

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: P596909

Luminaire Tested: **MSA-SA1D-835-U-T3-HSS**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596909
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-11)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA1D-835-U-T3-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS
EACH AND TYPE III OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4175 lumens
Efficiency: N/A
Efficacy: 62.3 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G1

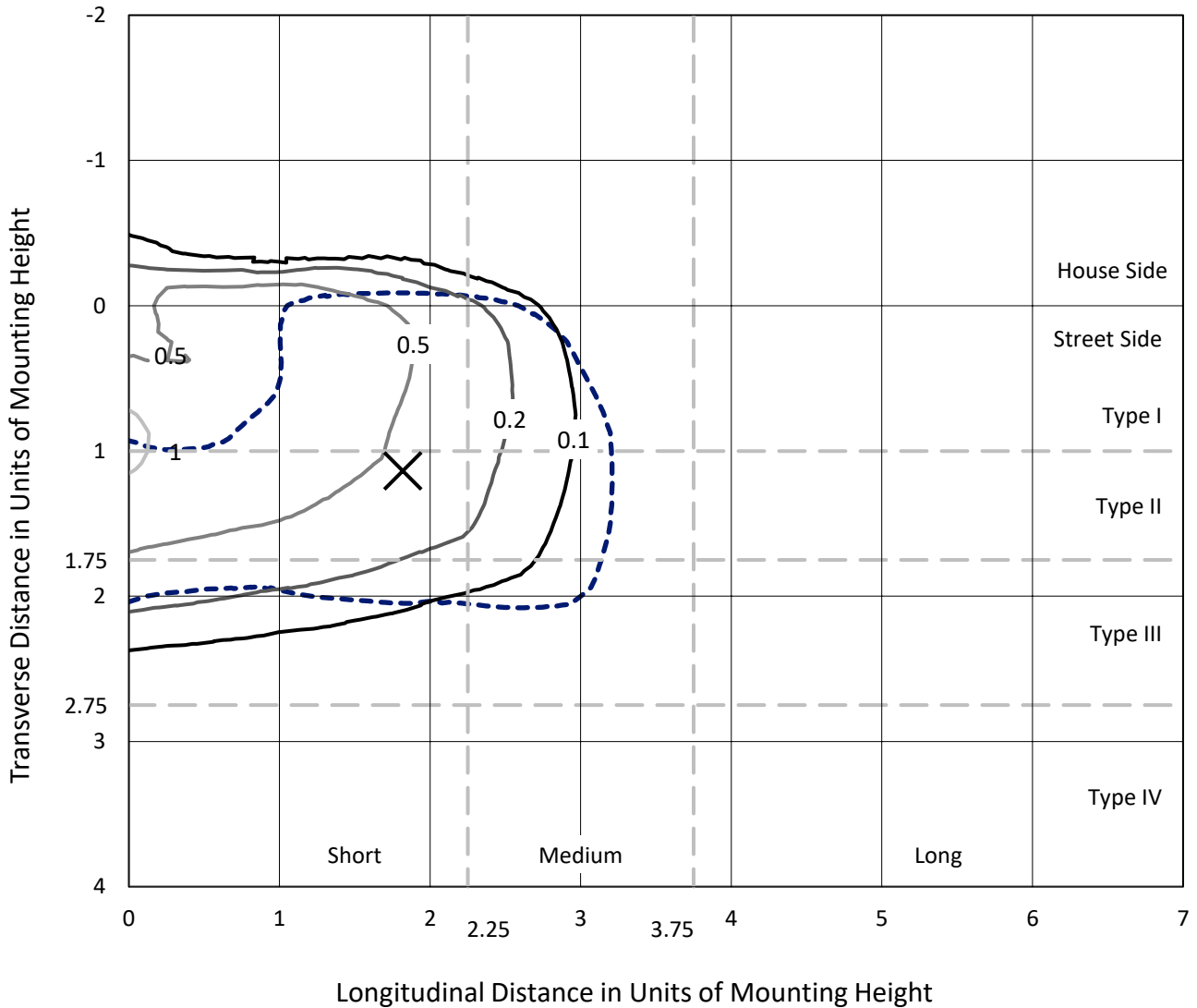
Input Watts (W): 67
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

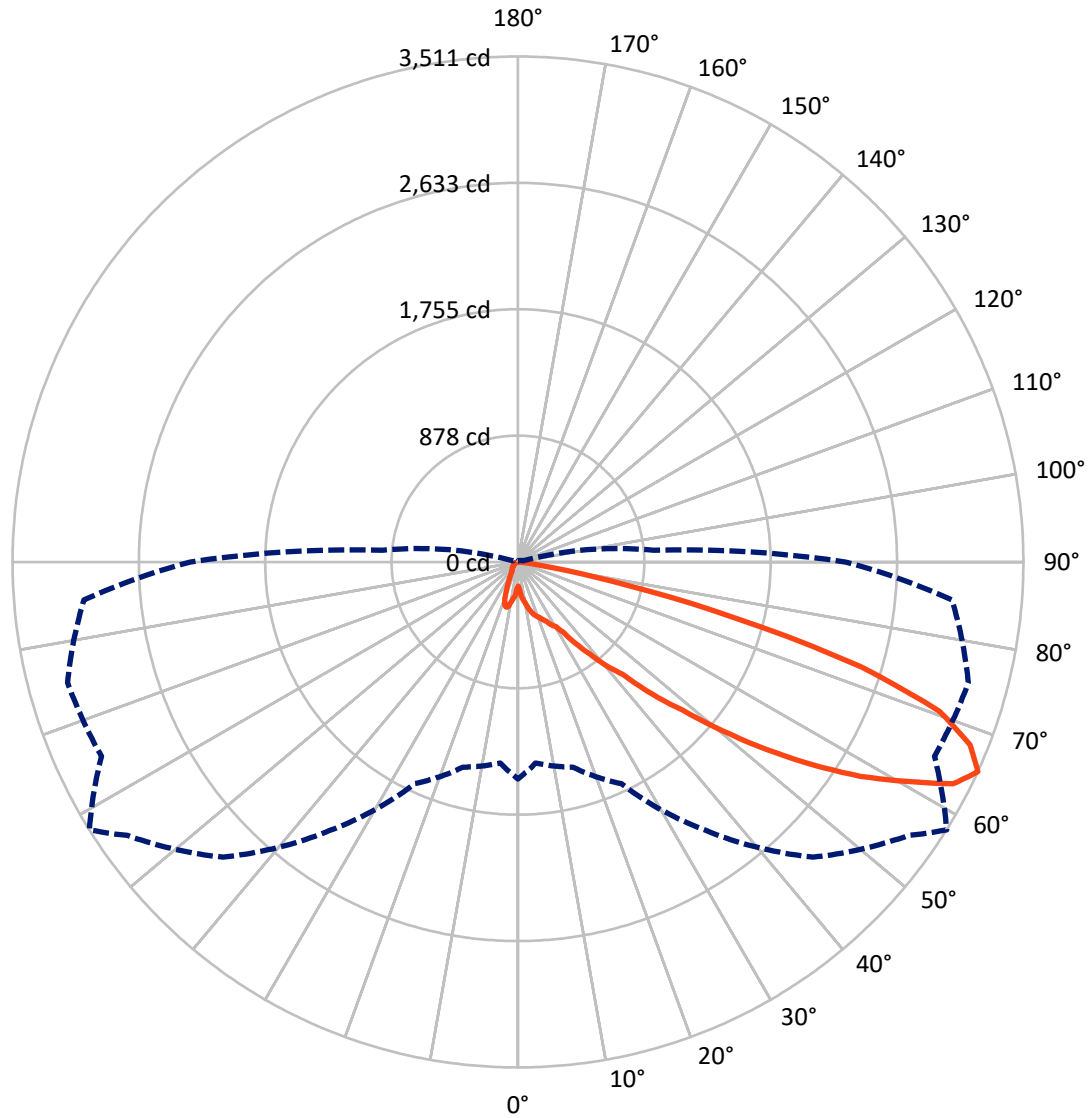
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.1 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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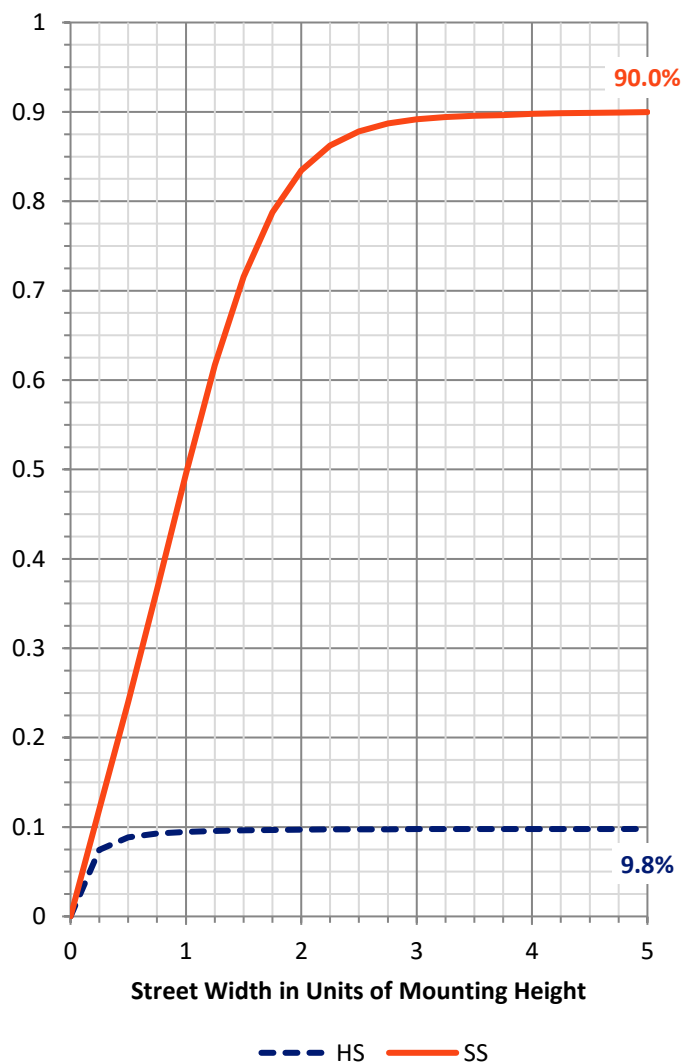
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	412.0	0.0	412.0
	% Fixture	9.9	0.0	9.9
Street Side	Lumens	3763.0	0.0	3763.0
	% Fixture	90.1	0.0	90.1
Total	Lumens	4175.0	0.0	4175.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	23.5	0.6
10°-20°	85.7	2.1
20°-30°	165.9	4.0
30°-40°	331.0	7.9
40°-50°	676.6	16.2
50°-60°	1200.1	28.7
60°-70°	1265.3	30.3
70°-80°	410.2	9.8
80°-90°	16.8	0.4
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°	4175.0	100.0
0°-180°	4175.0	100.0

Coefficient of Utilization



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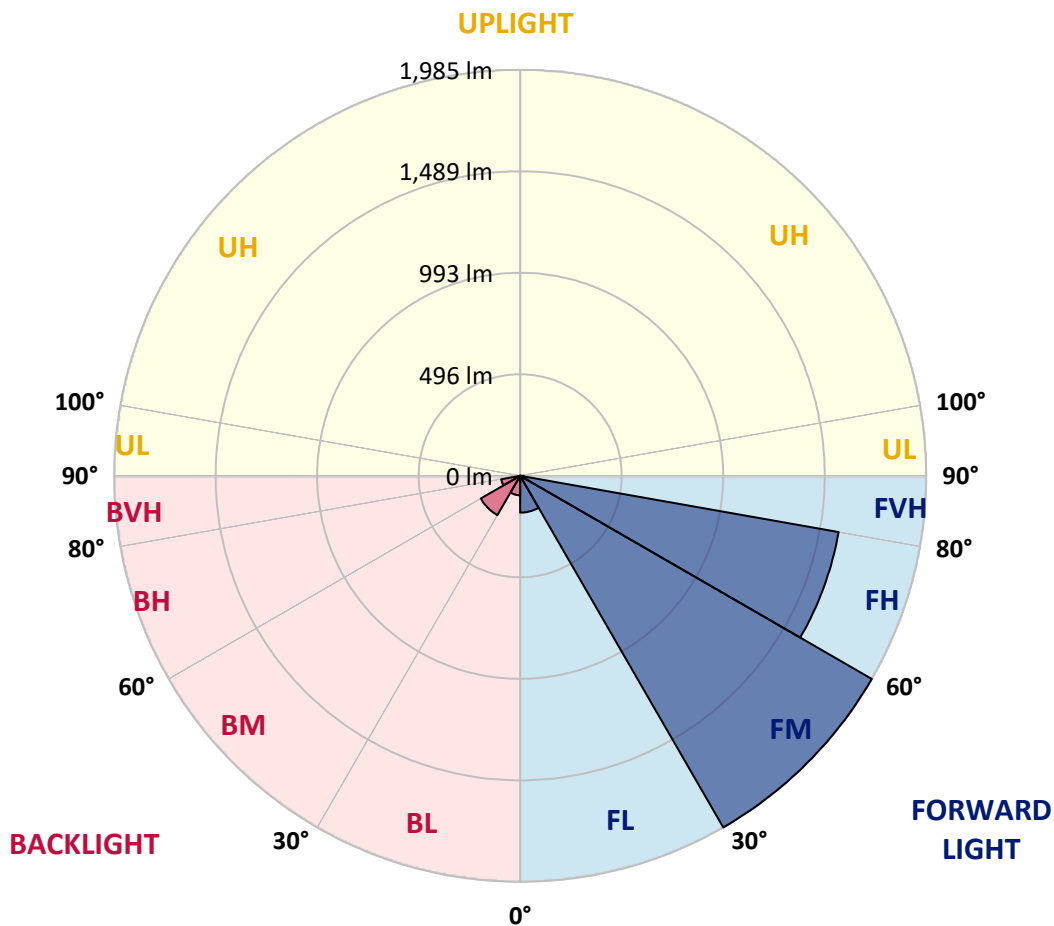
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	180.1	4.3			
FM (30°-60°)	1985.4	47.6			
FH (60°-80°)	1581.4	37.9			G1/1800
FVH (80°-90°)	16.1	0.4			G1/100
BL (0°-30°)	95.0	2.3	B0/110		
BM (30°-60°)	222.3	5.3	B1/1000		
BH (60°-80°)	94.0	2.3	B0/110		G0/110
BVH (80°-90°)	0.7	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-G1

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	167.1	167.1	167.1	167.1	167.1	167.1	167.1	167.1	167.1	167.1	167.1
2.5°	204.0	197.9	188.3	189.9	191.8	195.6	192.5	189.7	186.6	182.6	197.9
5°	246.3	236.2	235.3	233.2	231.5	231.3	235.1	233.9	235.5	243.1	250.8
7.5°	261.9	257.6	249.6	252.9	247.8	243.8	260.5	265.9	276.2	279.7	299.9
10°	260.2	254.1	257.4	259.0	262.6	277.1	287.7	293.6	302.5	321.8	317.8
12.5°	267.7	273.1	276.7	276.9	295.0	321.8	329.3	334.3	350.2	357.8	377.5
15°	292.9	301.8	296.2	298.5	304.4	337.1	354.7	365.5	388.1	412.5	417.5
17.5°	328.9	334.5	322.7	314.3	330.5	348.4	380.3	391.6	406.0	463.1	473.7
20°	374.2	383.9	358.5	324.9	346.3	367.4	402.2	407.6	422.9	497.4	514.1
22.5°	480.2	465.9	427.1	374.7	368.3	377.8	410.9	432.1	457.9	516.7	555.5
25°	584.8	579.9	522.8	464.3	421.9	400.8	444.7	456.5	498.8	562.5	583.9
27.5°	701.2	711.1	615.6	580.1	497.2	428.1	465.9	495.3	545.4	579.2	630.7
30°	854.7	838.9	727.1	691.6	596.8	503.0	520.7	522.6	596.1	634.2	683.1
32.5°	975.1	985.2	844.6	790.1	714.4	618.5	561.8	586.3	638.9	723.8	770.1
35°	1105.3	1104.3	967.3	894.0	795.0	712.7	683.8	701.7	767.7	863.9	876.1
37.5°	1299.9	1283.2	1121.5	1014.1	929.9	859.6	837.5	813.8	882.0	973.6	1019.5
40°	1483.5	1425.9	1276.4	1149.0	1041.3	1012.7	932.7	947.3	967.5	1088.6	1215.3
42.5°	1669.0	1633.2	1433.4	1326.7	1194.4	1126.2	1074.0	1067.2	1163.3	1306.7	1437.7
45°	1913.7	1804.4	1644.5	1550.7	1397.5	1329.1	1287.0	1312.1	1398.6	1608.1	1695.3
47.5°	2119.1	2018.5	1881.2	1738.8	1578.0	1654.9	1575.9	1536.2	1654.9	1871.4	1987.2
50°	2295.7	2183.5	2044.6	1939.1	1913.0	1986.8	1826.9	1841.5	1918.6	2172.9	2238.3
52.5°	2424.0	2306.0	2184.7	2133.7	2240.6	2277.8	2197.6	2165.4	2235.5	2430.1	2461.8
55°	2520.6	2399.8	2305.1	2375.3	2582.2	2570.0	2598.2	2488.2	2555.2	2698.3	2683.3
57.5°	2526.5	2383.3	2327.9	2440.9	2724.9	2914.1	2996.6	2809.5	2847.6	2908.0	2874.1
60°	2341.7	2199.3	2194.8	2355.4	2766.3	3003.2	3183.7	3092.5	3041.5	3086.4	3022.2
62.5°	1973.6	1873.9	1920.5	2098.0	2612.3	2954.1	3283.4	3393.2	3194.5	3204.7	3113.4
65°	1507.0	1402.4	1475.3	1698.8	2275.7	2899.1	3311.6	3510.7	3191.7	3238.3	3026.0
67.5°	998.1	937.4	1020.0	1266.3	1809.3	2559.2	3297.0	3387.3	3090.4	3106.9	2701.4
70°	515.3	500.5	567.2	761.6	1216.5	1966.1	3153.9	3104.5	2884.7	2676.5	2083.6
72.5°	165.0	165.7	229.9	347.9	655.8	1197.0	2424.2	2491.9	2308.3	1957.9	1272.2
75°	73.1	71.9	96.1	146.0	273.4	536.7	1506.1	1579.2	1437.2	1077.1	534.8
77.5°	52.7	51.0	61.6	85.3	135.4	181.9	706.1	762.1	651.6	373.3	122.5
80°	37.1	36.9	44.7	59.9	84.6	80.9	223.1	250.1	200.3	90.5	36.0
82.5°	20.9	21.6	31.0	42.3	51.5	40.4	62.8	69.1	67.5	48.2	15.7
85°	10.1	11.3	20.2	30.6	27.0	15.7	22.3	24.2	28.2	28.0	8.0
87.5°	0.0	0.0	8.2	13.9	7.3	2.4	6.8	7.8	7.5	8.9	1.9
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°	167.1	167.1	167.1	167.1	167.1	167.1	167.1	167.1	167.1	167.1	167.1
2.5°	201.0	199.6	181.7	183.1	187.1	185.5	186.9	183.6	179.8	195.1	194.9
5°	254.1	243.5	237.9	232.7	233.7	223.1	229.2	232.0	231.5	240.2	242.6
7.5°	300.6	286.5	275.3	264.4	248.0	233.2	242.4	248.2	252.2	267.3	273.1
10°	322.5	311.0	306.5	285.4	273.6	264.4	253.4	245.4	248.7	244.7	248.7
12.5°	370.5	362.7	345.5	324.2	310.1	291.2	250.1	215.8	194.6	194.9	193.5
15°	414.2	413.7	388.1	352.6	311.7	258.1	193.9	150.7	130.7	125.1	123.2
17.5°	471.3	464.3	417.5	365.1	291.5	199.8	132.1	103.2	101.3	104.6	103.2
20°	507.7	497.4	432.1	347.0	240.2	135.2	99.7	91.4	97.1	101.8	100.6
22.5°	544.2	528.7	443.1	324.9	170.9	99.0	90.0	88.6	92.1	98.0	99.0
25°	564.2	561.1	464.7	283.5	117.1	86.7	86.7	86.3	87.4	91.7	91.0
27.5°	622.2	580.8	448.5	221.2	90.5	79.7	80.9	80.4	76.2	80.4	80.6
30°	658.4	639.4	449.7	157.5	79.7	70.5	73.6	69.8	63.5	67.0	66.3
32.5°	731.3	683.8	446.2	106.2	72.6	67.2	62.5	57.1	52.4	53.8	52.7
35°	816.1	779.9	398.4	85.3	67.7	59.5	51.9	46.5	41.6	42.8	42.5
37.5°	984.9	870.0	358.9	76.9	64.4	54.5	45.8	38.3	35.7	36.4	37.1
40°	1141.2	1020.2	285.4	73.1	58.8	48.7	37.8	32.4	30.8	31.3	32.0
42.5°	1374.9	1139.6	215.6	69.3	53.1	41.1	31.5	28.0	26.3	27.3	27.7
45°	1601.0	1241.1	161.0	66.1	48.4	35.5	26.6	24.2	22.3	23.0	24.0
47.5°	1826.9	1354.0	120.1	60.9	43.3	30.6	22.8	21.2	20.0	20.2	21.4
50°	2029.1	1406.6	94.5	54.5	39.0	26.6	20.7	19.0	18.6	18.8	19.7
52.5°	2177.6	1407.1	79.7	48.9	35.0	23.5	19.5	17.6	17.4	17.9	18.8
55°	2311.9	1369.5	69.1	44.0	31.5	21.4	18.6	16.9	16.9	17.4	18.3
57.5°	2401.0	1300.4	59.9	38.8	28.4	20.2	17.9	16.2	16.0	15.7	16.5
60°	2444.4	1206.1	50.8	34.1	25.6	19.5	17.4	14.3	14.1	13.6	14.1
62.5°	2416.9	1088.1	42.5	29.4	22.8	18.6	15.3	12.5	12.0	11.0	11.8
65°	2276.4	944.7	36.0	25.2	19.7	15.7	12.9	10.6	9.4	8.2	8.0
67.5°	1988.9	767.5	30.1	21.6	16.9	12.9	10.6	9.4	7.3	6.3	6.1
70°	1490.6	524.0	24.9	18.6	14.1	11.0	8.9	8.5	6.8	6.1	5.6
72.5°	874.4	282.8	20.9	16.2	12.0	9.2	7.3	7.8	6.8	5.6	5.2
75°	349.3	94.0	16.7	12.9	9.6	6.6	6.1	6.3	6.1	5.2	4.2
77.5°	79.7	29.6	12.9	10.1	7.5	4.2	4.9	5.4	5.4	4.2	3.1
80°	24.9	11.8	7.5	6.3	5.4	2.4	3.5	3.8	2.6	1.2	0.0
82.5°	8.0	3.3	2.6	2.6	2.4	0.5	0.7	0.5	0.0	0.0	0.0
85°	3.1	2.1	1.6	1.6	0.9	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	1.2	0.9	0.7	0.9	0.5	0.0	0.0	0.0	0.0	0.0	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)