

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: P366725

Luminaire Tested: **MSA-SA1A-830-U-T3-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P366725
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-11)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA1A-830-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: 2372 lumens
Efficiency: N/A
Efficacy: 69.8 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Short
BUG Rating: B0 - U0 - G1

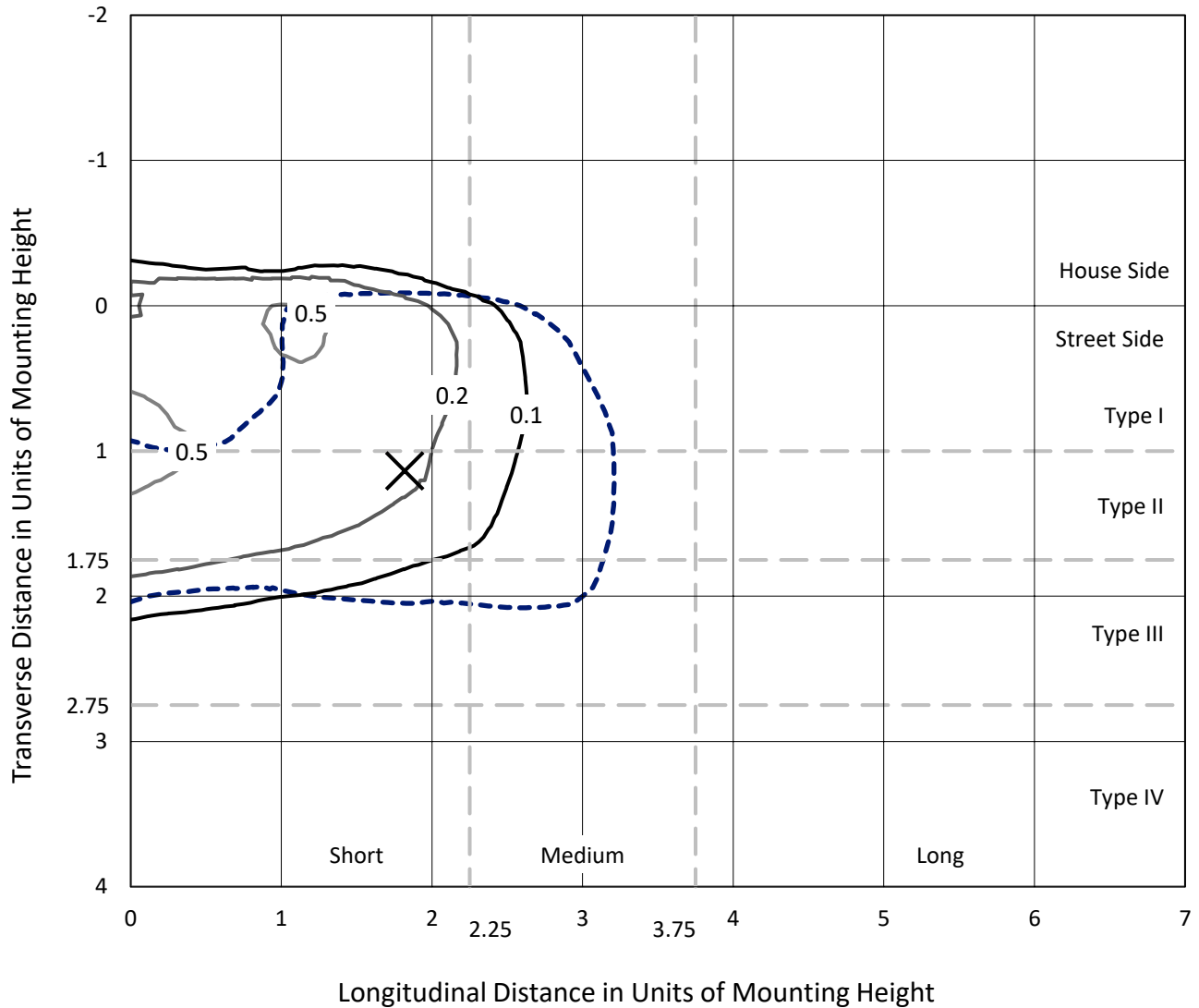
Input Watts (W): 34
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

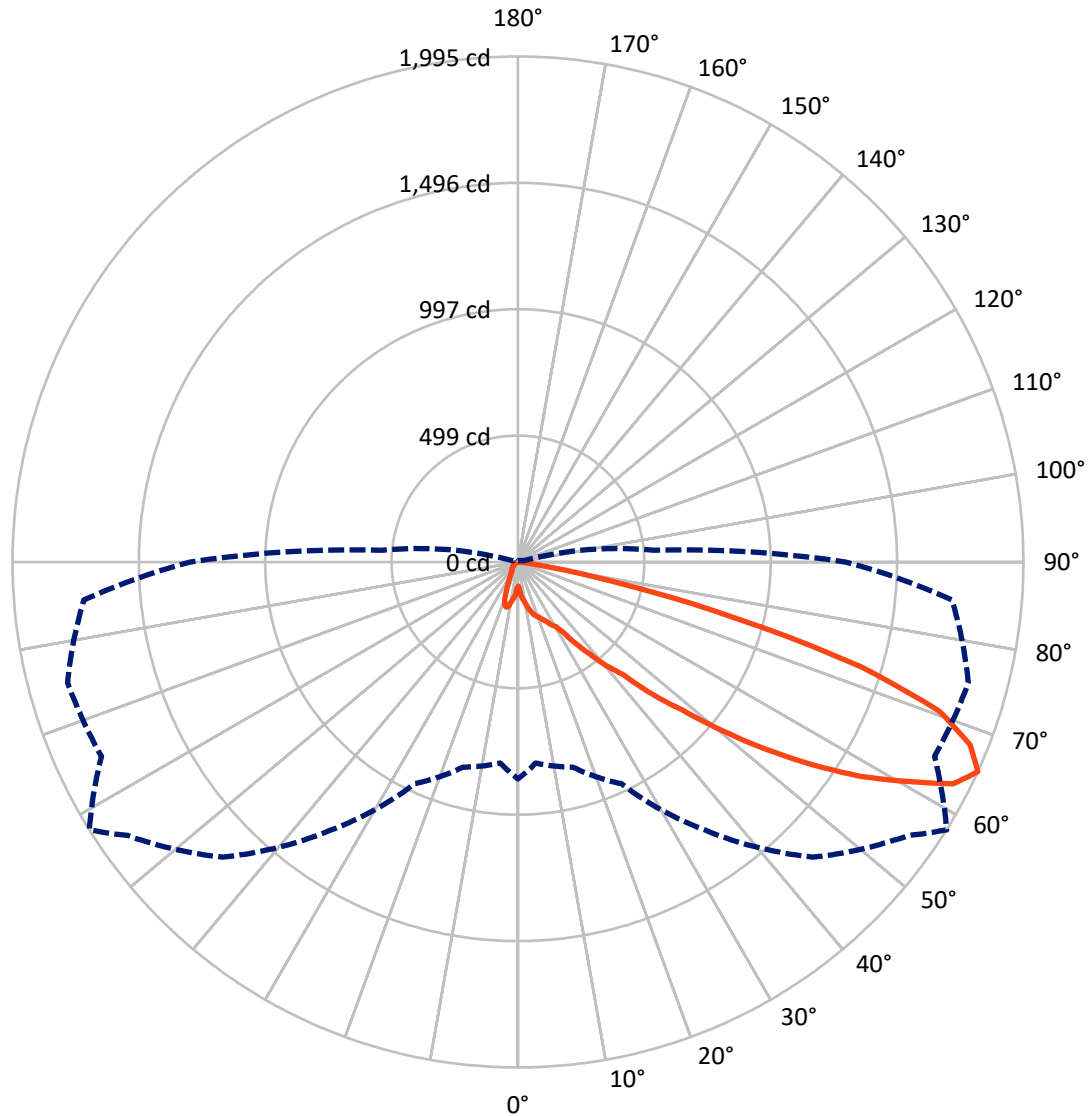
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.6 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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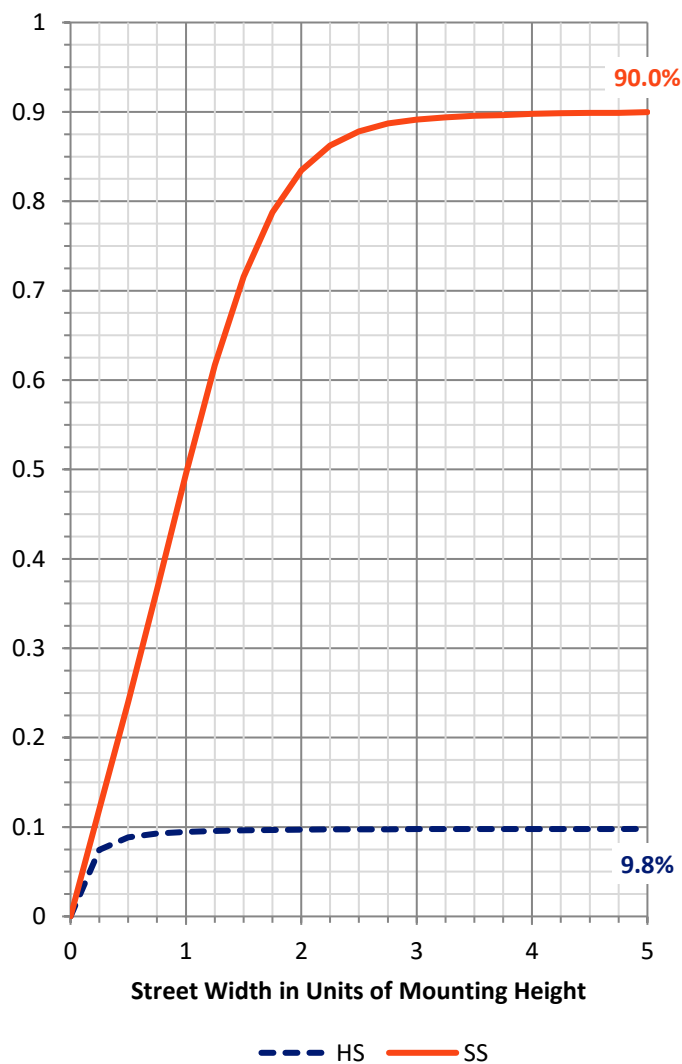
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	234.1	0.0	234.1
	% Fixture	9.9	0.0	9.9
Street Side	Lumens	2137.9	0.0	2137.9
	% Fixture	90.1	0.0	90.1
Total	Lumens	2372.0	0.0	2372.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	13.3	0.6
10°-20°	48.7	2.1
20°-30°	94.3	4.0
30°-40°	188.0	7.9
40°-50°	384.4	16.2
50°-60°	681.8	28.7
60°-70°	718.8	30.3
70°-80°	233.1	9.8
80°-90°	9.5	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°	2372.0	100.0
0°-180°	2372.0	100.0

Coefficient of Utilization



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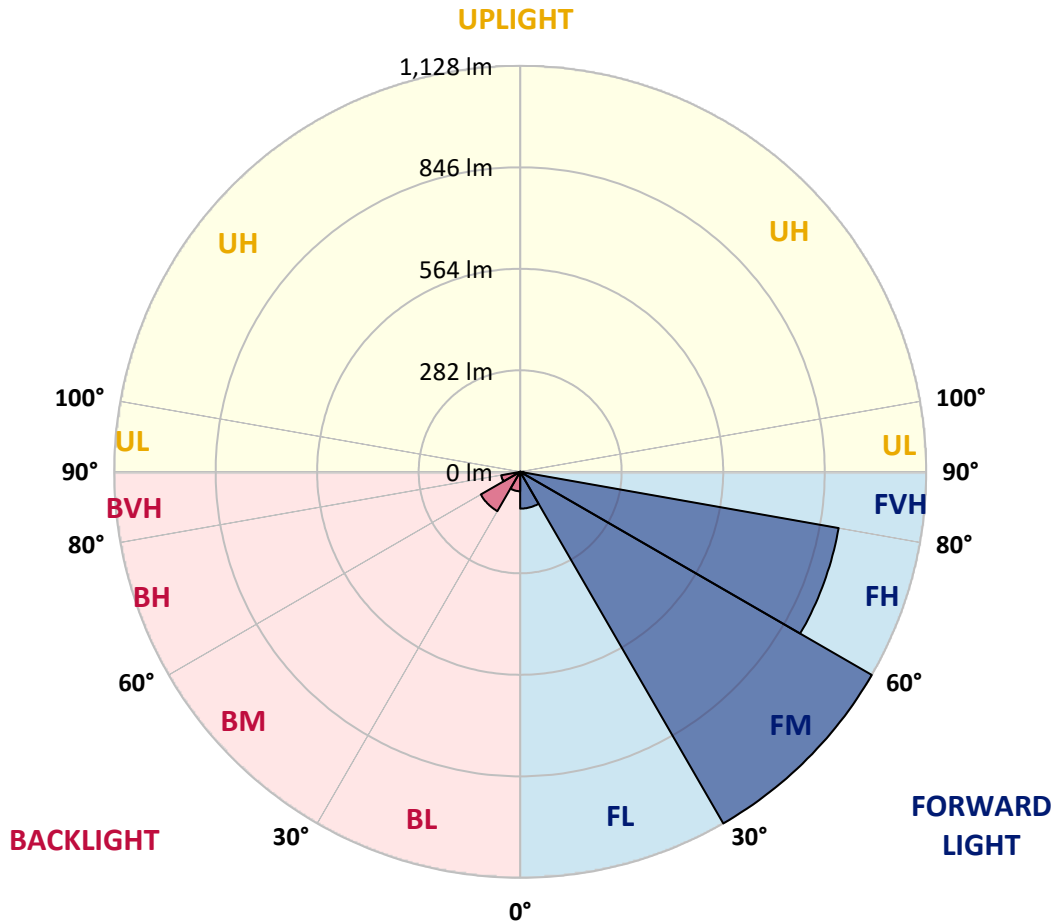
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	102.3	4.3			
FM (30°-60°)	1128.0	47.6			
FH (60°-80°)	898.5	37.9			G1/1800
FVH (80°-90°)	9.1	0.4			G0/10
BL (0°-30°)	54.0	2.3	B0/110		
BM (30°-60°)	126.3	5.3	B0/220		
BH (60°-80°)	53.4	2.3	B0/110		G0/110
BVH (80°-90°)	0.4	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B0-U0-G1

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0
2.5°	115.9	112.5	107.0	107.9	109.0	111.1	109.4	107.8	106.0	103.8	112.5
5°	140.0	134.2	133.7	132.5	131.5	131.4	133.6	132.9	133.8	138.1	142.5
7.5°	148.8	146.4	141.8	143.7	140.8	138.5	148.0	151.0	156.9	158.9	170.4
10°	147.8	144.4	146.2	147.2	149.2	157.5	163.5	166.8	171.9	182.8	180.6
12.5°	152.1	155.2	157.2	157.3	167.6	182.8	187.1	189.9	199.0	203.3	214.5
15°	166.4	171.5	168.3	169.6	172.9	191.5	201.5	207.7	220.5	234.4	237.2
17.5°	186.8	190.0	183.4	178.6	187.8	197.9	216.1	222.5	230.6	263.1	269.1
20°	212.6	218.1	203.7	184.6	196.7	208.7	228.5	231.6	240.3	282.6	292.1
22.5°	272.8	264.7	242.7	212.9	209.3	214.6	233.4	245.5	260.2	293.5	315.6
25°	332.3	329.5	297.0	263.8	239.7	227.7	252.7	259.4	283.4	319.6	331.7
27.5°	398.4	404.0	349.8	329.6	282.5	243.2	264.7	281.4	309.8	329.1	358.3
30°	485.6	476.6	413.1	392.9	339.1	285.8	295.8	296.9	338.7	360.3	388.1
32.5°	554.0	559.7	479.8	448.9	405.9	351.4	319.2	333.1	363.0	411.2	437.5
35°	628.0	627.4	549.6	507.9	451.7	404.9	388.5	398.7	436.2	490.8	497.7
37.5°	738.5	729.1	637.2	576.1	528.3	488.4	475.8	462.4	501.1	553.2	579.2
40°	842.8	810.1	725.2	652.8	591.6	575.3	529.9	538.2	549.7	618.5	690.5
42.5°	948.2	927.9	814.4	753.8	678.6	639.8	610.2	606.3	660.9	742.4	816.8
45°	1087.2	1025.1	934.3	881.0	794.0	755.1	731.2	745.5	794.6	913.6	963.2
47.5°	1204.0	1146.8	1068.8	987.9	896.5	940.2	895.3	872.8	940.2	1063.2	1129.0
50°	1304.3	1240.6	1161.6	1101.7	1086.8	1128.8	1038.0	1046.2	1090.0	1234.5	1271.7
52.5°	1377.2	1310.1	1241.2	1212.2	1273.0	1294.1	1248.6	1230.3	1270.1	1380.7	1398.7
55°	1432.1	1363.4	1309.6	1349.5	1467.1	1460.1	1476.1	1413.6	1451.7	1533.0	1524.5
57.5°	1435.4	1354.1	1322.6	1386.8	1548.1	1655.6	1702.5	1596.2	1617.8	1652.2	1632.9
60°	1330.4	1249.5	1247.0	1338.2	1571.6	1706.2	1808.8	1757.0	1728.0	1753.5	1717.1
62.5°	1121.3	1064.7	1091.1	1191.9	1484.2	1678.3	1865.4	1927.8	1815.0	1820.7	1768.9
65°	856.2	796.8	838.2	965.2	1292.9	1647.1	1881.5	1994.6	1813.4	1839.8	1719.2
67.5°	567.1	532.6	579.5	719.4	1027.9	1454.0	1873.2	1924.5	1755.8	1765.1	1534.8
70°	292.7	284.3	322.3	432.7	691.1	1117.0	1791.9	1763.8	1638.9	1520.6	1183.8
72.5°	93.8	94.2	130.6	197.7	372.6	680.0	1377.3	1415.8	1311.5	1112.3	722.8
75°	41.5	40.9	54.6	82.9	155.3	304.9	855.7	897.2	816.5	611.9	303.8
77.5°	29.9	29.0	35.0	48.5	76.9	103.4	401.2	433.0	370.2	212.1	69.6
80°	21.1	21.0	25.4	34.1	48.1	45.9	126.7	142.1	113.8	51.4	20.4
82.5°	11.9	12.3	17.6	24.0	29.2	23.0	35.7	39.3	38.3	27.4	8.9
85°	5.7	6.4	11.5	17.4	15.4	8.9	12.7	13.8	16.0	15.9	4.5
87.5°	0.0	0.0	4.7	7.9	4.1	1.3	3.9	4.4	4.3	5.1	1.1
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°	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0
2.5°	114.2	113.4	103.2	104.0	106.3	105.4	106.2	104.3	102.2	110.8	110.7
5°	144.4	138.4	135.2	132.2	132.7	126.7	130.2	131.8	131.5	136.5	137.8
7.5°	170.8	162.8	156.4	150.2	140.9	132.5	137.7	141.0	143.3	151.8	155.2
10°	183.2	176.7	174.2	162.1	155.5	150.2	144.0	139.4	141.3	139.0	141.3
12.5°	210.5	206.1	196.3	184.2	176.2	165.5	142.1	122.6	110.6	110.7	109.9
15°	235.3	235.0	220.5	200.3	177.1	146.6	110.2	85.6	74.3	71.0	70.0
17.5°	267.8	263.8	237.2	207.4	165.6	113.5	75.1	58.6	57.6	59.4	58.6
20°	288.5	282.6	245.5	197.1	136.5	76.8	56.6	52.0	55.2	57.8	57.2
22.5°	309.2	300.4	251.7	184.6	97.1	56.2	51.2	50.3	52.4	55.7	56.2
25°	320.5	318.8	264.0	161.1	66.5	49.3	49.3	49.0	49.7	52.1	51.7
27.5°	353.5	330.0	254.8	125.7	51.4	45.3	45.9	45.7	43.3	45.7	45.8
30°	374.1	363.3	255.5	89.5	45.3	40.1	41.8	39.7	36.1	38.1	37.7
32.5°	415.5	388.5	253.5	60.4	41.3	38.2	35.5	32.5	29.8	30.6	29.9
35°	463.7	443.1	226.4	48.5	38.5	33.8	29.5	26.4	23.6	24.3	24.2
37.5°	559.6	494.3	203.9	43.7	36.6	31.0	26.0	21.8	20.3	20.7	21.1
40°	648.4	579.6	162.1	41.5	33.4	27.6	21.5	18.4	17.5	17.8	18.2
42.5°	781.1	647.5	122.5	39.4	30.2	23.4	17.9	15.9	15.0	15.5	15.8
45°	909.6	705.1	91.5	37.5	27.5	20.2	15.1	13.8	12.7	13.1	13.6
47.5°	1038.0	769.3	68.2	34.6	24.6	17.4	13.0	12.0	11.4	11.5	12.2
50°	1152.8	799.2	53.7	31.0	22.2	15.1	11.8	10.8	10.6	10.7	11.2
52.5°	1237.2	799.4	45.3	27.8	19.9	13.4	11.1	10.0	9.9	10.1	10.7
55°	1313.5	778.1	39.3	25.0	17.9	12.2	10.6	9.6	9.6	9.9	10.4
57.5°	1364.1	738.8	34.1	22.0	16.2	11.5	10.1	9.2	9.1	8.9	9.3
60°	1388.8	685.3	28.8	19.4	14.6	11.1	9.9	8.1	8.0	7.7	8.0
62.5°	1373.2	618.2	24.2	16.7	13.0	10.6	8.7	7.1	6.8	6.3	6.7
65°	1293.3	536.7	20.4	14.3	11.2	8.9	7.3	6.0	5.3	4.7	4.5
67.5°	1130.0	436.0	17.1	12.3	9.6	7.3	6.0	5.3	4.1	3.6	3.5
70°	846.8	297.7	14.2	10.6	8.0	6.3	5.1	4.8	3.9	3.5	3.2
72.5°	496.8	160.7	11.9	9.2	6.8	5.2	4.1	4.4	3.9	3.2	2.9
75°	198.5	53.4	9.5	7.3	5.5	3.7	3.5	3.6	3.5	2.9	2.4
77.5°	45.3	16.8	7.3	5.7	4.3	2.4	2.8	3.1	3.1	2.4	1.7
80°	14.2	6.7	4.3	3.6	3.1	1.3	2.0	2.1	1.5	0.7	0.0
82.5°	4.5	1.9	1.5	1.5	1.3	0.3	0.4	0.3	0.0	0.0	0.0
85°	1.7	1.2	0.9	0.9	0.5	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.7	0.5	0.4	0.5	0.3	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)