

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: P367241

Luminaire Tested: **MSA-SA2A-830-U-SL2-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367241
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-SA2A-830-U-SL2-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) 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: 5177 lumens
Efficiency: N/A
Efficacy: 78.4 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type II - Short
BUG Rating: B1 - U0 - G2

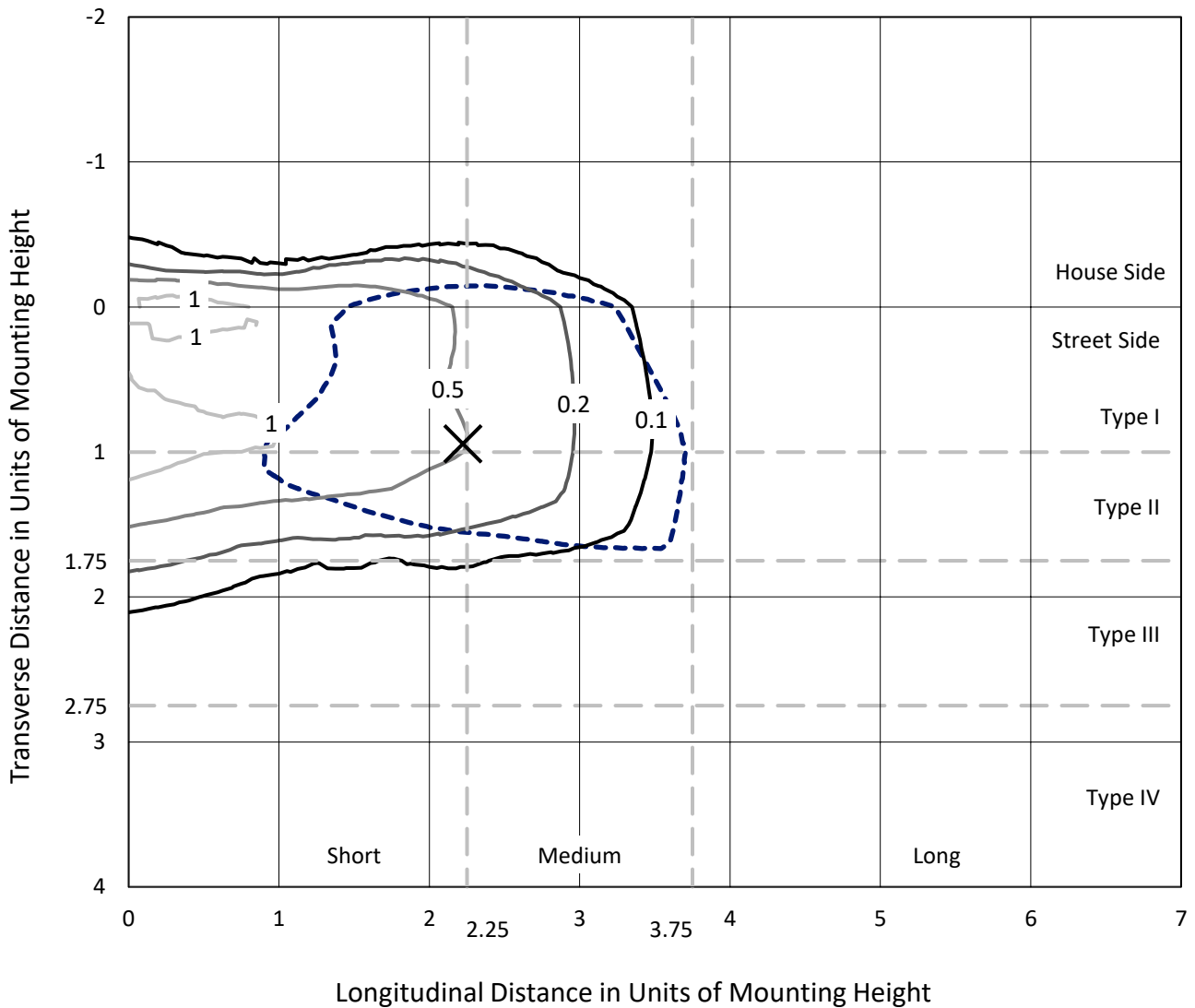
Input Watts (W): 66
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

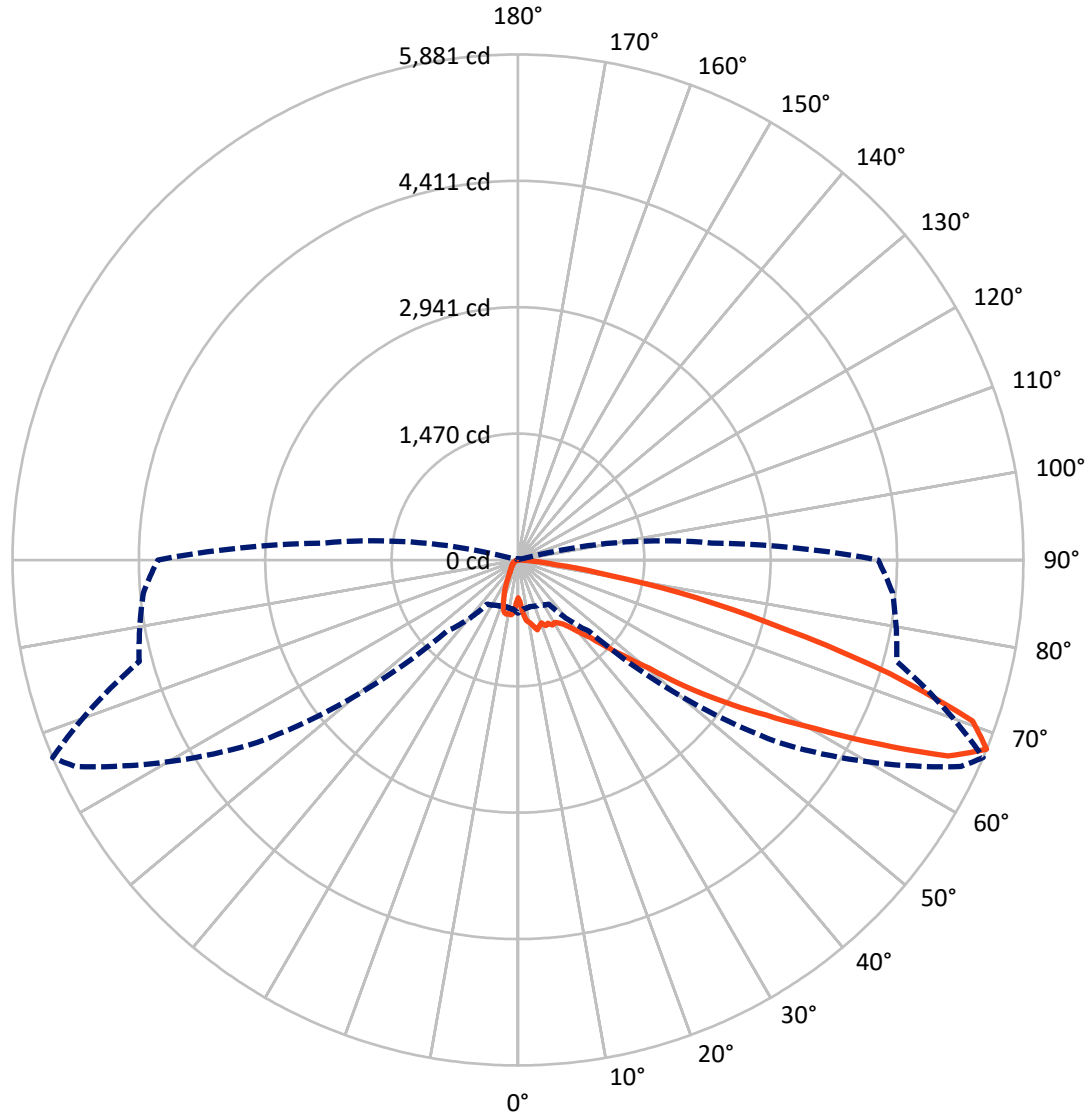
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.4 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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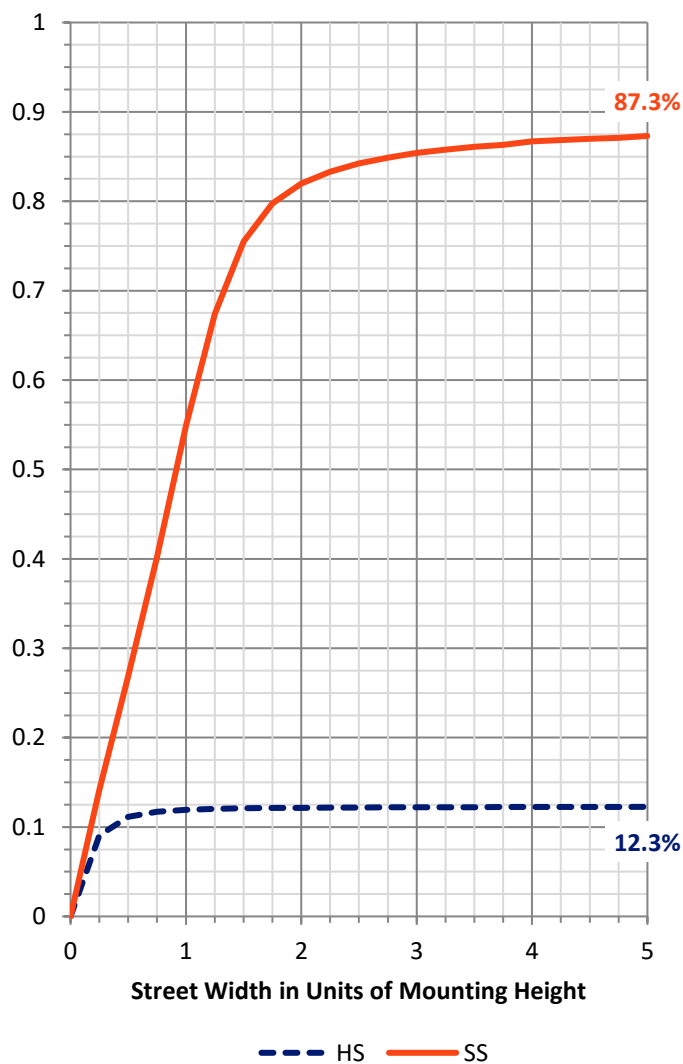
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	640.2	0.0	640.2
	% Fixture	12.4	0.0	12.4
Street Side	Lumens	4536.8	0.0	4536.8
	% Fixture	87.6	0.0	87.6
Total	Lumens	5177.0	0.0	5177.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	55.3	1.1
10°-20°	163.8	3.2
20°-30°	256.7	5.0
30°-40°	413.8	8.0
40°-50°	760.4	14.7
50°-60°	1284.3	24.8
60°-70°	1419.8	27.4
70°-80°	743.1	14.4
80°-90°	79.8	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°	5177.0	100.0
0°-180°	5177.0	100.0

Coefficient of Utilization

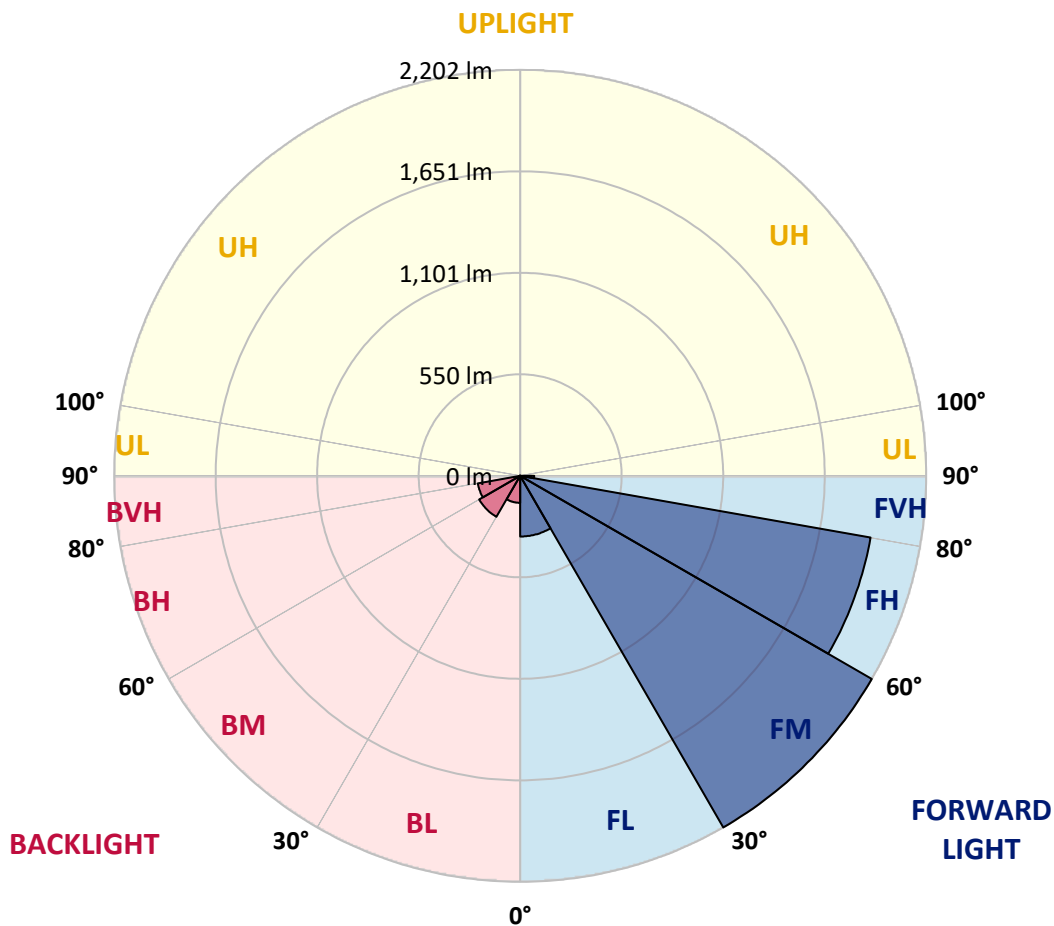


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	329.2	6.4			
FM (30°-60°)	2201.8	42.5			
FH (60°-80°)	1929.4	37.3			G2/5000
FVH (80°-90°)	76.4	1.5			G1/100
BL (0°-30°)	146.6	2.8	B1/500		
BM (30°-60°)	256.7	5.0	B1/1000		
BH (60°-80°)	233.5	4.5	B1/500		G1/500
BVH (80°-90°)	3.4	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-G2
 Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	67°	75°	85°
0°	440.9	440.9	440.9	440.9	440.9	440.9	440.9	440.9	440.9	440.9	440.9
2.5°	520.5	502.9	473.0	481.6	499.0	513.4	506.6	493.2	493.5	479.8	528.9
5°	605.6	582.0	564.6	570.7	569.9	569.4	601.7	614.0	619.3	641.8	675.2
7.5°	630.0	621.6	603.5	609.0	590.9	592.2	648.9	702.5	710.9	724.8	784.2
10°	620.6	604.3	610.8	610.8	611.1	640.5	678.6	729.8	740.1	793.6	799.9
12.5°	610.3	611.1	637.1	632.4	668.1	720.9	733.8	791.3	786.3	832.8	901.8
15°	648.4	668.4	651.6	658.1	661.5	723.5	744.3	820.7	842.7	901.6	946.5
17.5°	713.8	716.4	681.5	672.0	696.7	714.3	756.1	792.8	807.5	962.0	1025.5
20°	725.6	742.4	707.0	652.3	704.6	728.8	757.9	775.5	781.8	980.6	1070.2
22.5°	796.8	778.1	721.4	679.9	694.9	721.1	739.3	792.3	830.1	945.4	1113.0
25°	833.3	828.3	774.2	738.7	723.5	721.4	762.9	803.1	815.2	981.9	1123.5
27.5°	920.7	909.4	804.7	800.2	750.0	705.9	763.7	835.9	858.5	947.5	1162.9
30°	1039.7	1035.5	896.1	893.2	813.3	734.0	806.2	856.1	842.5	965.1	1189.1
32.5°	1159.5	1193.6	1051.0	969.6	909.7	837.2	794.2	849.8	874.3	1007.9	1237.5
35°	1304.2	1328.8	1183.6	1124.5	991.4	885.5	874.3	910.0	920.5	1058.9	1292.3
37.5°	1557.3	1520.0	1396.3	1295.8	1225.9	1058.1	1002.4	974.0	998.5	1127.9	1404.5
40°	1744.3	1720.7	1568.4	1508.2	1347.5	1249.3	1103.8	1077.3	1104.6	1198.8	1482.5
42.5°	1969.9	1920.8	1777.4	1736.7	1571.2	1381.9	1234.3	1243.5	1226.4	1338.8	1619.3
45°	2173.9	2063.1	1983.3	1992.5	1904.2	1648.5	1452.0	1447.5	1433.4	1541.6	1763.2
47.5°	2311.3	2214.4	2136.7	2111.2	2100.7	2117.2	1766.6	1687.3	1676.8	1754.5	1989.9
50°	2385.1	2279.0	2182.9	2188.1	2401.4	2561.8	2091.2	1978.6	1982.5	2063.7	2299.7
52.5°	2335.5	2215.4	2114.1	2212.6	2634.6	2858.3	2628.5	2359.1	2450.5	2429.7	2715.5
55°	2106.2	2001.9	1930.0	2106.2	2660.1	3177.4	3290.1	2931.9	2911.4	2864.1	3139.3
57.5°	1720.4	1630.6	1586.2	1772.1	2381.4	3434.5	3954.5	3579.2	3404.6	3206.6	3491.2
60°	1281.8	1215.7	1169.4	1267.7	1876.4	3184.8	4389.7	4189.3	3987.1	3536.7	3807.4
62.5°	949.4	895.5	846.4	855.3	1292.1	2739.1	4556.7	4835.6	4719.5	3885.2	4105.8
65°	757.7	708.5	674.1	654.4	800.2	2060.8	4324.3	5365.3	5499.2	4213.4	4321.1
67.5°	618.7	577.2	560.2	582.7	627.7	1174.7	3703.4	5686.7	5881.1	4561.7	4374.2
70°	503.4	469.3	467.5	528.4	578.0	716.2	2724.1	5464.8	5611.1	4621.0	4056.1
72.5°	350.9	335.9	359.8	446.2	572.8	596.4	1564.4	4522.3	4527.5	4081.3	3336.3
75°	198.5	196.2	234.0	355.8	557.8	590.4	872.2	3195.8	3198.2	3086.8	2311.3
77.5°	109.2	102.2	136.3	240.6	479.0	576.7	562.5	2182.1	2126.2	1717.8	1055.7
80°	50.4	47.5	73.8	154.2	350.3	545.5	450.9	1199.4	1081.5	559.6	257.6
82.5°	20.7	19.7	33.9	99.0	221.4	439.4	380.0	532.1	427.0	106.4	79.6
85°	3.7	3.9	13.9	59.9	124.0	202.5	308.1	252.6	185.7	29.4	43.6
87.5°	0.0	0.0	2.9	14.4	29.9	55.4	125.0	70.6	48.6	8.7	12.9
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°	440.9	440.9	440.9	440.9	440.9	440.9	440.9	440.9	440.9	440.9	440.9
2.5°	538.6	534.2	489.0	491.1	494.2	491.4	490.8	478.2	466.7	504.8	504.2
5°	681.2	649.5	618.2	606.1	580.1	546.0	546.2	535.5	524.4	539.9	539.9
7.5°	782.9	739.0	699.4	628.7	559.9	497.7	492.1	477.4	460.6	480.9	484.8
10°	806.5	768.4	717.2	613.5	548.3	487.7	421.0	366.1	340.6	328.8	326.7
12.5°	879.2	850.9	736.4	621.6	527.9	425.2	315.9	250.8	206.4	203.0	198.3
15°	927.8	907.9	755.3	601.4	441.2	305.7	198.5	152.3	134.5	132.9	130.5
17.5°	1003.2	968.5	737.2	537.1	345.1	201.7	133.4	120.3	122.4	127.1	123.4
20°	1033.9	966.2	697.8	443.8	242.4	135.2	115.8	108.7	114.2	118.7	116.6
22.5°	1065.4	973.0	662.8	365.8	158.4	111.9	103.2	99.5	100.1	104.5	104.8
25°	1065.2	991.9	622.4	284.9	117.9	99.5	93.2	88.5	86.7	89.8	89.0
27.5°	1116.9	970.1	548.6	211.4	103.7	89.0	83.0	77.2	70.6	73.8	73.8
30°	1117.2	1005.6	497.1	151.8	95.1	79.3	74.1	65.1	57.5	60.1	60.4
32.5°	1146.9	974.8	449.6	116.1	88.2	73.5	62.0	53.8	49.4	50.9	50.9
35°	1180.7	1001.1	376.6	102.4	81.4	65.4	53.0	46.5	43.1	44.4	44.4
37.5°	1292.6	995.6	325.9	95.3	76.9	59.1	48.3	41.0	39.4	40.2	41.2
40°	1333.0	1034.7	257.1	91.1	69.6	53.3	42.5	37.0	34.9	35.5	35.7
42.5°	1436.0	1043.4	205.4	87.7	63.0	46.2	37.8	33.9	31.3	31.3	32.0
45°	1549.7	1065.2	163.3	84.8	57.5	41.5	34.1	31.0	27.0	26.5	27.6
47.5°	1714.4	1148.7	133.1	79.0	50.9	38.6	31.5	26.8	23.6	22.6	23.6
50°	1989.9	1290.5	117.7	72.0	46.2	36.2	27.8	22.8	20.5	19.2	20.0
52.5°	2378.5	1535.5	109.5	65.4	42.0	32.6	24.9	20.0	17.6	16.5	17.1
55°	2810.3	1816.5	105.6	58.8	38.3	28.6	21.8	17.6	15.5	14.2	14.4
57.5°	3209.5	2080.7	101.6	52.5	34.7	25.5	19.2	15.5	13.4	12.1	12.3
60°	3602.9	2291.6	92.2	45.2	31.3	22.8	16.8	13.4	12.1	10.5	10.5
62.5°	3950.8	2417.7	78.5	39.1	28.1	20.2	15.0	12.1	11.0	9.5	9.5
65°	4187.7	2423.4	63.3	33.6	24.7	17.3	13.1	11.3	10.2	8.4	8.1
67.5°	4191.1	2265.9	50.7	29.9	21.8	15.2	11.8	10.8	9.5	7.9	7.4
70°	3751.2	1871.9	42.3	26.3	18.9	13.4	10.2	10.2	9.2	7.6	6.8
72.5°	3000.7	1430.5	35.5	22.8	16.8	11.6	9.5	9.7	8.9	7.6	6.8
75°	2016.9	820.4	29.4	19.4	14.7	9.7	9.2	9.5	9.2	7.6	6.6
77.5°	928.9	261.3	22.8	16.0	12.6	8.1	8.9	8.9	8.4	6.8	5.8
80°	209.3	64.3	16.5	11.8	10.2	6.0	8.1	7.4	6.6	4.7	3.4
82.5°	76.2	19.7	10.0	7.4	6.3	2.4	5.3	5.3	4.7	3.4	2.1
85°	43.6	10.2	5.5	4.7	3.4	1.1	2.9	3.2	2.6	2.4	1.1
87.5°	14.2	2.4	2.6	2.9	2.6	0.5	1.1	1.1	0.8	0.5	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)