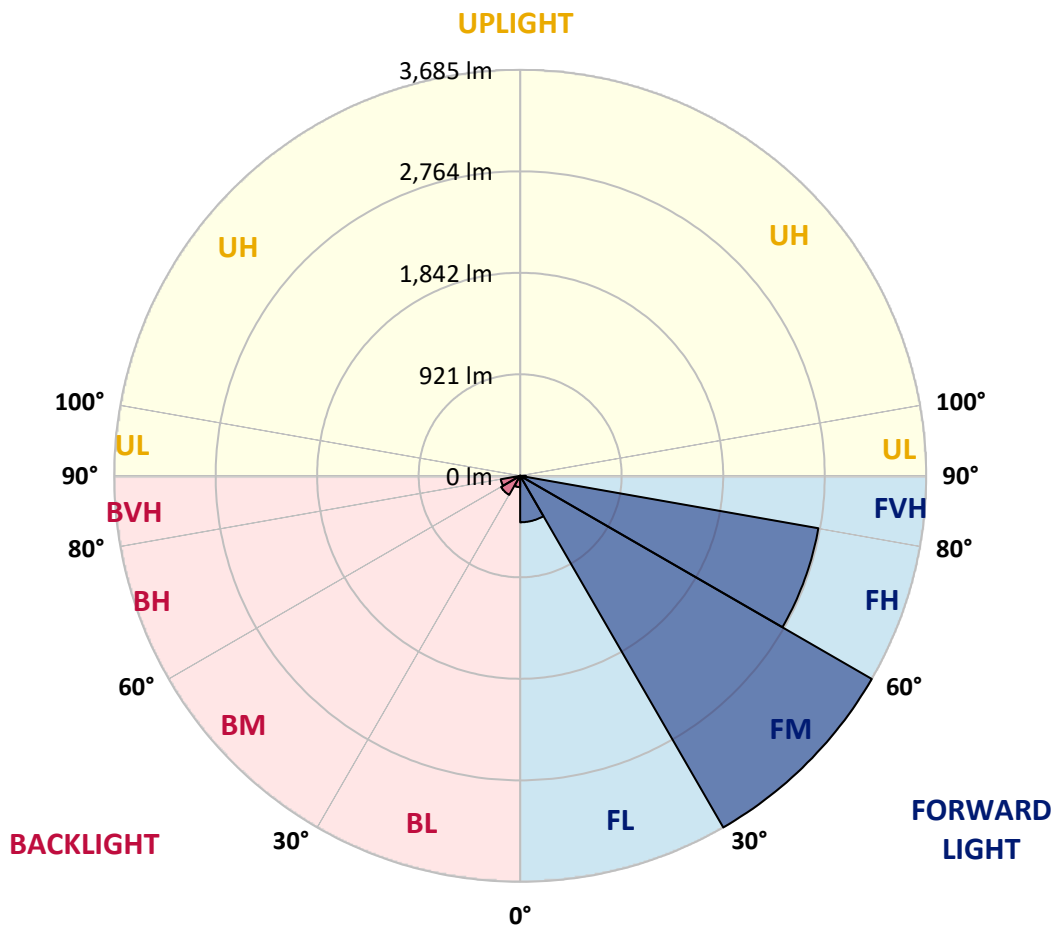
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	422.1	5.7			
FM (30°-60°)	3684.8	49.8			
FH (60°-80°)	2747.7	37.2			G2/5000
FVH (80°-90°)	52.7	0.7			G1/100
BL (0°-30°)	103.3	1.4	B0/110		
BM (30°-60°)	199.9	2.7	B0/220		
BH (60°-80°)	179.1	2.4	B1/500		G1/500
BVH (80°-90°)	3.6	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°	284.9	284.9	284.9	284.9	284.9	284.9	284.9	284.9	284.9	284.9	284.9
2.5°	384.7	370.9	348.4	361.1	360.3	366.8	354.6	341.1	319.5	341.1	342.7
5°	553.8	528.2	511.9	508.6	490.7	474.0	470.3	456.4	445.9	426.7	443.8
7.5°	690.0	678.1	649.2	646.0	601.9	577.5	585.2	579.1	538.8	518.8	535.5
10°	747.8	727.5	731.5	727.5	708.7	715.6	699.7	681.4	649.2	616.2	574.6
12.5°	770.3	767.0	800.8	796.7	840.8	893.7	858.3	827.7	753.1	745.0	688.3
15°	818.3	838.7	833.8	850.9	879.1	969.1	968.3	975.7	896.6	854.2	772.3
17.5°	861.1	876.2	851.8	871.3	947.9	1002.6	1075.5	1047.0	1055.9	1012.7	886.0
20°	842.8	859.9	835.5	823.6	958.5	1062.1	1159.5	1138.7	1192.5	1165.6	990.7
22.5°	957.3	925.1	863.6	825.3	925.9	1060.8	1189.2	1276.0	1266.6	1200.6	1088.1
25°	1098.7	1079.2	1005.4	937.8	946.7	1053.5	1282.9	1410.5	1438.2	1410.1	1180.6
27.5°	1289.5	1285.0	1134.2	1104.8	1017.6	1021.3	1297.6	1580.0	1516.9	1472.9	1288.6
30°	1538.5	1503.0	1324.1	1285.8	1157.0	1093.8	1387.3	1726.3	1679.9	1620.0	1390.1
32.5°	1806.2	1811.5	1583.3	1457.0	1353.4	1278.5	1351.8	1794.8	1881.6	1833.1	1516.9
35°	2110.3	2133.9	1854.7	1706.4	1505.1	1394.6	1504.2	2005.1	2160.8	2033.2	1686.8
37.5°	2578.5	2577.7	2251.7	1956.2	1809.9	1690.1	1758.1	2196.2	2503.9	2324.6	1991.7
40°	2990.5	2900.9	2597.7	2258.2	2030.0	1997.4	1948.0	2457.9	2870.3	2762.3	2262.7
42.5°	3298.2	3235.1	2868.7	2604.6	2321.8	2218.2	2200.7	2841.4	3411.1	3259.9	2649.4
45°	3666.2	3459.2	3189.4	2951.4	2663.3	2633.1	2592.0	3230.6	4040.4	3699.7	2985.6
47.5°	3995.9	3801.1	3546.0	3240.4	2909.4	3158.0	2999.9	3572.5	4498.0	4178.1	3356.5
50°	4273.5	4066.4	3780.8	3548.1	3406.2	3575.0	3311.3	3854.1	4992.4	4733.2	3703.3
52.5°	4414.9	4180.6	3959.7	3815.8	3902.6	3864.7	3733.5	4195.2	5413.8	5219.8	4010.6
55°	4298.7	4069.7	3977.2	4048.5	4312.2	4202.6	4213.2	4723.8	5811.5	5544.2	4278.0
57.5°	3783.6	3574.5	3615.7	3810.9	4316.3	4603.2	4760.1	5237.3	6130.6	5948.5	4690.4
60°	2862.2	2693.8	2846.3	3192.7	3910.4	4523.3	5148.1	5750.8	6586.7	6529.6	5314.7
62.5°	1747.9	1656.7	1872.7	2304.6	3116.1	4131.7	5374.3	6435.5	7074.5	7135.2	5977.0
65°	891.7	850.5	1030.7	1410.5	2105.4	3394.0	5210.8	6861.0	7578.6	7802.8	6608.3
67.5°	561.6	535.1	631.3	860.3	1242.2	2213.8	4562.4	7233.0	7934.8	8112.1	6819.0
70°	389.2	372.5	455.6	590.5	783.7	1192.5	3387.5	6885.8	7652.4	7660.6	6309.2
72.5°	247.0	233.9	315.0	437.3	578.3	615.8	1941.9	5403.2	6550.4	6475.0	5109.3
75°	160.2	153.6	200.1	320.3	444.2	379.8	959.8	3645.9	4696.9	4578.7	3393.6
77.5°	114.9	110.9	134.1	214.0	316.3	265.7	430.4	2173.0	2693.0	2434.7	1647.3
80°	69.3	68.9	97.0	134.1	225.0	187.5	198.9	986.7	1044.1	851.4	503.3
82.5°	34.6	35.9	54.2	86.4	144.7	122.7	90.9	328.5	280.4	206.6	101.9
85°	8.2	10.2	28.5	59.5	72.5	48.9	43.2	86.0	77.0	58.3	29.8
87.5°	0.0	0.0	9.0	14.3	19.6	8.2	14.7	16.3	20.8	16.3	6.1
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°	284.9	284.9	284.9	284.9	284.9	284.9	284.9	284.9	284.9	284.9	284.9
2.5°	343.1	338.3	308.5	300.8	300.0	291.4	293.4	285.3	285.7	304.0	304.0
5°	437.3	408.8	380.2	355.0	337.9	313.4	304.4	300.8	297.5	304.8	309.3
7.5°	513.5	471.5	420.2	365.2	314.2	279.2	274.3	265.3	262.0	269.4	275.1
10°	547.3	495.2	424.7	344.4	296.7	268.2	244.5	231.9	229.4	229.0	231.1
12.5°	619.1	554.3	429.5	336.6	284.9	253.5	226.6	205.4	185.8	187.9	185.8
15°	676.5	599.9	429.5	317.9	256.3	225.0	177.7	167.1	164.2	168.7	165.1
17.5°	763.3	645.1	407.9	284.5	231.9	174.8	156.9	156.1	161.8	168.3	164.2
20°	815.5	651.3	371.7	246.2	190.3	151.6	145.1	138.6	146.7	152.0	150.0
22.5°	869.7	651.7	335.4	225.8	153.2	138.2	127.6	122.3	123.5	128.4	129.2
25°	892.9	635.8	301.6	198.9	139.0	123.5	112.5	106.8	104.7	107.2	106.4
27.5°	956.1	605.2	264.9	169.5	132.0	109.6	99.4	92.5	86.4	90.5	91.3
30°	965.1	595.4	244.9	150.8	123.1	97.0	88.0	80.7	76.2	81.9	81.9
32.5°	993.6	541.6	234.7	143.0	113.7	89.7	77.4	72.1	71.3	75.0	75.4
35°	1037.6	518.0	219.7	136.9	105.1	81.1	69.7	67.2	66.4	69.3	69.3
37.5°	1186.8	488.6	203.0	131.6	97.8	76.6	67.7	63.6	64.0	66.4	68.1
40°	1285.8	492.3	178.1	125.1	89.3	72.5	63.6	60.7	60.3	61.5	62.8
42.5°	1469.6	495.2	167.1	118.2	82.7	67.7	59.5	57.5	55.8	57.1	58.3
45°	1675.0	510.2	161.4	112.5	79.1	64.8	55.8	54.6	50.9	51.8	53.4
47.5°	1873.1	565.3	154.5	104.3	75.8	63.2	52.2	49.3	46.9	46.5	48.1
50°	2098.0	618.6	146.7	95.4	72.5	60.7	48.5	44.0	42.4	42.4	43.6
52.5°	2299.3	669.6	139.4	89.3	70.1	56.2	45.2	40.8	39.5	39.5	41.2
55°	2511.3	723.0	132.9	83.5	66.8	51.8	42.4	38.3	37.9	37.1	38.3
57.5°	2885.4	839.5	124.7	78.7	62.4	48.1	39.9	35.9	35.0	33.8	35.0
60°	3430.3	1018.4	114.1	73.8	57.1	45.6	37.9	33.0	31.8	29.8	30.2
62.5°	3962.9	1163.1	101.9	67.7	52.2	43.2	34.6	29.8	27.7	25.3	25.7
65°	4419.4	1220.2	88.8	60.3	47.3	37.5	30.2	26.1	23.2	20.0	19.6
67.5°	4473.2	1077.5	76.2	53.4	42.4	31.8	25.7	23.2	18.7	15.9	15.1
70°	4025.7	802.9	63.6	47.3	36.7	26.9	22.0	20.4	17.5	15.1	13.9
72.5°	3205.7	592.6	53.4	42.0	32.2	22.8	18.7	19.2	17.5	14.7	13.0
75°	2120.0	339.1	43.6	35.0	26.9	18.3	17.1	17.1	16.7	13.9	12.2
77.5°	1020.1	146.3	33.4	27.7	21.6	13.9	15.5	15.5	15.9	12.6	10.2
80°	289.4	44.0	20.8	18.7	15.9	9.4	12.2	11.8	10.6	7.3	4.5
82.5°	51.8	17.1	9.4	9.8	9.0	3.7	6.9	6.5	5.3	2.9	0.4
85°	14.3	6.5	5.3	5.7	4.5	1.2	2.9	3.7	2.9	1.6	0.0
87.5°	3.7	2.9	3.7	4.1	3.3	0.4	1.2	0.4	1.2	0.4	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)