

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: P367145

Luminaire Tested: **MSA-SA2A-727-U-T4FT-HSS**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P367145  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-13)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA2A-727-U-T4FT-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV FORWARD THROW OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

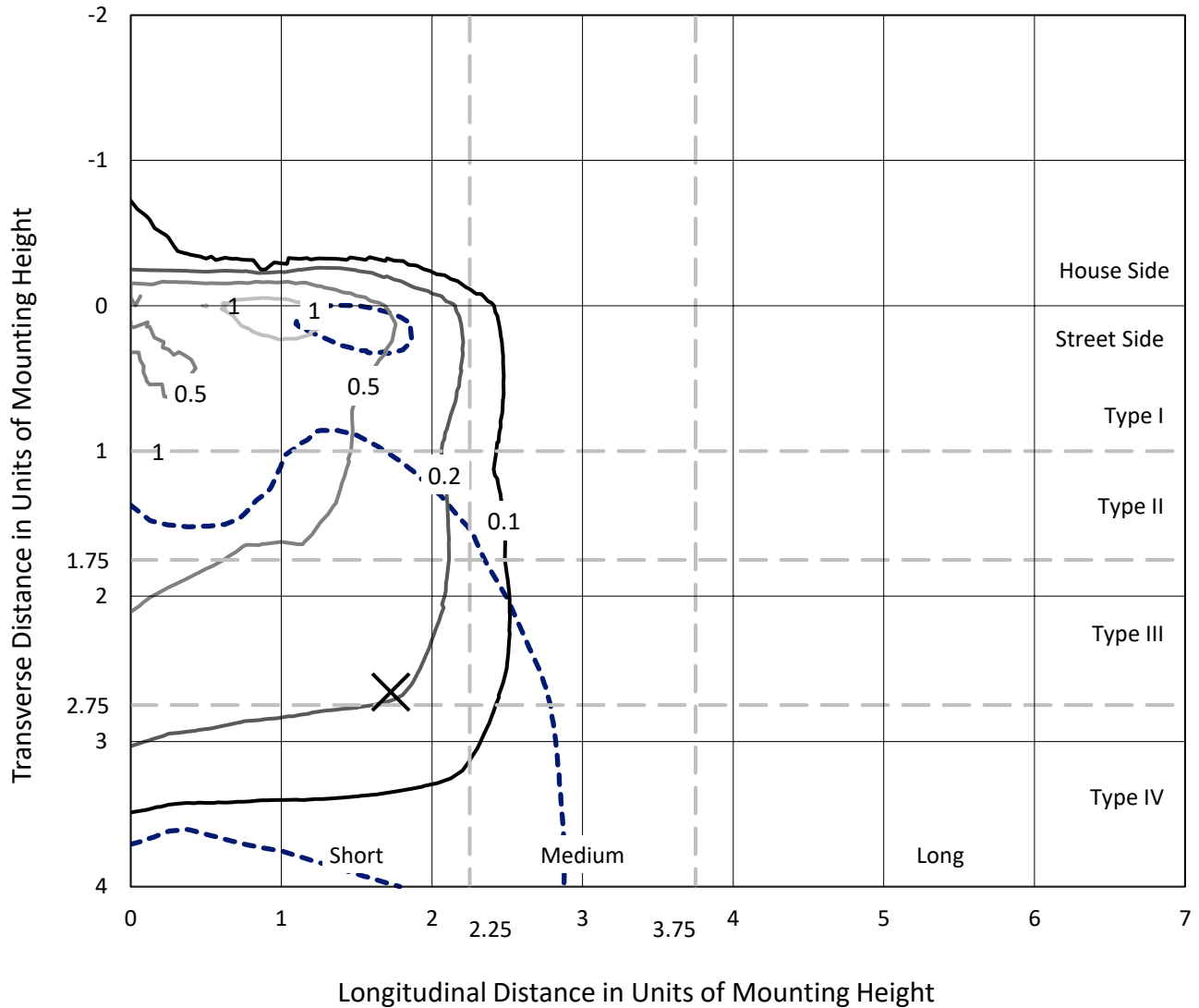
Lumens per Lamp: N/A  
Luminaire Lumens: 4978 lumens  
Efficiency: N/A  
Efficacy: 75.4 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G2  
  
Input Watts (W): 66  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage 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

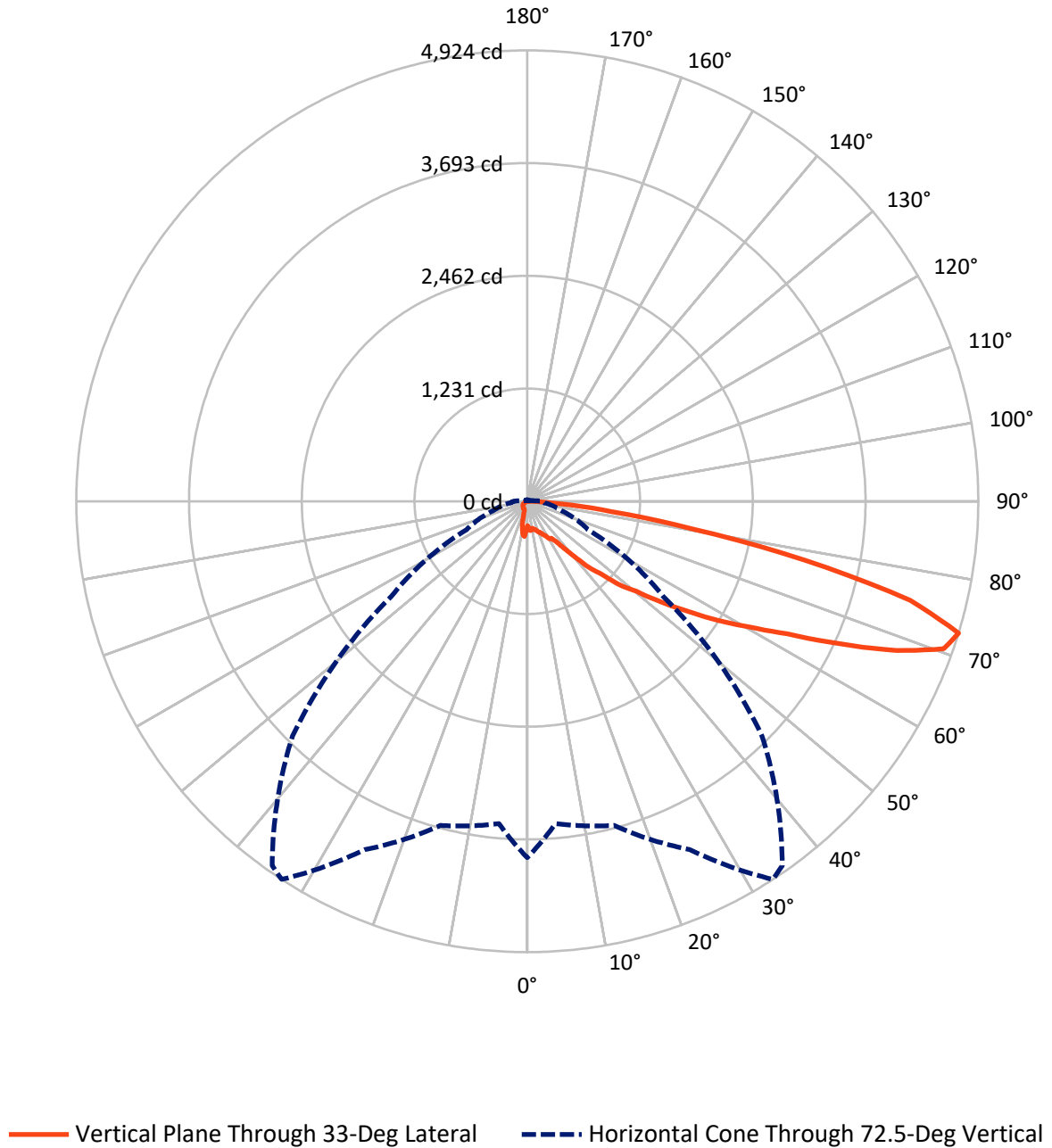
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.2 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



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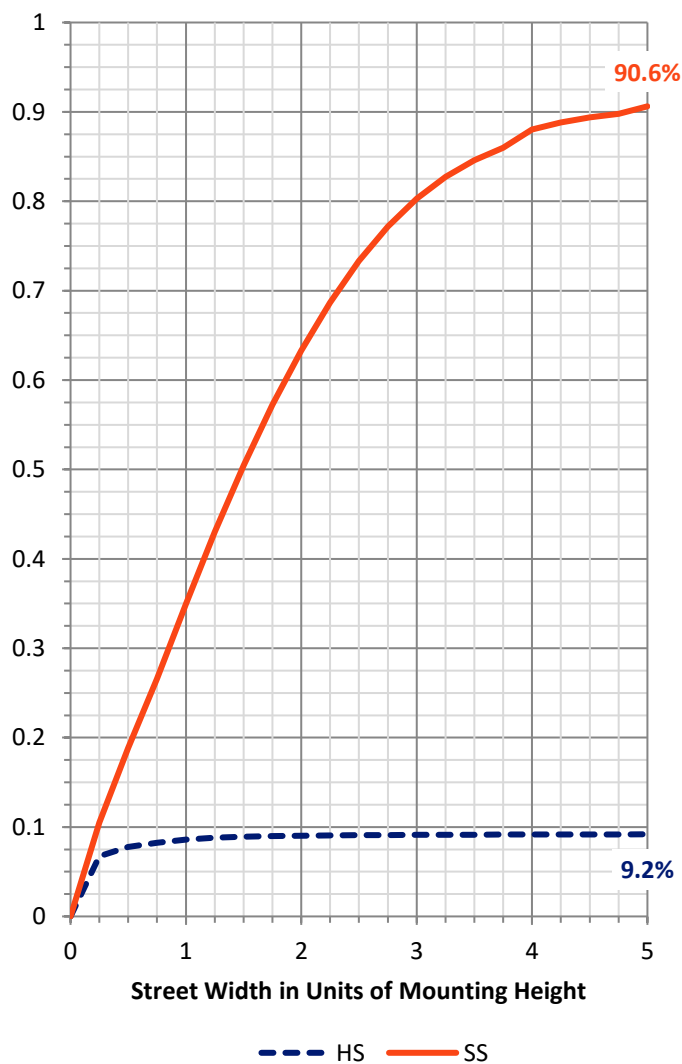
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	460.3	0.0	460.3
	% Fixture	9.2	0.0	9.2
<b>Street Side</b>	Lumens	4517.7	0.0	4517.7
	% Fixture	90.8	0.0	90.8
<b>Total</b>	Lumens	4978.0	0.0	4978.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	34.3	0.7
10°-20°	102.1	2.1
20°-30°	173.2	3.5
30°-40°	316.9	6.4
40°-50°	668.9	13.4
50°-60°	1119.2	22.5
60°-70°	1498.1	30.1
70°-80°	978.6	19.7
80°-90°	86.8	1.7
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°	4978.0	100.0
0°-180°	4978.0	100.0

**Coefficient of Utilization**

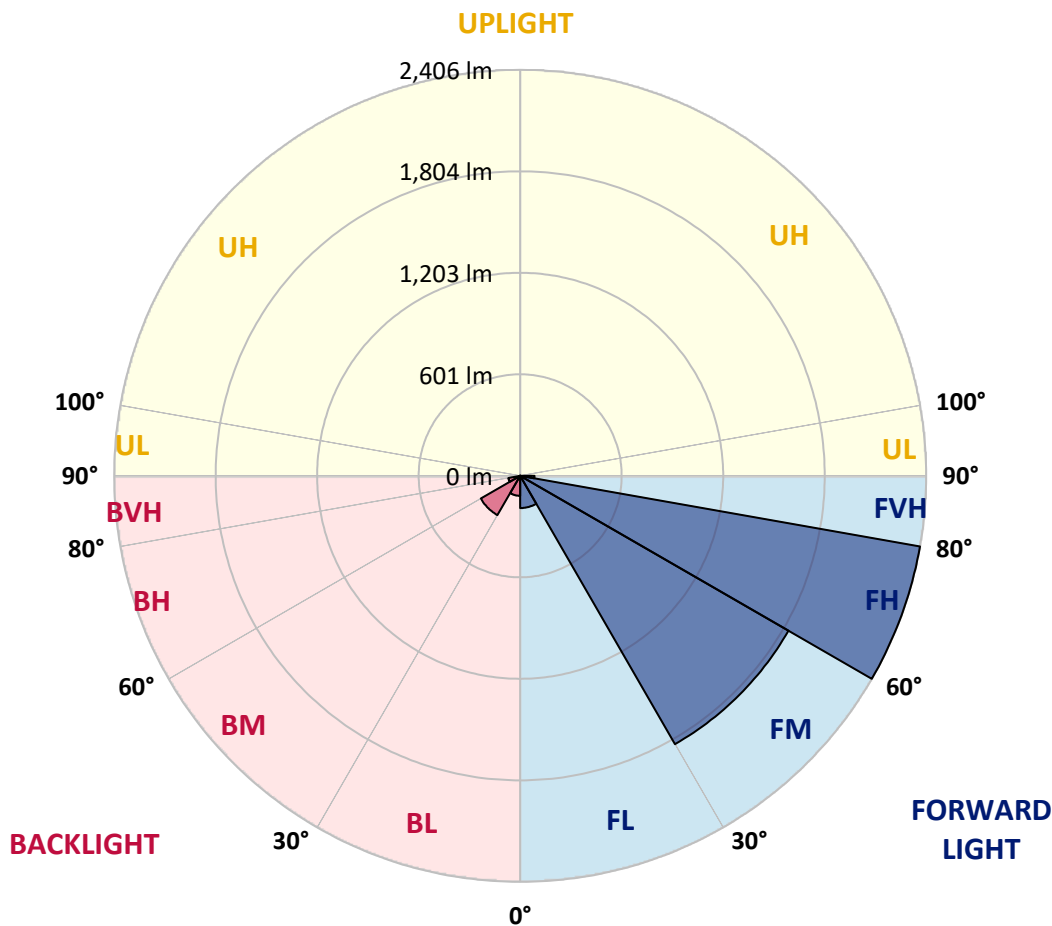


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	191.1	3.8			
FM (30°-60°)	1836.0	36.9			
FH (60°-80°)	2405.6	48.3			G2/5000
FVH (80°-90°)	85.1	1.7			G1/100
BL (0°-30°)	118.5	2.4	B1/500		
BM (30°-60°)	269.1	5.4	B1/1000		
BH (60°-80°)	71.1	1.4	B0/110		G0/110
BVH (80°-90°)	1.7	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-G2**  
 Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	33°	35°	45°	55°	65°	75°	85°
0°	264.8	264.8	264.8	264.8	264.8	264.8	264.8	264.8	264.8	264.8	264.8
2.5°	315.6	303.5	285.8	286.9	289.9	292.4	299.0	296.3	291.0	290.8	315.6
5°	334.4	320.9	319.8	321.4	320.6	325.0	319.5	337.5	352.7	370.9	400.2
7.5°	325.3	318.9	310.9	319.2	318.9	316.7	320.3	356.8	393.6	416.8	465.1
10°	299.0	291.9	297.9	300.7	298.8	308.4	332.5	362.3	406.3	454.9	478.4
12.5°	291.6	296.0	298.2	298.2	316.7	321.7	358.5	386.7	438.9	477.3	545.6
15°	320.6	329.2	314.0	310.7	316.5	319.2	360.1	394.1	461.0	531.2	588.4
17.5°	366.8	366.2	342.7	329.7	338.8	345.5	368.1	407.9	447.2	573.5	656.4
20°	398.5	399.1	356.8	329.7	359.8	363.7	388.9	420.6	451.6	594.8	700.9
22.5°	439.4	424.8	378.1	351.8	372.3	375.9	403.5	428.7	474.3	592.3	757.8
25°	472.9	463.5	404.6	386.4	404.6	399.6	424.8	462.7	498.6	631.8	791.3
27.5°	524.8	508.8	423.4	426.7	425.6	429.2	435.0	493.1	541.4	633.7	868.7
30°	573.2	563.8	465.4	465.4	476.2	469.3	473.4	543.6	582.9	678.5	955.7
32.5°	623.2	623.8	514.9	488.6	480.1	508.5	536.5	568.2	632.9	755.3	1088.9
35°	755.6	744.6	609.7	544.2	537.3	535.6	580.4	666.4	721.6	855.4	1268.3
37.5°	1022.3	983.9	813.7	670.2	644.2	635.4	686.3	774.4	829.4	1002.4	1564.9
40°	1295.9	1225.5	1036.4	874.7	790.4	752.3	811.5	886.3	984.2	1164.9	1839.3
42.5°	1536.1	1449.1	1204.2	1095.3	985.6	969.0	913.4	1035.3	1205.3	1401.5	2108.2
45°	1770.2	1598.9	1353.4	1267.2	1134.0	1143.4	1124.6	1230.2	1435.0	1660.8	2346.7
47.5°	1931.3	1777.4	1536.4	1424.5	1371.1	1316.1	1465.4	1575.1	1639.5	1825.5	2552.9
50°	2104.9	1949.0	1693.7	1615.4	1545.2	1600.8	1794.5	1809.2	1803.9	1979.2	2693.3
52.5°	2329.1	2145.3	1874.1	1785.7	1825.5	1880.8	2104.4	2107.1	1950.1	2108.5	2794.5
55°	2536.3	2332.6	2114.6	2031.1	2114.3	2161.0	2408.9	2318.0	2035.3	2196.4	2844.2
57.5°	2828.5	2592.7	2434.4	2287.3	2455.9	2411.1	2676.7	2541.6	2130.9	2254.7	2826.0
60°	3197.7	2920.2	2761.6	2606.0	2786.7	2817.1	2938.2	2653.2	2167.9	2273.8	2716.3
62.5°	3573.3	3294.2	3085.5	2979.9	3185.0	3285.0	3180.3	2708.8	2123.4	2236.5	2467.8
65°	4039.3	3681.9	3438.2	3376.3	3756.3	3903.3	3466.6	2722.3	2037.5	2031.1	1984.1
67.5°	4358.5	4010.5	3787.0	3890.6	4349.7	4361.5	3723.7	2726.5	1748.1	1590.3	1302.3
70°	4434.2	4061.7	3961.6	4266.8	4823.1	4673.6	3806.6	2516.4	1296.5	943.8	595.3
72.5°	3892.5	3533.8	3664.0	4195.7	4923.7	4855.2	3623.3	1815.5	729.9	377.5	182.7
75°	2387.6	2170.7	2748.6	3557.3	4322.0	4277.8	2826.8	938.0	294.1	150.9	68.3
77.5°	1038.4	964.3	1434.4	2360.3	3105.7	3066.2	1656.3	345.5	152.0	106.1	34.5
80°	343.5	333.3	543.4	1117.7	1819.1	1784.3	697.9	143.7	108.3	85.1	19.3
82.5°	81.5	81.0	189.6	514.3	926.7	897.7	214.2	79.3	78.5	67.2	10.2
85°	20.5	21.0	52.5	210.3	376.4	331.9	55.8	39.5	55.3	45.6	5.3
87.5°	0.0	0.0	13.5	30.1	56.9	35.7	6.1	10.5	15.5	16.3	2.8
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°	264.8	264.8	264.8	264.8	264.8	264.8	264.8	264.8	264.8	264.8	264.8
2.5°	321.2	318.1	293.2	299.3	308.7	307.9	314.0	309.3	305.1	325.6	323.6
5°	408.5	391.9	384.2	394.9	389.1	375.6	386.9	385.0	381.7	388.6	393.8
7.5°	474.0	458.8	451.9	429.2	396.3	370.3	374.5	364.8	355.7	366.5	377.5
10°	495.5	487.3	486.4	442.2	411.3	373.7	329.2	290.8	280.5	267.0	273.1
12.5°	554.1	559.1	527.9	476.2	416.5	344.4	265.3	210.9	188.8	174.4	175.2
15°	602.2	619.6	574.3	481.5	366.5	262.6	176.6	127.7	113.9	110.3	109.2
17.5°	673.8	690.7	588.7	444.1	295.4	178.0	113.6	99.5	100.3	102.8	102.3
20°	726.9	724.4	576.3	378.1	217.8	116.6	95.1	93.1	97.6	104.7	103.1
22.5°	778.0	760.9	568.5	317.0	141.0	93.7	91.8	91.5	95.6	102.5	104.5
25°	814.5	817.3	555.5	248.2	102.5	87.1	88.7	91.2	95.4	102.8	101.7
27.5°	919.0	841.6	501.4	180.2	86.5	83.5	87.6	92.6	94.0	103.4	103.6
30°	986.7	933.3	466.0	121.3	79.9	77.1	85.4	92.0	93.7	105.9	106.7
32.5°	1104.7	972.9	425.1	90.1	74.3	75.2	80.4	89.3	97.0	110.0	110.6
35°	1251.4	1099.7	351.0	81.0	72.4	71.0	73.5	83.7	96.5	110.6	113.3
37.5°	1530.9	1175.7	278.3	78.5	72.4	69.9	72.4	78.5	94.8	116.1	121.9
40°	1718.0	1330.5	200.7	77.9	71.0	68.8	69.6	75.7	90.1	112.8	121.3
42.5°	1948.5	1395.7	147.9	76.6	69.6	66.3	66.9	74.6	85.4	105.9	112.2
45°	2137.2	1443.3	116.4	76.0	66.3	65.2	66.3	73.8	81.0	90.9	96.7
47.5°	2280.7	1498.5	93.4	72.4	65.5	65.2	63.8	69.1	73.5	76.0	79.9
50°	2385.7	1486.1	77.4	66.9	62.7	64.4	61.9	62.7	63.8	62.5	66.9
52.5°	2450.1	1441.3	64.4	60.3	59.4	60.8	57.8	55.3	53.3	52.2	55.0
55°	2473.6	1351.5	54.7	51.7	53.6	54.2	51.7	47.3	43.9	42.3	44.5
57.5°	2429.1	1214.7	47.5	42.8	47.3	47.3	43.9	39.2	35.4	32.6	34.8
60°	2316.3	1063.5	42.3	35.7	40.4	40.6	36.8	31.8	28.7	26.0	27.4
62.5°	2106.3	898.8	37.0	31.0	34.8	35.1	30.4	25.7	23.5	20.5	21.6
65°	1686.2	687.4	31.5	27.4	30.1	29.3	25.2	21.8	19.1	16.3	16.9
67.5°	1094.5	424.2	27.4	24.9	25.4	24.6	21.3	19.1	16.0	13.8	14.1
70°	490.0	182.7	24.0	22.4	22.1	20.7	18.0	17.7	15.8	13.8	13.8
72.5°	151.2	68.8	20.7	20.2	19.1	17.4	15.8	16.9	15.5	13.3	13.0
75°	59.7	31.5	17.1	17.1	16.6	14.4	14.1	15.2	14.4	12.2	11.6
77.5°	31.2	19.9	14.1	14.6	14.4	11.1	12.7	13.8	13.3	10.2	8.6
80°	18.5	12.2	10.5	11.9	11.6	7.7	9.7	8.8	6.4	3.0	0.8
82.5°	10.2	5.5	4.7	6.9	6.9	2.8	5.0	4.4	2.5	0.0	0.0
85°	5.0	3.9	3.6	3.9	2.8	0.8	2.5	2.5	1.4	0.0	0.0
87.5°	2.5	2.2	1.7	1.4	1.1	0.0	0.8	1.1	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)