

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: P368186

Luminaire Tested: **MSA-SA4A-727-U-RW**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368186
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-7)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA4A-727-U-RW
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13315 lumens
Efficiency: N/A
Efficacy: 103.2 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B3 - U0 - G3

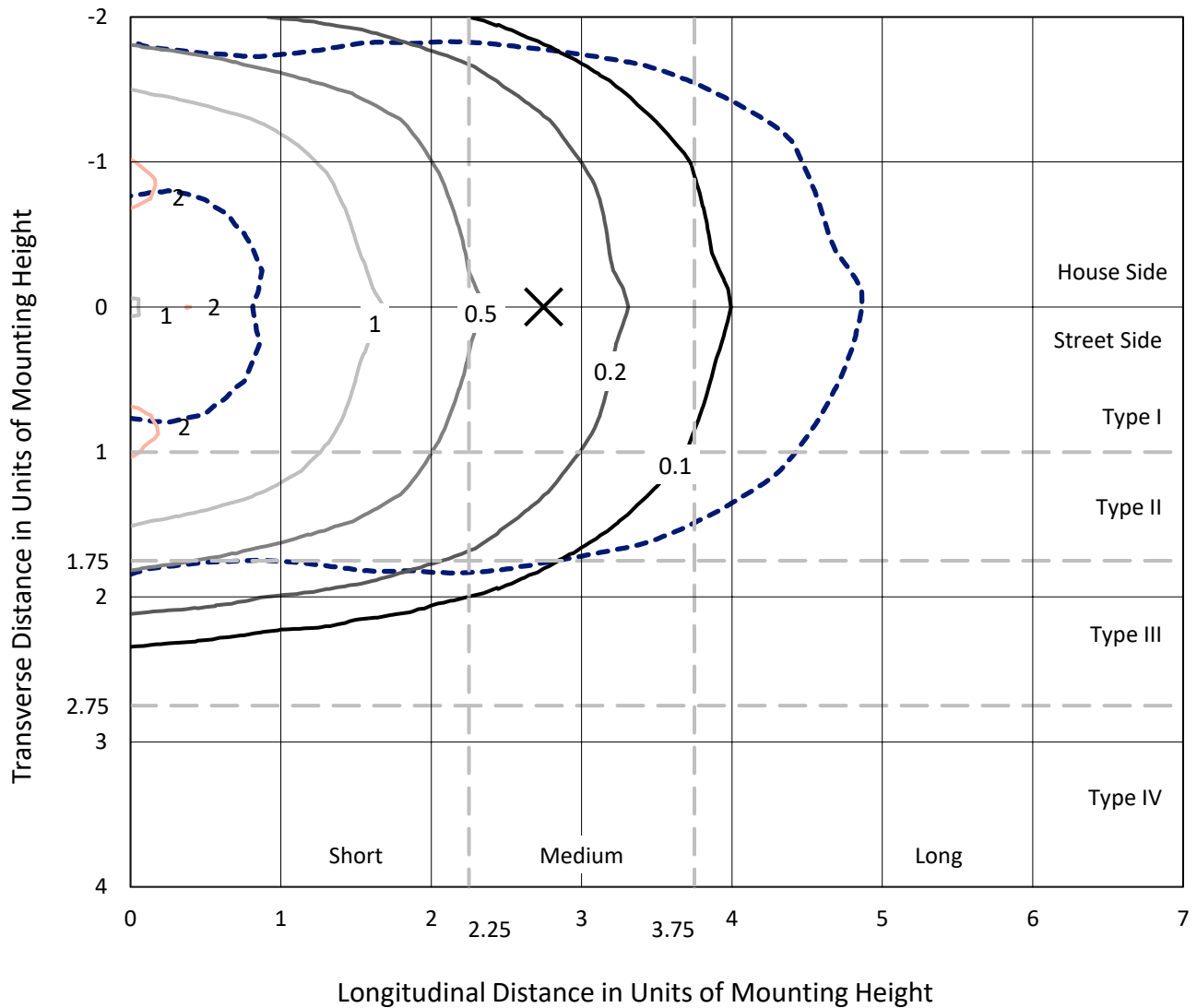
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

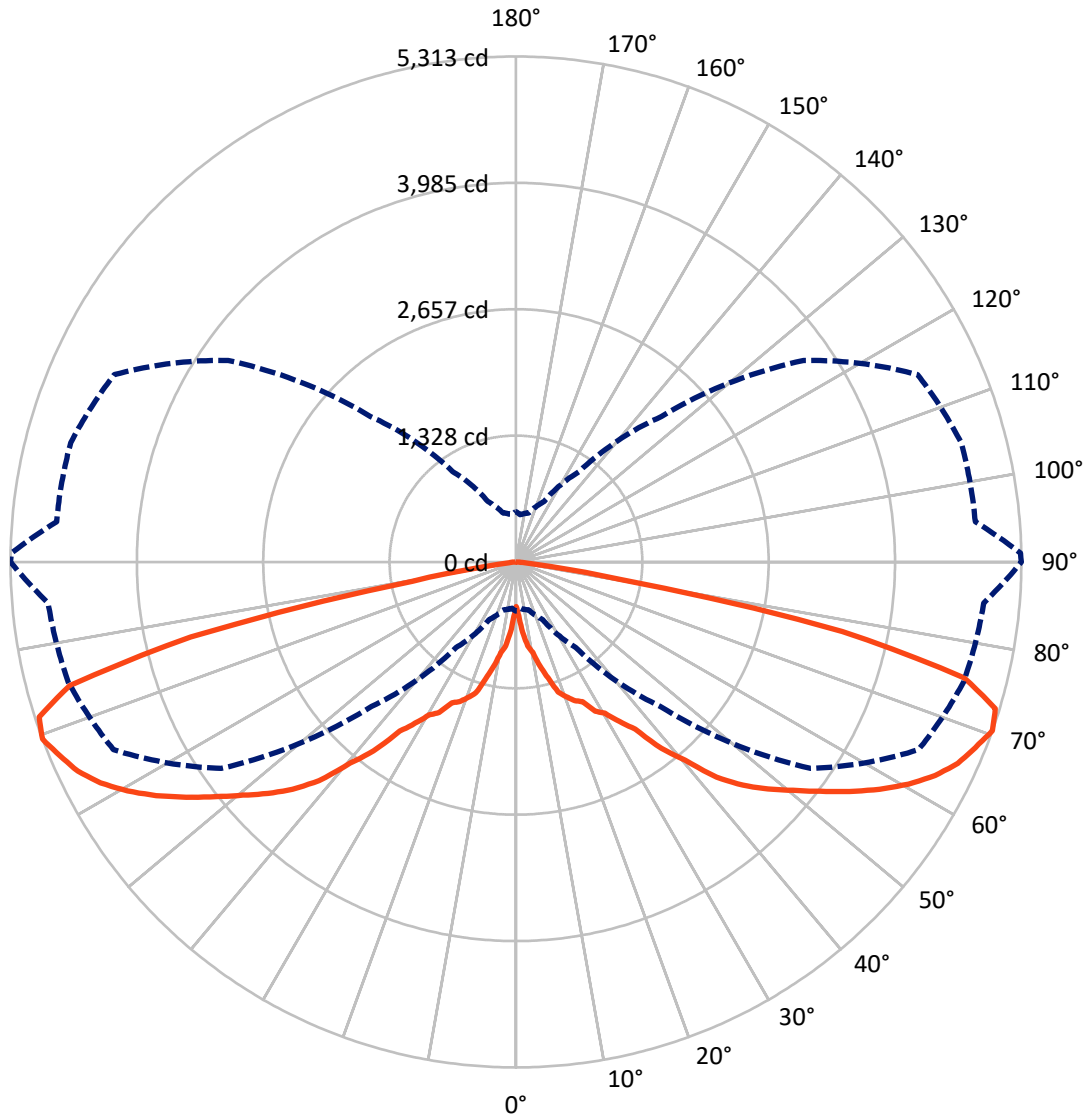
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.2 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 90-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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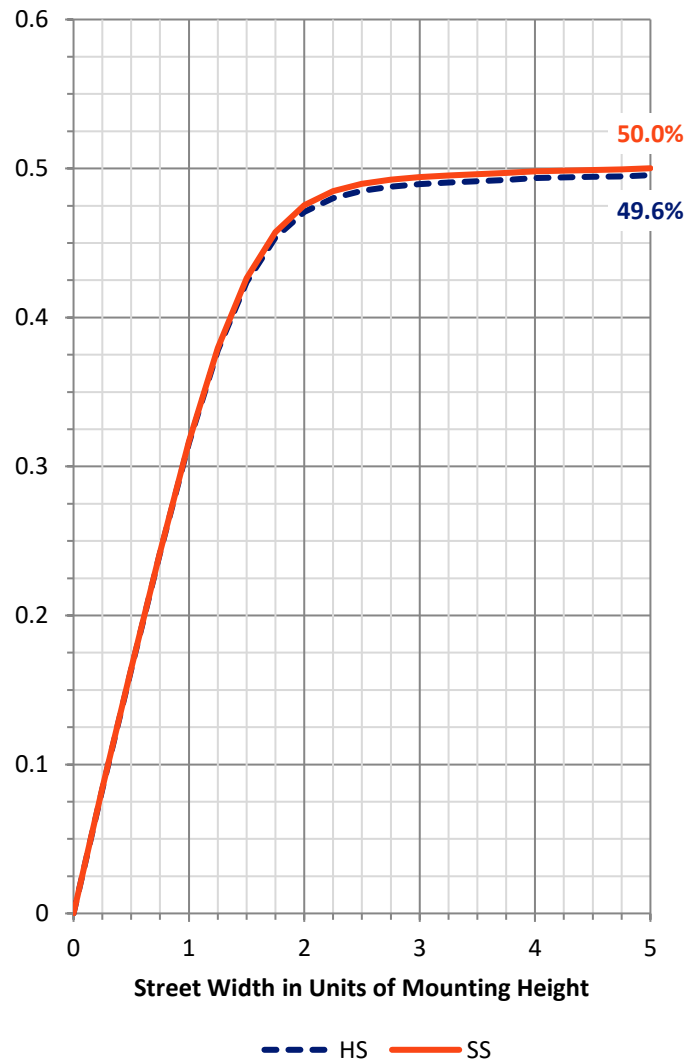
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	6632.8	0.0	6632.8
	% Fixture	49.8	0.0	49.8
Street Side	Lumens	6682.2	0.0	6682.2
	% Fixture	50.2	0.0	50.2
Total	Lumens	13315.0	0.0	13315.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	70.5	0.5
10°-20°	323.1	2.4
20°-30°	698.6	5.2
30°-40°	1332.9	10.0
40°-50°	2421.3	18.2
50°-60°	3401.4	25.5
60°-70°	3247.7	24.4
70°-80°	1666.7	12.5
80°-90°	152.8	1.1
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°	13315.0	100.0
0°-180°	13315.0	100.0



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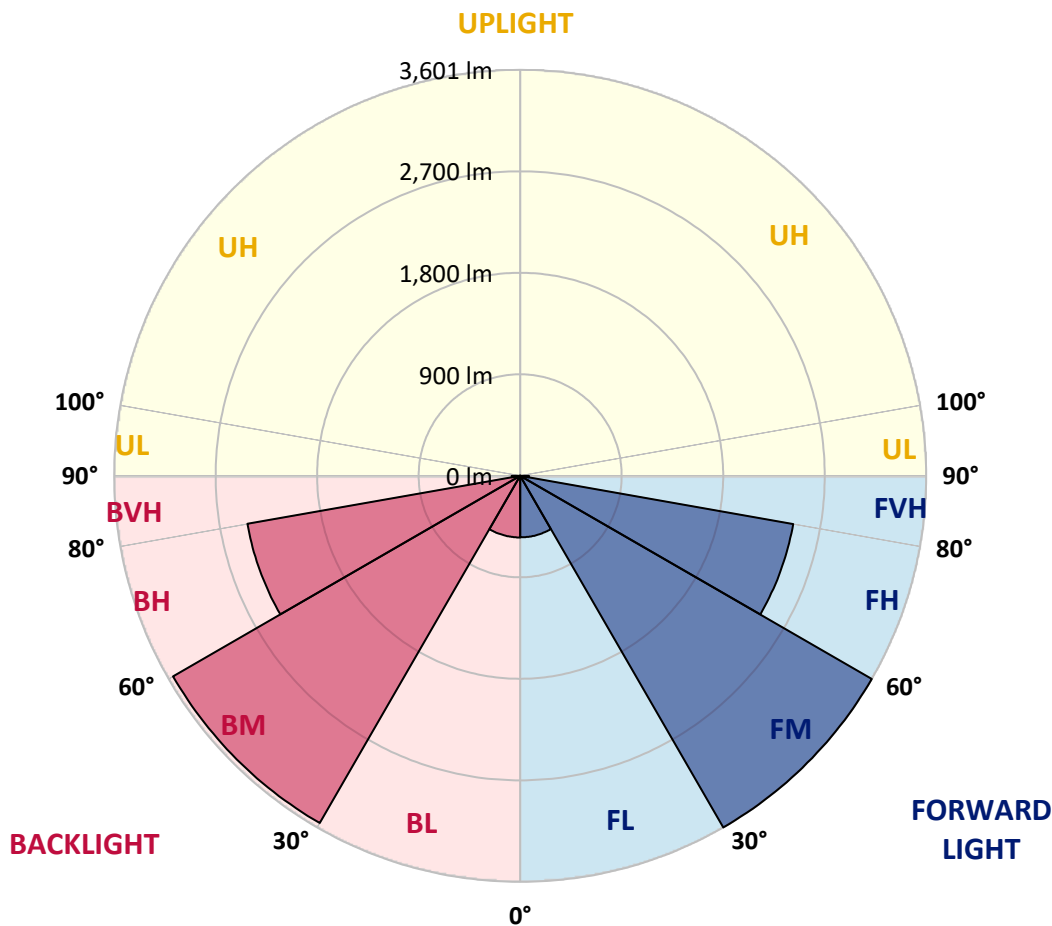
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	545.6	4.1			
FM (30°-60°)	3600.5	27.0			
FH (60°-80°)	2458.5	18.5			G2/5000
FVH (80°-90°)	77.5	0.6			G1/100
BL (0°-30°)	546.6	4.1	B2/1000		
BM (30°-60°)	3555.1	26.7	B3/5000		
BH (60°-80°)	2455.9	18.4	B3/2500		G3/2500
BVH (80°-90°)	75.3	0.6			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G3

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	467.3	467.3	467.3	467.3	467.3	467.3	467.3	467.3	467.3	467.3	467.3
2.5°	566.1	545.0	518.6	534.2	540.7	552.0	550.4	545.0	521.8	560.7	565.0
5°	708.5	675.1	662.7	660.5	663.8	653.0	688.0	677.8	696.7	731.7	739.8
7.5°	806.8	781.9	755.5	763.6	730.1	725.3	770.6	811.1	821.3	885.5	889.9
10°	853.2	828.9	835.9	831.0	827.3	858.6	879.6	909.3	951.9	957.9	967.0
12.5°	892.6	902.3	933.0	932.0	982.7	1038.3	1030.2	1060.9	1067.9	1142.4	1119.7
15°	992.4	1012.4	1010.2	1029.1	1051.2	1142.4	1143.0	1195.3	1243.3	1272.5	1264.9
17.5°	1138.6	1145.7	1116.5	1117.6	1181.8	1219.0	1260.6	1251.4	1376.6	1433.8	1437.6
20°	1226.1	1243.9	1210.4	1166.2	1280.0	1331.3	1354.5	1301.1	1434.9	1512.1	1512.1
22.5°	1378.8	1332.9	1282.2	1252.5	1352.9	1407.4	1404.7	1389.6	1460.8	1597.3	1584.4
25°	1463.0	1437.1	1411.7	1419.2	1470.0	1498.0	1535.3	1500.2	1567.1	1668.6	1625.9
27.5°	1622.7	1574.7	1450.0	1549.3	1549.3	1528.3	1607.0	1623.8	1580.1	1745.2	1777.0
30°	1803.5	1786.7	1610.3	1715.5	1683.1	1623.8	1774.9	1764.1	1690.7	1859.1	1844.5
32.5°	1974.5	2029.6	1862.3	1804.5	1853.1	1875.8	1796.5	1828.8	1842.9	2005.3	1998.3
35°	2236.8	2283.2	2061.4	2046.8	1965.9	1944.9	2005.3	2016.1	2017.2	2188.2	2156.9
37.5°	2690.6	2623.7	2404.6	2301.6	2310.7	2285.4	2297.2	2212.0	2223.8	2472.1	2487.7
40°	3022.5	2947.0	2703.0	2629.1	2447.8	2556.3	2460.2	2451.6	2427.8	2749.5	2740.8
42.5°	3388.9	3285.3	3015.5	2916.7	2724.1	2679.8	2635.6	2735.4	2728.9	3026.8	3092.7
45°	3665.8	3456.4	3315.5	3254.0	3138.5	3030.1	2988.0	3032.8	3012.3	3233.5	3348.5
47.5°	3840.6	3658.7	3496.9	3367.3	3256.7	3522.8	3309.6	3249.7	3208.1	3455.8	3566.5
50°	3979.8	3769.9	3578.9	3535.7	3623.1	3858.4	3522.2	3390.0	3440.7	3623.1	3773.7
52.5°	4017.6	3795.3	3623.7	3596.1	3832.5	3875.1	3820.6	3598.3	3584.8	3823.9	4005.7
55°	3902.1	3689.0	3607.5	3758.0	4019.2	3983.6	4066.7	3924.8	3829.3	4028.9	4257.7
57.5°	3604.8	3393.2	3373.8	3590.8	3919.9	4223.2	4264.2	4152.0	4026.8	4238.3	4508.1
60°	3116.4	2923.2	2972.3	3211.9	3708.4	4140.1	4358.1	4255.6	4216.7	4427.2	4740.2
62.5°	2356.1	2205.5	2336.6	2670.7	3322.0	4032.7	4487.6	4471.4	4415.3	4627.9	4945.2
65°	1502.4	1423.0	1556.9	1896.3	2722.5	3837.4	4549.7	4571.3	4623.1	4782.8	5103.9
67.5°	873.1	831.0	912.5	1190.4	1938.9	3150.9	4434.2	4744.0	4770.9	4862.7	5208.0
70°	516.4	488.9	522.4	668.6	1097.6	2146.7	3782.3	4668.4	4872.4	4936.1	5313.3
72.5°	393.9	368.0	353.5	395.6	573.1	1109.0	2557.3	3957.2	4790.9	4887.5	5269.0
75°	340.5	315.7	298.4	302.2	341.1	526.7	1386.3	2830.4	4082.4	4450.4	4867.0
77.5°	292.5	270.4	257.9	256.9	261.7	289.2	579.6	1534.7	2556.8	3199.0	3508.7
80°	234.2	216.9	214.2	214.2	207.2	205.1	288.2	583.9	973.0	1153.7	1106.3
82.5°	171.1	153.8	171.1	168.9	158.1	149.5	183.5	252.6	300.0	236.9	187.3
85°	115.5	99.8	112.8	114.9	104.7	77.7	110.1	126.3	129.5	80.9	66.9
87.5°	40.5	39.4	63.7	55.6	45.3	26.4	40.5	43.7	45.9	28.6	19.4
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):

	91°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	467.3	467.3	467.3	467.3	467.3	467.3	467.3	467.3	467.3	467.3	467.3
2.5°	566.6	560.1	527.8	532.6	545.0	551.0	556.9	532.6	520.8	558.5	554.7
5°	742.0	718.3	691.8	688.0	689.7	666.5	679.9	674.0	676.7	701.0	705.8
7.5°	888.8	860.2	825.1	797.6	750.1	712.3	744.2	760.3	765.2	808.4	824.6
10°	968.1	943.8	933.6	881.8	866.1	861.3	853.7	827.8	856.4	846.2	854.2
12.5°	1123.5	1118.7	1065.2	1031.2	1034.5	1043.7	996.2	970.3	933.0	991.3	970.3
15°	1255.7	1276.8	1223.4	1161.3	1130.5	1146.2	1110.0	1072.3	1038.8	1056.6	1033.9
17.5°	1424.6	1424.1	1320.0	1253.6	1250.9	1249.8	1196.4	1113.3	1153.2	1140.8	1141.9
20°	1514.2	1499.7	1370.1	1293.5	1358.8	1335.6	1287.6	1180.7	1227.1	1242.2	1252.0
22.5°	1589.2	1581.1	1424.1	1368.0	1410.1	1410.6	1362.6	1306.5	1300.5	1347.5	1322.1
25°	1641.6	1674.0	1526.1	1512.6	1531.0	1512.6	1465.7	1429.0	1405.2	1475.4	1405.2
27.5°	1765.7	1719.8	1541.7	1618.4	1629.7	1537.4	1596.2	1553.1	1487.2	1574.1	1602.7
30°	1854.2	1881.2	1651.8	1767.3	1753.8	1668.6	1692.8	1691.2	1612.4	1781.9	1761.9
32.5°	2006.4	1974.0	1831.5	1822.4	1854.7	1851.0	1809.9	1829.9	1849.3	1972.4	2002.1
35°	2162.3	2196.9	1946.5	2008.5	1999.4	1941.1	2048.5	2036.1	2093.8	2346.3	2262.7
37.5°	2514.2	2349.6	2204.4	2196.3	2257.8	2267.0	2232.5	2287.0	2411.6	2605.9	2695.5
40°	2744.6	2669.6	2423.0	2432.7	2347.4	2494.2	2397.1	2572.5	2667.4	2995.0	2963.2
42.5°	3093.2	2910.3	2673.4	2705.7	2688.5	2617.8	2745.7	2835.8	2971.8	3221.6	3383.0
45°	3352.8	3101.8	2989.6	2969.6	2967.5	3090.5	3074.3	3218.4	3267.0	3454.8	3588.6
47.5°	3549.7	3336.6	3170.4	3193.0	3127.2	3478.5	3291.3	3336.0	3434.3	3611.3	3767.2
50°	3783.4	3546.0	3357.1	3413.2	3573.5	3708.4	3538.9	3462.3	3510.3	3719.2	3892.9
52.5°	3999.8	3749.9	3542.2	3589.1	3850.9	3789.3	3771.0	3577.3	3571.3	3739.2	3936.7
55°	4252.9	3971.2	3787.7	3936.7	4029.5	3953.4	3924.2	3688.4	3542.7	3636.1	3822.3
57.5°	4501.1	4190.3	4007.9	4038.6	4156.3	4080.7	3862.2	3499.0	3317.2	3335.5	3523.8
60°	4733.7	4391.6	4241.0	4211.3	4305.2	4009.0	3626.4	3152.0	2910.8	2866.6	3029.5
62.5°	4932.8	4559.9	4417.5	4336.5	4426.1	4011.7	3258.9	2595.1	2330.2	2180.1	2307.0
65°	5090.9	4699.7	4598.3	4556.2	4588.5	3767.8	2686.3	1905.5	1580.6	1414.4	1488.3
67.5°	5196.2	4778.0	4731.5	4786.6	4354.9	3138.0	1990.2	1219.6	919.0	828.3	874.8
70°	5305.2	4847.0	4845.4	4658.2	3692.7	2163.4	1162.4	703.1	534.8	499.7	528.8
72.5°	5268.5	4765.0	4789.3	4073.7	2559.0	1156.4	613.6	397.7	362.1	374.5	400.4
75°	4878.9	4332.2	4215.1	2928.6	1451.6	537.5	353.5	301.1	299.0	317.8	343.2
77.5°	3538.9	3017.1	2707.4	1659.9	622.2	290.9	260.1	251.5	251.5	266.6	289.2
80°	1166.7	1009.7	1052.3	642.2	294.1	200.7	202.9	206.7	205.6	209.4	228.3
82.5°	191.6	198.6	307.1	262.3	177.5	137.1	153.3	160.8	163.0	145.7	165.7
85°	68.0	76.6	130.6	121.4	102.5	69.1	100.9	112.8	111.2	97.1	107.4
87.5°	21.0	27.0	47.5	36.7	30.8	18.9	37.8	44.3	55.6	22.7	20.5
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)