

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: P366713

Luminaire Tested: **MSA-SA1A-830-U-SL2-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P366713
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-830-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: 2632 lumens
Efficiency: N/A
Efficacy: 77.4 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

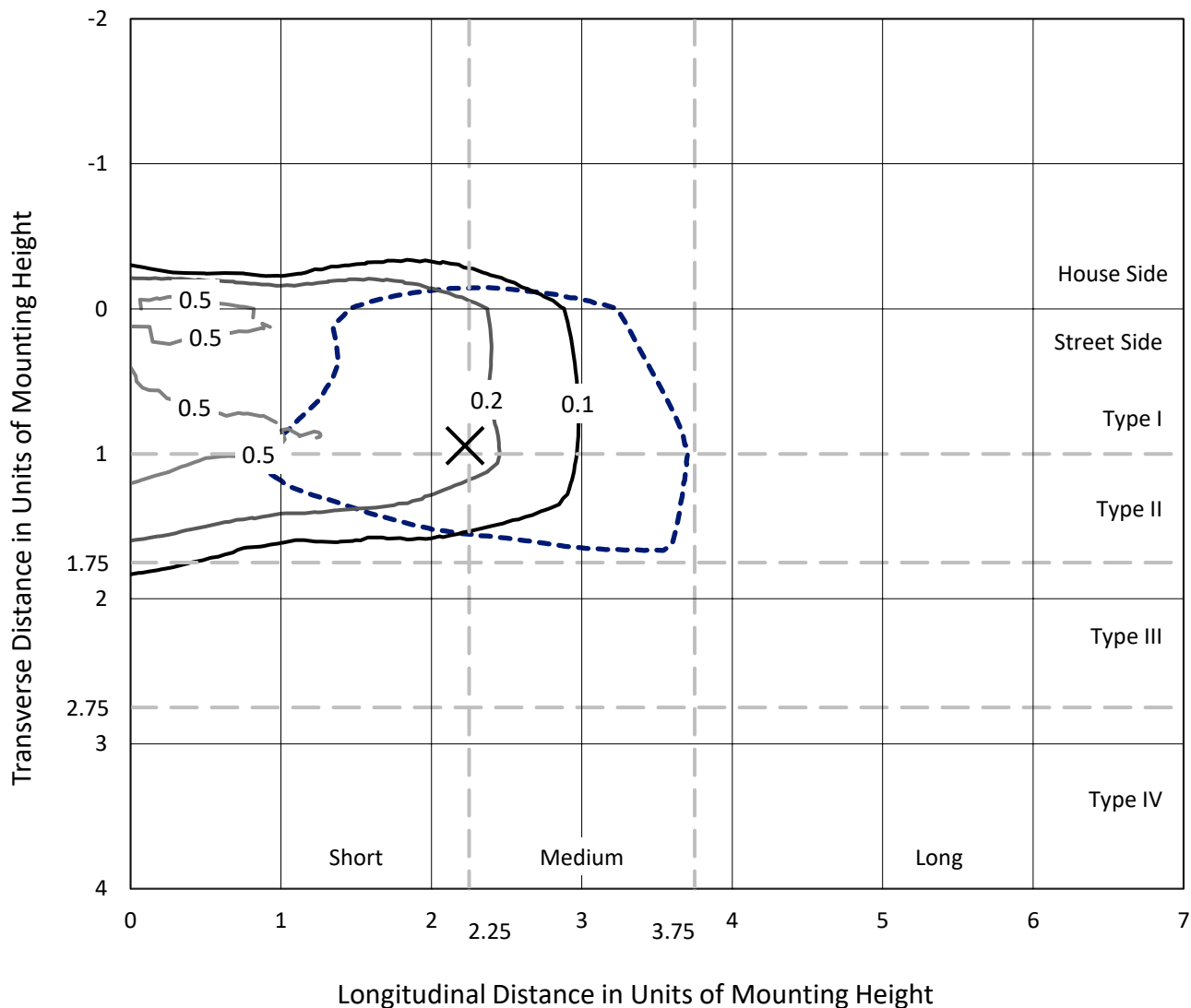
Input Watts (W): 34
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

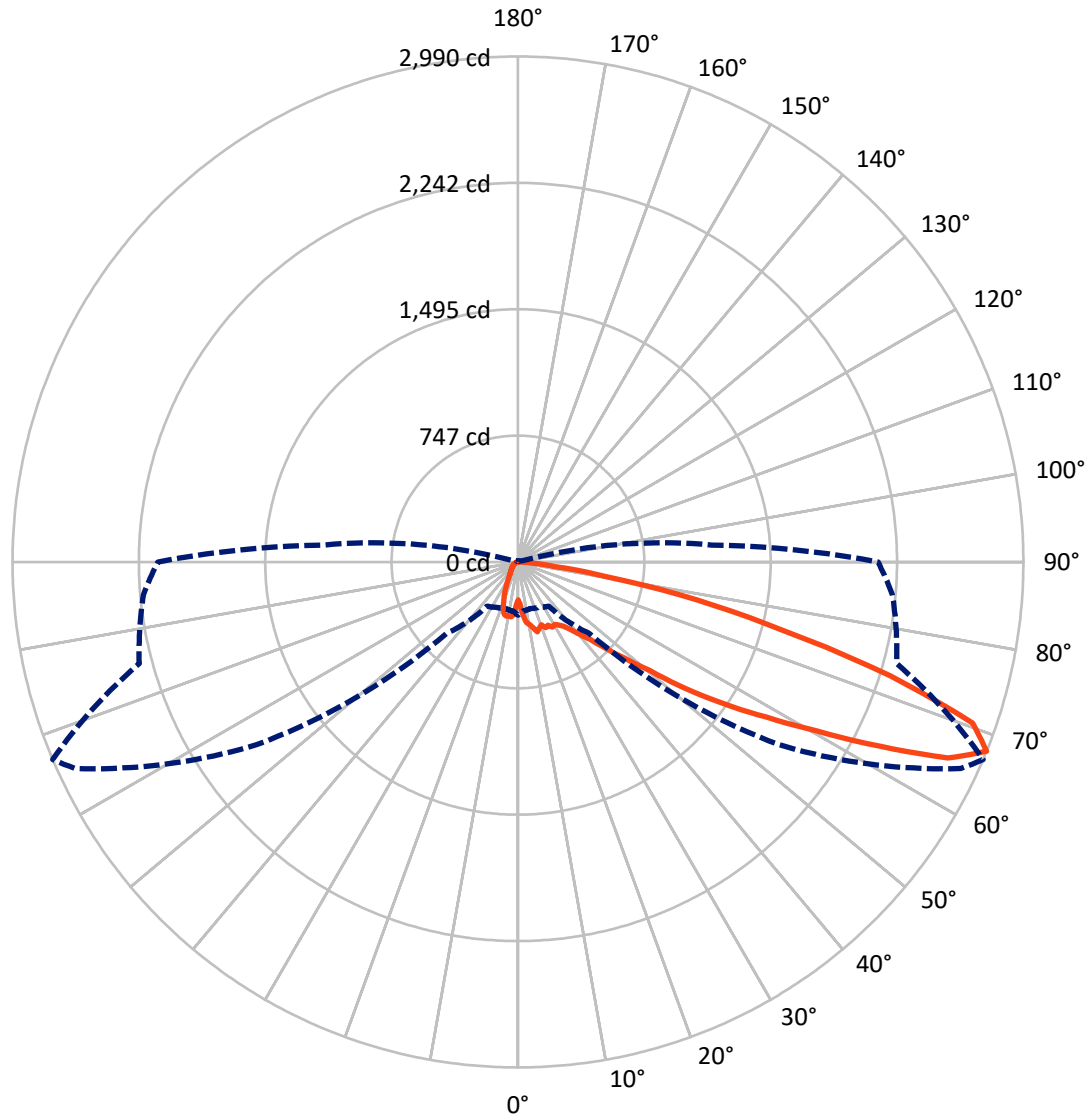
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.7 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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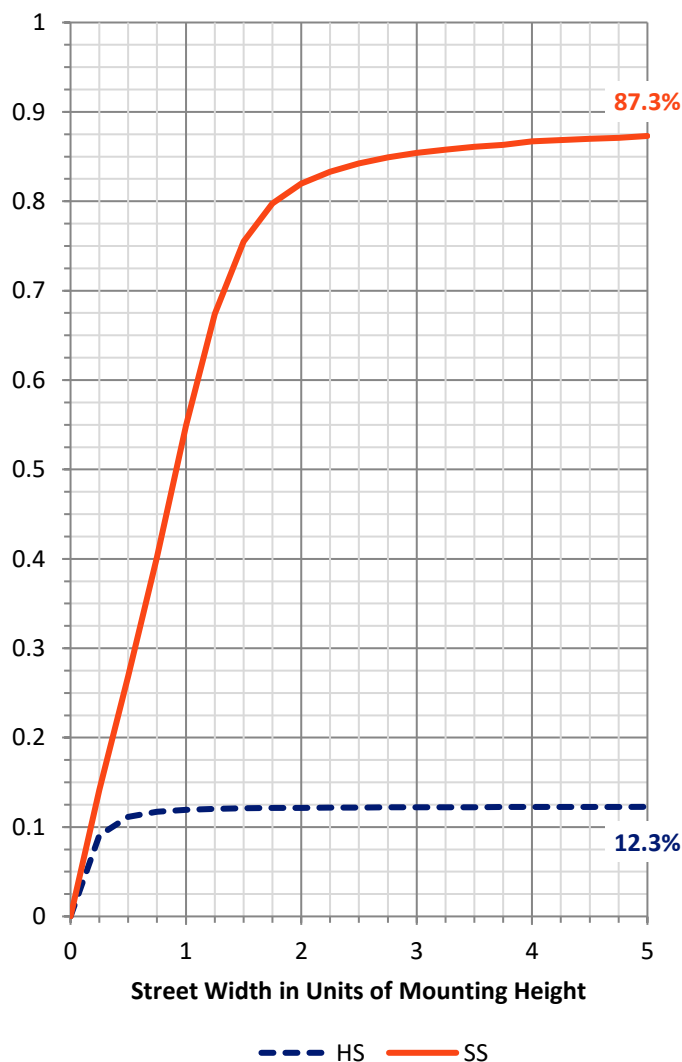
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	325.5	0.0	325.5
	% Fixture	12.4	0.0	12.4
Street Side	Lumens	2306.5	0.0	2306.5
	% Fixture	87.6	0.0	87.6
Total	Lumens	2632.0	0.0	2632.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	28.1	1.1
10°-20°	83.3	3.2
20°-30°	130.5	5.0
30°-40°	210.4	8.0
40°-50°	386.6	14.7
50°-60°	652.9	24.8
60°-70°	721.8	27.4
70°-80°	377.8	14.4
80°-90°	40.6	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°	2632.0	100.0
0°-180°	2632.0	100.0

Coefficient of Utilization



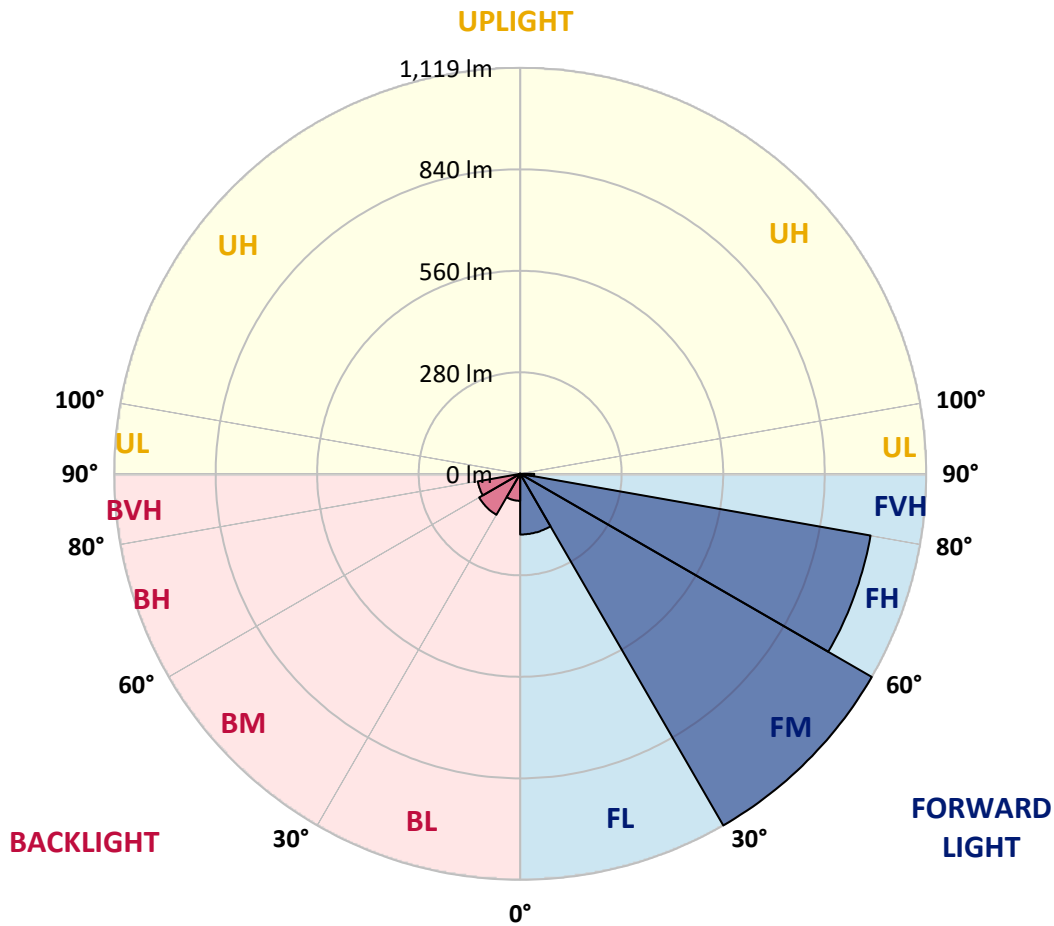
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	167.4	6.4			
FM (30°-60°)	1119.4	42.5			
FH (60°-80°)	980.9	37.3			G1/1800
FVH (80°-90°)	38.8	1.5			G1/100
BL (0°-30°)	74.5	2.8	B0/110		
BM (30°-60°)	130.5	5.0	B0/220		
BH (60°-80°)	118.7	4.5	B1/500		G1/500
BVH (80°-90°)	1.7	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°	224.2	224.2	224.2	224.2	224.2	224.2	224.2	224.2	224.2	224.2	224.2
2.5°	264.6	255.7	240.5	244.9	253.7	261.0	257.6	250.7	250.9	243.9	268.9
5°	307.9	295.9	287.1	290.1	289.7	289.5	305.9	312.2	314.8	326.3	343.3
7.5°	320.3	316.0	306.8	309.6	300.4	301.1	329.9	357.2	361.4	368.5	398.7
10°	315.5	307.2	310.6	310.6	310.7	325.6	345.0	371.0	376.2	403.5	406.7
12.5°	310.3	310.7	323.9	321.5	339.7	366.5	373.0	402.3	399.7	423.4	458.5
15°	329.6	339.8	331.3	334.6	336.3	367.8	378.4	417.2	428.5	458.4	481.2
17.5°	362.9	364.2	346.5	341.7	354.2	363.2	384.4	403.1	410.6	489.1	521.4
20°	368.9	377.4	359.4	331.7	358.2	370.5	385.3	394.3	397.5	498.5	544.1
22.5°	405.1	395.6	366.8	345.7	353.3	366.6	375.8	402.8	422.0	480.7	565.8
25°	423.6	421.1	393.6	375.6	367.8	366.8	387.9	408.3	414.4	499.2	571.2
27.5°	468.1	462.4	409.1	406.8	381.3	358.9	388.3	425.0	436.5	481.7	591.2
30°	528.6	526.5	455.6	454.1	413.5	373.2	409.9	435.3	428.3	490.7	604.6
32.5°	589.5	606.8	534.3	492.9	462.5	425.6	403.8	432.1	444.5	512.4	629.1
35°	663.0	675.6	601.8	571.7	504.0	450.2	444.5	462.6	468.0	538.3	657.0
37.5°	791.7	772.8	709.9	658.8	623.3	537.9	509.6	495.2	507.6	573.4	714.0
40°	886.8	874.8	797.4	766.8	685.1	635.1	561.2	547.7	561.6	609.5	753.7
42.5°	1001.5	976.5	903.6	882.9	798.8	702.6	627.5	632.2	623.5	680.7	823.3
45°	1105.2	1048.9	1008.3	1013.0	968.1	838.1	738.2	735.9	728.7	783.7	896.4
47.5°	1175.1	1125.8	1086.3	1073.3	1068.0	1076.4	898.2	857.8	852.5	892.0	1011.6
50°	1212.6	1158.6	1109.8	1112.5	1220.9	1302.4	1063.2	1005.9	1007.9	1049.2	1169.2
52.5°	1187.4	1126.3	1074.8	1124.9	1339.4	1453.2	1336.4	1199.4	1245.8	1235.3	1380.6
55°	1070.8	1017.8	981.2	1070.8	1352.4	1615.4	1672.7	1490.6	1480.2	1456.1	1596.0
57.5°	874.7	829.0	806.4	901.0	1210.7	1746.1	2010.5	1819.7	1730.9	1630.2	1775.0
60°	651.7	618.0	594.5	644.5	954.0	1619.1	2231.7	2129.8	2027.0	1798.1	1935.7
62.5°	482.7	455.3	430.3	434.9	656.9	1392.6	2316.6	2458.4	2399.4	1975.2	2087.4
65°	385.2	360.2	342.7	332.7	406.8	1047.7	2198.5	2727.7	2795.8	2142.1	2196.9
67.5°	314.6	293.5	284.8	296.3	319.1	597.2	1882.8	2891.1	2989.9	2319.2	2223.8
70°	255.9	238.6	237.7	268.6	293.9	364.1	1385.0	2778.3	2852.7	2349.3	2062.1
72.5°	178.4	170.8	182.9	226.8	291.2	303.2	795.4	2299.1	2301.8	2075.0	1696.2
75°	100.9	99.7	119.0	180.9	283.6	300.1	443.4	1624.8	1626.0	1569.3	1175.1
77.5°	55.5	51.9	69.3	122.3	243.5	293.2	286.0	1109.4	1080.9	873.3	536.7
80°	25.6	24.2	37.5	78.4	178.1	277.3	229.2	609.8	549.8	284.5	131.0
82.5°	10.5	10.0	17.2	50.3	112.6	223.4	193.2	270.5	217.1	54.1	40.5
85°	1.9	2.0	7.1	30.4	63.0	102.9	156.6	128.4	94.4	15.0	22.2
87.5°	0.0	0.0	1.5	7.3	15.2	28.2	63.6	35.9	24.7	4.4	6.5
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°	224.2	224.2	224.2	224.2	224.2	224.2	224.2	224.2	224.2	224.2	224.2
2.5°	273.8	271.6	248.6	249.7	251.3	249.8	249.5	243.1	237.3	256.6	256.3
5°	346.3	330.2	314.3	308.2	294.9	277.6	277.7	272.2	266.6	274.5	274.5
7.5°	398.0	375.7	355.6	319.6	284.7	253.0	250.2	242.7	234.2	244.5	246.5
10°	410.0	390.7	364.6	311.9	278.8	247.9	214.0	186.1	173.2	167.2	166.1
12.5°	447.0	432.6	374.4	316.0	268.4	216.2	160.6	127.5	104.9	103.2	100.8
15°	471.7	461.6	384.0	305.8	224.3	155.4	100.9	77.4	68.4	67.6	66.4
17.5°	510.0	492.4	374.8	273.0	175.4	102.5	67.8	61.2	62.2	64.6	62.8
20°	525.7	491.2	354.8	225.6	123.2	68.8	58.9	55.3	58.1	60.3	59.3
22.5°	541.7	494.7	337.0	186.0	80.5	56.9	52.5	50.6	50.9	53.1	53.3
25°	541.5	504.3	316.4	144.9	59.9	50.6	47.4	45.0	44.1	45.7	45.3
27.5°	567.8	493.2	278.9	107.5	52.7	45.3	42.2	39.3	35.9	37.5	37.5
30°	568.0	511.2	252.7	77.2	48.3	40.3	37.7	33.1	29.2	30.6	30.7
32.5°	583.1	495.6	228.6	59.0	44.9	37.4	31.5	27.4	25.1	25.9	25.9
35°	600.3	509.0	191.5	52.1	41.4	33.2	27.0	23.6	21.9	22.6	22.6
37.5°	657.2	506.2	165.7	48.5	39.1	30.0	24.6	20.8	20.0	20.4	21.0
40°	677.7	526.1	130.7	46.3	35.4	27.1	21.6	18.8	17.8	18.0	18.2
42.5°	730.1	530.5	104.4	44.6	32.0	23.5	19.2	17.2	15.9	15.9	16.3
45°	787.9	541.5	83.0	43.1	29.2	21.1	17.4	15.8	13.8	13.5	14.0
47.5°	871.6	584.0	67.7	40.2	25.9	19.6	16.0	13.6	12.0	11.5	12.0
50°	1011.6	656.1	59.8	36.6	23.5	18.4	14.2	11.6	10.4	9.7	10.1
52.5°	1209.3	780.7	55.7	33.2	21.4	16.6	12.7	10.1	8.9	8.4	8.7
55°	1428.7	923.5	53.7	29.9	19.5	14.6	11.1	8.9	7.9	7.2	7.3
57.5°	1631.7	1057.8	51.7	26.7	17.6	13.0	9.7	7.9	6.8	6.1	6.3
60°	1831.7	1165.1	46.9	23.0	15.9	11.6	8.5	6.8	6.1	5.3	5.3
62.5°	2008.6	1229.1	39.9	19.9	14.3	10.3	7.6	6.1	5.6	4.8	4.8
65°	2129.0	1232.1	32.2	17.1	12.6	8.8	6.7	5.7	5.2	4.3	4.1
67.5°	2130.8	1152.0	25.8	15.2	11.1	7.7	6.0	5.5	4.8	4.0	3.7
70°	1907.1	951.7	21.5	13.4	9.6	6.8	5.2	5.2	4.7	3.9	3.5
72.5°	1525.5	727.3	18.0	11.6	8.5	5.9	4.8	4.9	4.5	3.9	3.5
75°	1025.4	417.1	15.0	9.9	7.5	4.9	4.7	4.8	4.7	3.9	3.3
77.5°	472.2	132.8	11.6	8.1	6.4	4.1	4.5	4.5	4.3	3.5	2.9
80°	106.4	32.7	8.4	6.0	5.2	3.1	4.1	3.7	3.3	2.4	1.7
82.5°	38.7	10.0	5.1	3.7	3.2	1.2	2.7	2.7	2.4	1.7	1.1
85°	22.2	5.2	2.8	2.4	1.7	0.5	1.5	1.6	1.3	1.2	0.5
87.5°	7.2	1.2	1.3	1.5	1.3	0.3	0.5	0.5	0.4	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)