

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: P366647

Luminaire Tested: **MSA-SA1A-740-U-SL2-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P366647
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-17)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA1A-740-U-SL2-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3312 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 II - Short
BUG Rating: B1 - U0 - G1

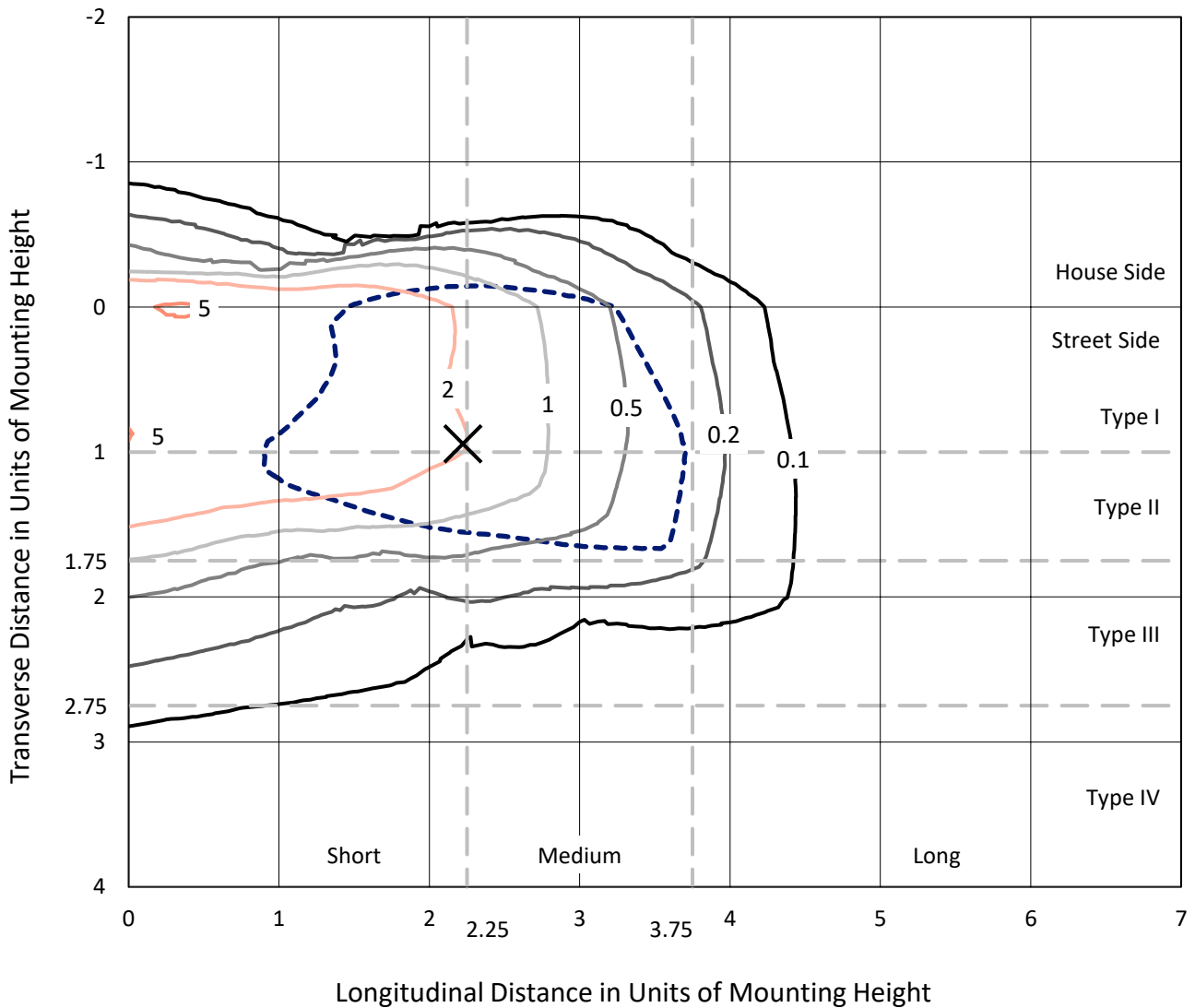
Input Watts (W): 34
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

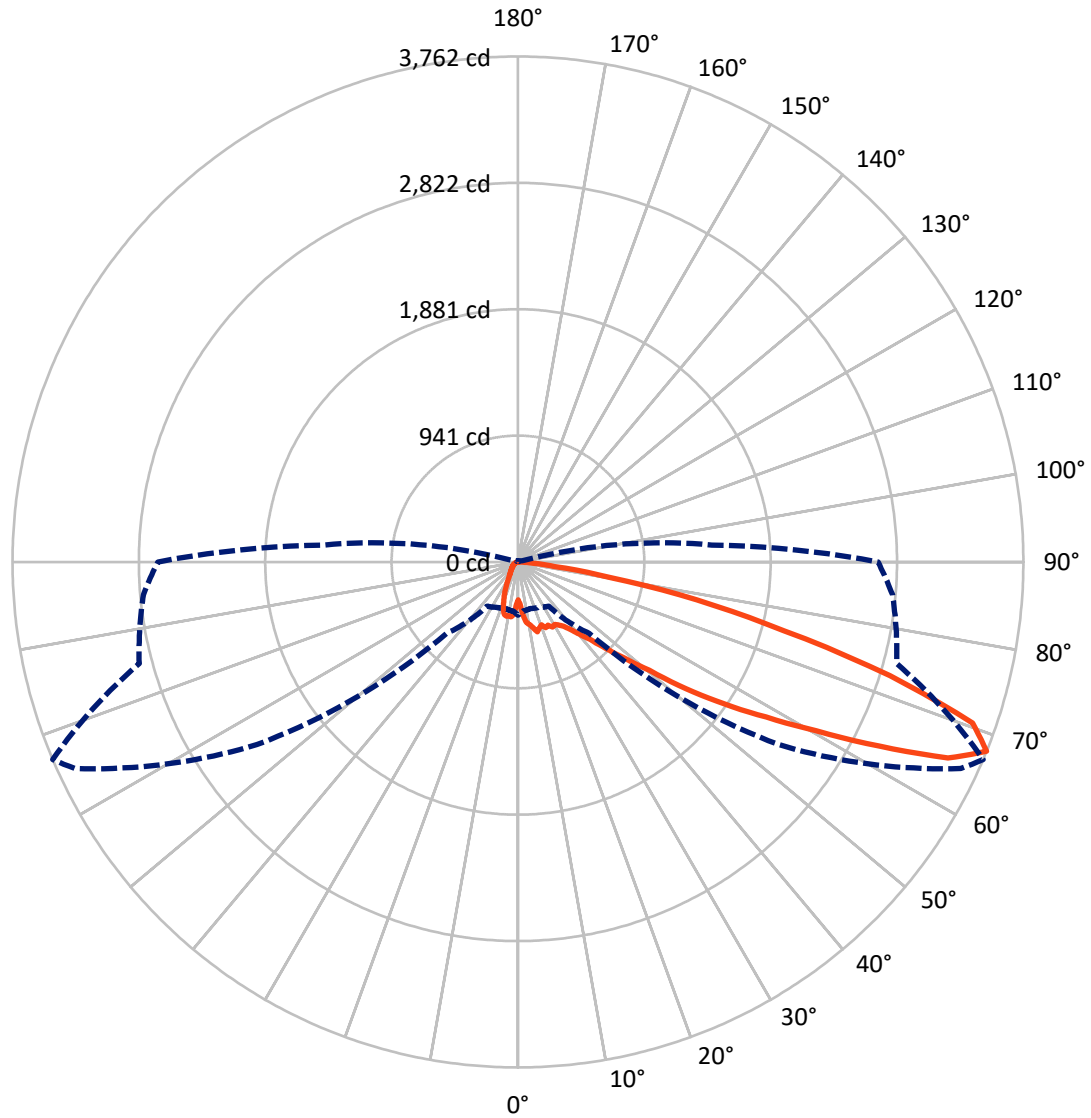
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5.5 fc
 Type II - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 67-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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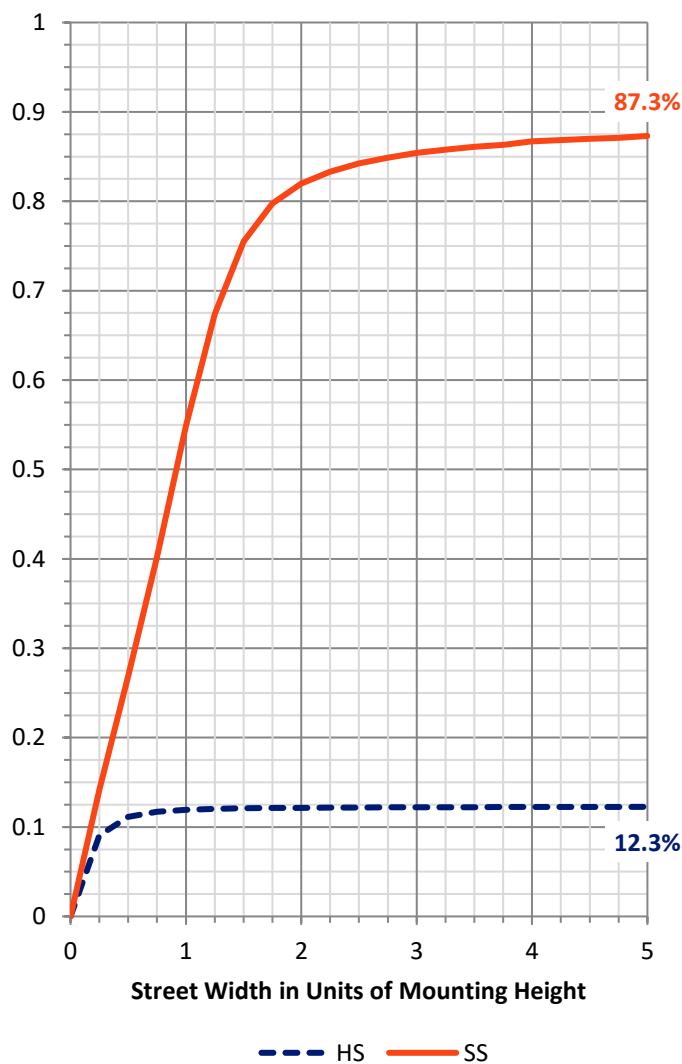
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	409.6	0.0	409.6
	% Fixture	12.4	0.0	12.4
Street Side	Lumens	2902.4	0.0	2902.4
	% Fixture	87.6	0.0	87.6
Total	Lumens	3312.0	0.0	3312.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	35.4	1.1
10°-20°	104.8	3.2
20°-30°	164.2	5.0
30°-40°	264.7	8.0
40°-50°	486.5	14.7
50°-60°	821.6	24.8
60°-70°	908.3	27.4
70°-80°	475.4	14.4
80°-90°	51.1	1.5
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°	3312.0	100.0
0°-180°	3312.0	100.0

Coefficient of Utilization



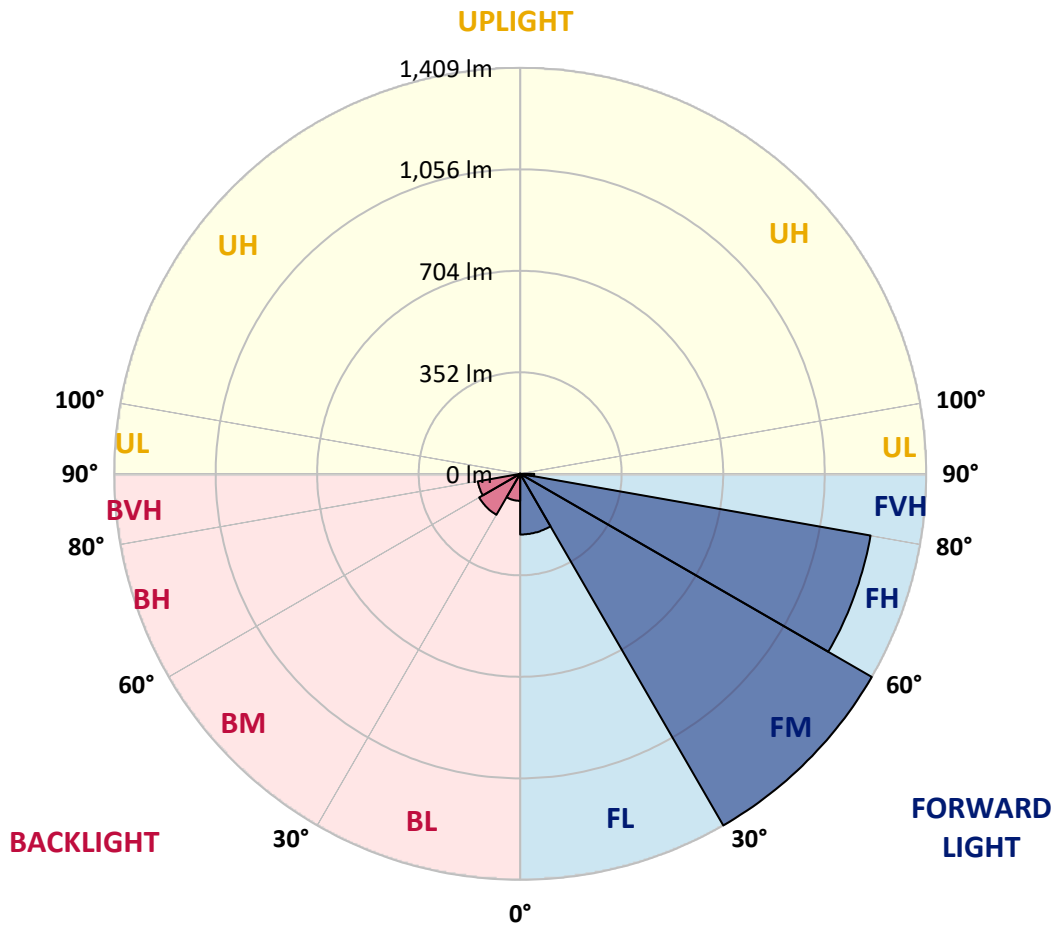
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	210.6	6.4			
FM (30°-60°)	1408.6	42.5			
FH (60°-80°)	1234.3	37.3			G1/1800
FVH (80°-90°)	48.9	1.5			G1/100
BL (0°-30°)	93.8	2.8	B0/110		
BM (30°-60°)	164.2	5.0	B0/220		
BH (60°-80°)	149.4	4.5	B1/500		G1/500
BVH (80°-90°)	2.2	0.1			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G1

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	67°	75°	85°
0°	282.1	282.1	282.1	282.1	282.1	282.1	282.1	282.1	282.1	282.1	282.1
2.5°	333.0	321.7	302.6	308.1	319.2	328.5	324.1	315.5	315.7	307.0	338.4
5°	387.4	372.3	361.2	365.1	364.6	364.2	384.9	392.8	396.2	410.6	432.0
7.5°	403.1	397.7	386.1	389.6	378.0	378.9	415.2	449.4	454.8	463.7	501.7
10°	397.0	386.6	390.8	390.8	391.0	409.8	434.1	466.9	473.5	507.7	511.8
12.5°	390.5	391.0	407.6	404.6	427.4	461.2	469.4	506.2	503.0	532.8	576.9
15°	414.8	427.6	416.8	421.0	423.2	462.9	476.1	525.0	539.1	576.8	605.5
17.5°	456.7	458.3	436.0	429.9	445.7	457.0	483.7	507.2	516.6	615.4	656.1
20°	464.2	475.0	452.3	417.3	450.8	466.2	484.9	496.1	500.2	627.4	684.6
22.5°	509.7	497.8	461.5	435.0	444.6	461.4	472.9	506.9	531.1	604.8	712.0
25°	533.1	529.9	495.3	472.6	462.9	461.5	488.1	513.8	521.5	628.2	718.7
27.5°	589.0	581.8	514.8	511.9	479.8	451.6	488.6	534.8	549.2	606.2	744.0
30°	665.2	662.5	573.3	571.4	520.3	469.6	515.8	547.7	539.0	617.4	760.8
32.5°	741.8	763.6	672.4	620.3	582.0	535.6	508.1	543.7	559.3	644.8	791.7
35°	834.3	850.1	757.2	719.4	634.2	566.5	559.3	582.2	588.9	677.4	826.8
37.5°	996.3	972.4	893.3	829.0	784.3	676.9	641.3	623.2	638.8	721.6	898.5
40°	1115.9	1100.8	1003.4	964.9	862.1	799.2	706.1	689.2	706.7	767.0	948.4
42.5°	1260.2	1228.8	1137.1	1111.1	1005.2	884.1	789.6	795.5	784.6	856.5	1036.0
45°	1390.8	1319.9	1268.8	1274.7	1218.2	1054.6	928.9	926.1	917.0	986.2	1128.0
47.5°	1478.7	1416.7	1366.9	1350.6	1343.9	1354.5	1130.2	1079.5	1072.7	1122.5	1273.0
50°	1525.9	1458.0	1396.5	1399.9	1536.3	1638.9	1337.9	1265.8	1268.3	1320.2	1471.3
52.5°	1494.1	1417.3	1352.5	1415.5	1685.5	1828.6	1681.6	1509.2	1567.7	1554.4	1737.2
55°	1347.4	1280.7	1234.7	1347.4	1701.8	2032.8	2104.8	1875.7	1862.6	1832.3	2008.4
57.5°	1100.6	1043.2	1014.8	1133.7	1523.5	2197.2	2529.9	2289.8	2178.1	2051.4	2233.5
60°	820.1	777.7	748.2	811.0	1200.4	2037.5	2808.3	2680.1	2550.7	2262.6	2435.8
62.5°	607.4	572.9	541.5	547.2	826.6	1752.3	2915.1	3093.6	3019.3	2485.5	2626.7
65°	484.7	453.3	431.3	418.7	511.9	1318.4	2766.5	3432.5	3518.1	2695.6	2764.4
67.5°	395.8	369.3	358.4	372.8	401.5	751.5	2369.3	3638.1	3762.4	2918.3	2798.4
70°	322.1	300.2	299.1	338.0	369.8	458.2	1742.8	3496.1	3589.7	2956.3	2594.9
72.5°	224.5	214.9	230.2	285.4	366.4	381.6	1000.8	2893.1	2896.5	2611.0	2134.4
75°	127.0	125.5	149.7	227.7	356.9	377.7	558.0	2044.5	2046.0	1974.8	1478.7
77.5°	69.9	65.4	87.2	153.9	306.5	369.0	359.9	1396.0	1360.2	1099.0	675.4
80°	32.3	30.4	47.2	98.6	224.1	349.0	288.5	767.3	691.9	358.0	164.8
82.5°	13.3	12.6	21.7	63.3	141.6	281.1	243.1	340.4	273.2	68.0	50.9
85°	2.4	2.5	8.9	38.3	79.3	129.5	197.1	161.6	118.8	18.8	27.9
87.5°	0.0	0.0	1.8	9.2	19.2	35.5	80.0	45.2	31.1	5.5	8.2
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°	282.1	282.1	282.1	282.1	282.1	282.1	282.1	282.1	282.1	282.1	282.1
2.5°	344.6	341.7	312.8	314.2	316.2	314.3	314.0	305.9	298.6	322.9	322.6
5°	435.8	415.5	395.5	387.8	371.1	349.3	349.5	342.6	335.5	345.4	345.4
7.5°	500.8	472.8	447.4	402.2	358.2	318.4	314.9	305.4	294.7	307.6	310.1
10°	516.0	491.6	458.8	392.5	350.8	312.0	269.3	234.2	217.9	210.3	209.0
12.5°	562.5	544.4	471.1	397.7	337.7	272.0	202.1	160.4	132.1	129.9	126.8
15°	593.6	580.8	483.2	384.7	282.3	195.6	127.0	97.4	86.0	85.0	83.5
17.5°	641.8	619.6	471.6	343.6	220.8	129.0	85.3	76.9	78.3	81.3	79.0
20°	661.5	618.1	446.4	283.9	155.1	86.5	74.1	69.6	73.1	75.9	74.6
22.5°	681.6	622.5	424.1	234.0	101.3	71.6	66.0	63.7	64.0	66.9	67.0
25°	681.5	634.6	398.2	182.3	75.4	63.7	59.6	56.6	55.4	57.5	57.0
27.5°	714.5	620.6	351.0	135.2	66.4	57.0	53.1	49.4	45.2	47.2	47.2
30°	714.7	643.3	318.0	97.1	60.8	50.7	47.4	41.7	36.8	38.5	38.6
32.5°	733.7	623.7	287.6	74.3	56.5	47.0	39.7	34.4	31.6	32.6	32.6
35°	755.4	640.5	240.9	65.5	52.1	41.8	33.9	29.7	27.6	28.4	28.4
37.5°	826.9	636.9	208.5	61.0	49.2	37.8	30.9	26.2	25.2	25.7	26.4
40°	852.8	662.0	164.5	58.3	44.5	34.1	27.2	23.7	22.3	22.7	22.8
42.5°	918.7	667.5	131.4	56.1	40.3	29.6	24.2	21.7	20.0	20.0	20.5
45°	991.4	681.5	104.5	54.3	36.8	26.5	21.8	19.8	17.3	17.0	17.6
47.5°	1096.8	734.9	85.2	50.6	32.6	24.7	20.2	17.1	15.1	14.4	15.1
50°	1273.0	825.6	75.3	46.0	29.6	23.2	17.8	14.6	13.1	12.3	12.8
52.5°	1521.7	982.4	70.1	41.8	26.9	20.8	16.0	12.8	11.3	10.6	10.9
55°	1797.9	1162.1	67.5	37.6	24.5	18.3	13.9	11.3	9.9	9.1	9.2
57.5°	2053.3	1331.1	65.0	33.6	22.2	16.3	12.3	9.9	8.6	7.7	7.9
60°	2304.9	1466.1	59.0	28.9	20.0	14.6	10.8	8.6	7.7	6.7	6.7
62.5°	2527.5	1546.7	50.2	25.0	18.0	12.9	9.6	7.7	7.1	6.0	6.0
65°	2679.1	1550.4	40.5	21.5	15.8	11.1	8.4	7.2	6.6	5.4	5.2
67.5°	2681.3	1449.6	32.4	19.2	13.9	9.7	7.6	6.9	6.0	5.0	4.7
70°	2399.9	1197.6	27.0	16.8	12.1	8.6	6.6	6.6	5.9	4.9	4.4
72.5°	1919.7	915.2	22.7	14.6	10.8	7.4	6.0	6.2	5.7	4.9	4.4
75°	1290.3	524.9	18.8	12.4	9.4	6.2	5.9	6.0	5.9	4.9	4.2
77.5°	594.3	167.2	14.6	10.2	8.1	5.2	5.7	5.7	5.4	4.4	3.7
80°	133.9	41.2	10.6	7.6	6.6	3.9	5.2	4.7	4.2	3.0	2.2
82.5°	48.7	12.6	6.4	4.7	4.0	1.5	3.4	3.4	3.0	2.2	1.3
85°	27.9	6.6	3.5	3.0	2.2	0.7	1.8	2.0	1.7	1.5	0.7
87.5°	9.1	1.5	1.7	1.8	1.7	0.3	0.7	0.7	0.5	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)