

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: P596698

Luminaire Tested: **MSA-SA3C-827-U-RW**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596698
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-7)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA3C-827-U-RW
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13744 lumens
Efficiency: N/A
Efficacy: 82.8 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B4 - U0 - G4

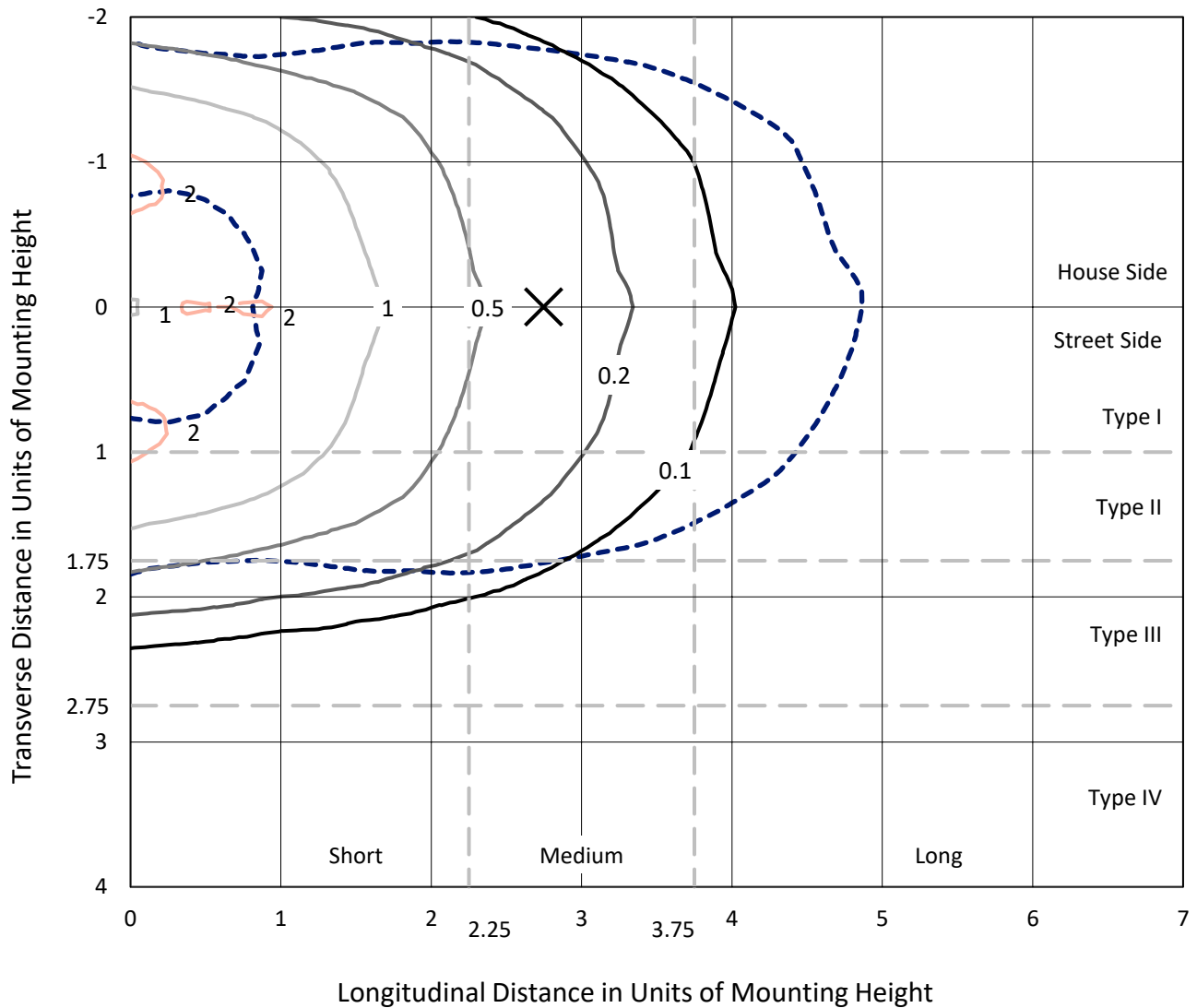
Input Watts (W): 166
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

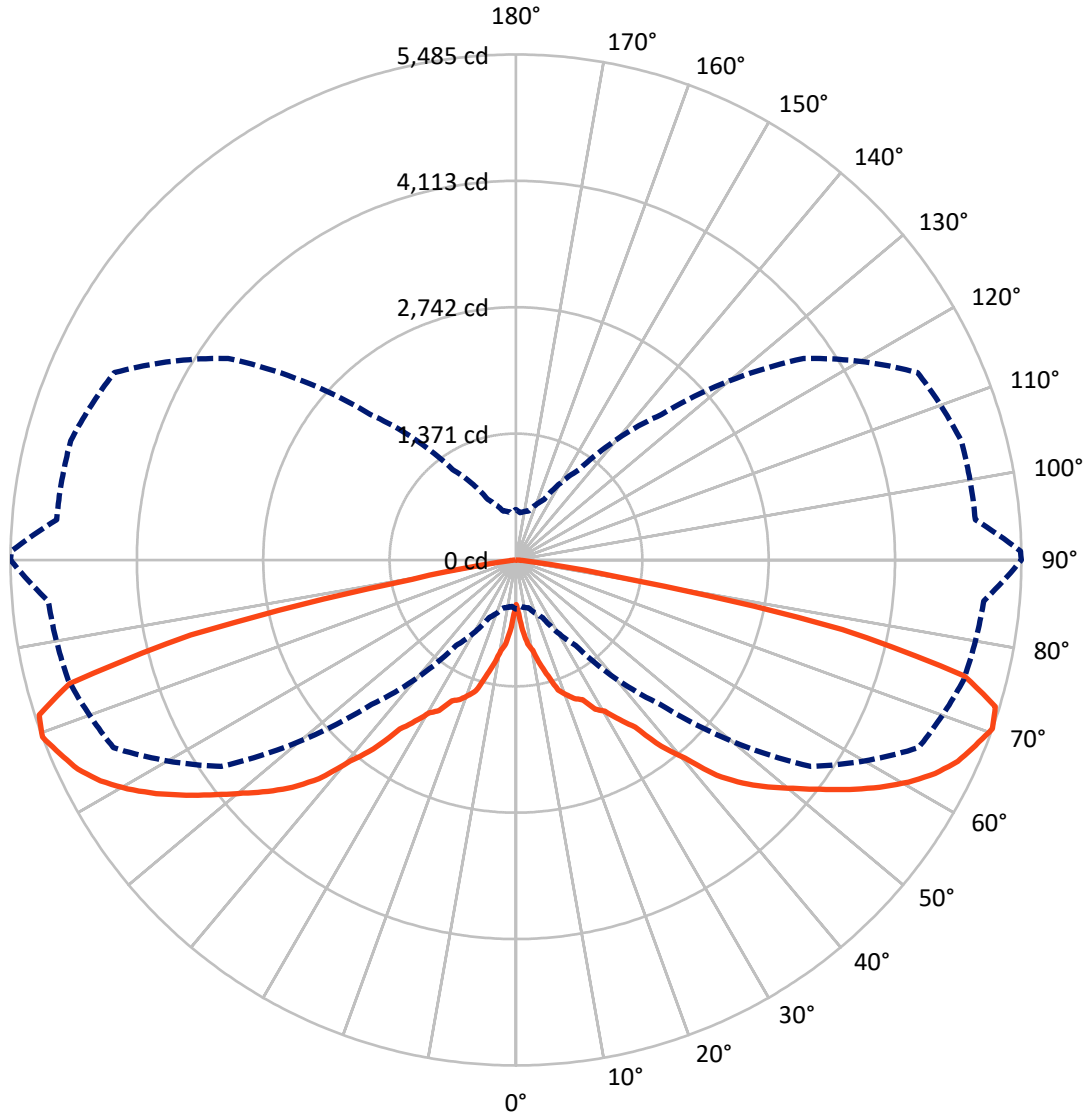
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.3 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	6846.5	0.0	6846.5
	% Fixture	49.8	0.0	49.8
Street Side	Lumens	6897.5	0.0	6897.5
	% Fixture	50.2	0.0	50.2
Total	Lumens	13744.0	0.0	13744.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.8	0.5
10°-20°	333.5	2.4
20°-30°	721.1	5.2
30°-40°	1375.8	10.0
40°-50°	2499.4	18.2
50°-60°	3511.0	25.5
60°-70°	3352.3	24.4
70°-80°	1720.4	12.5
80°-90°	157.7	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°	13744.0	100.0
0°-180°	13744.0	100.0

Coefficient of Utilization



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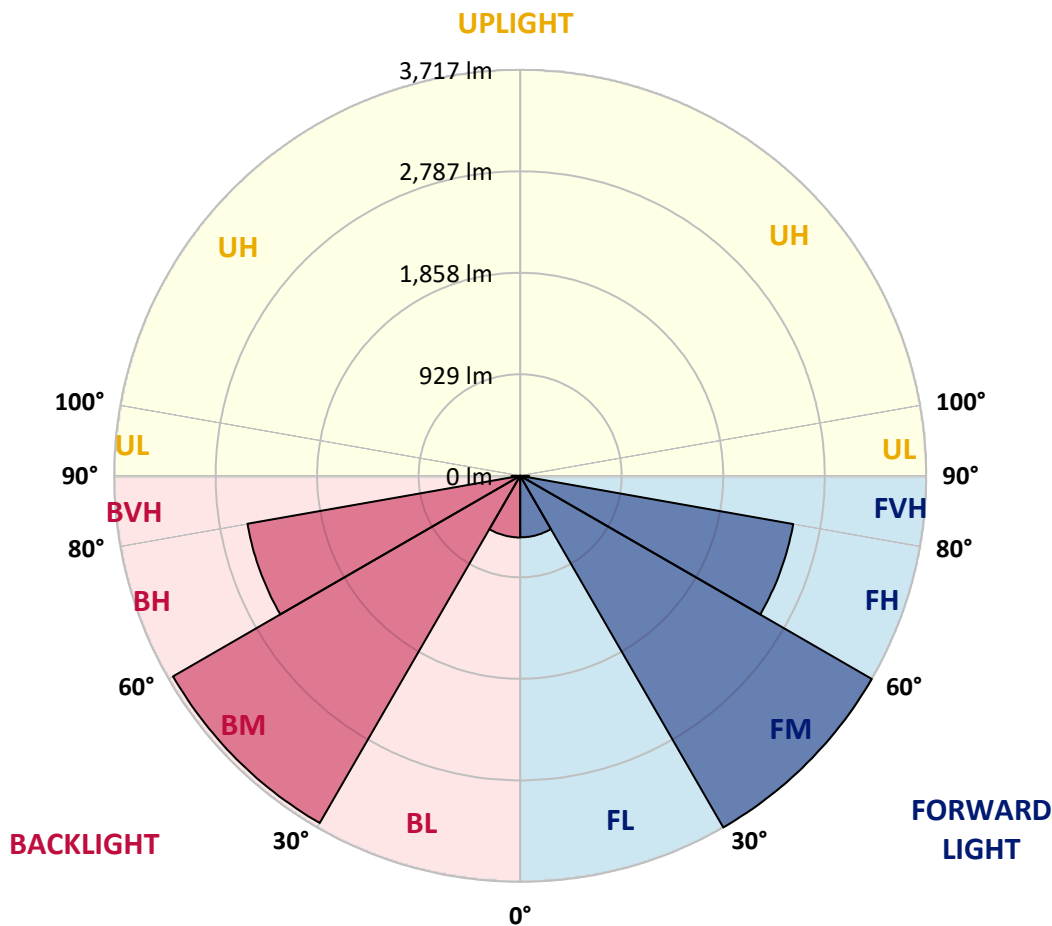
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	563.1	4.1			
FM (30°-60°)	3716.5	27.0			
FH (60°-80°)	2537.8	18.5			G2/5000
FVH (80°-90°)	80.0	0.6			G1/100
BL (0°-30°)	564.2	4.1	B2/1000		
BM (30°-60°)	3669.6	26.7	B3/5000		
BH (60°-80°)	2535.0	18.4	B4/5000		G4/5000
BVH (80°-90°)	77.7	0.6			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B4-U0-G4

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	482.4	482.4	482.4	482.4	482.4	482.4	482.4	482.4	482.4	482.4	482.4
2.5°	584.3	562.6	535.3	551.5	558.1	569.8	568.2	562.6	538.6	578.7	583.2
5°	731.4	696.8	684.0	681.8	685.1	674.0	710.2	699.6	719.1	755.3	763.7
7.5°	832.8	807.1	779.8	788.2	753.7	748.6	795.4	837.2	847.8	914.1	918.5
10°	880.7	855.6	862.8	857.8	853.9	886.2	908.0	938.6	982.6	988.7	998.2
12.5°	921.3	931.3	963.1	962.0	1014.3	1071.7	1063.4	1095.1	1102.4	1179.2	1155.8
15°	1024.4	1045.0	1042.7	1062.2	1085.1	1179.2	1179.8	1233.8	1283.4	1313.5	1305.7
17.5°	1175.3	1182.6	1152.5	1153.6	1219.9	1258.3	1301.2	1291.7	1421.0	1480.0	1483.9
20°	1265.6	1283.9	1249.4	1203.7	1321.3	1374.2	1398.1	1343.0	1481.1	1560.8	1560.8
22.5°	1423.2	1375.9	1323.5	1292.9	1396.5	1452.7	1449.9	1434.3	1507.9	1648.8	1635.4
25°	1510.1	1483.4	1457.2	1465.0	1517.3	1546.3	1584.7	1548.5	1617.6	1722.3	1678.3
27.5°	1675.0	1625.4	1496.7	1599.2	1599.2	1577.5	1658.8	1676.1	1631.0	1801.4	1834.3
30°	1861.6	1844.3	1662.2	1770.8	1737.4	1676.1	1832.1	1820.9	1745.2	1918.9	1903.9
32.5°	2038.2	2095.0	1922.3	1862.7	1912.8	1936.2	1854.3	1887.8	1902.2	2069.9	2062.7
35°	2308.9	2356.8	2127.8	2112.8	2029.2	2007.5	2069.9	2081.0	2082.2	2258.7	2226.4
37.5°	2777.3	2708.3	2482.1	2375.7	2385.2	2359.0	2371.3	2283.2	2295.5	2551.7	2567.9
40°	3119.9	3041.9	2790.1	2713.8	2526.7	2638.6	2539.5	2530.6	2506.1	2838.0	2829.1
42.5°	3498.1	3391.2	3112.7	3010.7	2811.9	2766.2	2720.5	2823.6	2816.9	3124.4	3192.3
45°	3783.9	3567.7	3422.4	3358.9	3239.7	3127.7	3084.2	3130.5	3109.3	3337.7	3456.3
47.5°	3964.3	3776.6	3609.5	3475.8	3361.6	3636.3	3416.2	3354.4	3311.5	3567.2	3681.4
50°	4108.1	3891.4	3694.2	3649.6	3739.9	3982.7	3635.7	3499.2	3551.6	3739.9	3895.3
52.5°	4147.0	3917.6	3740.4	3712.0	3956.0	4000.0	3943.7	3714.2	3700.3	3947.1	4134.8
55°	4027.8	3807.8	3723.7	3879.1	4148.7	4112.0	4197.7	4051.2	3952.6	4158.7	4394.9
57.5°	3720.9	3502.6	3482.5	3706.4	4046.2	4359.3	4401.6	4285.7	4156.5	4374.9	4653.4
60°	3216.8	3017.4	3068.1	3315.4	3827.9	4273.5	4498.5	4392.7	4352.6	4569.8	4892.9
62.5°	2432.0	2276.6	2411.9	2756.7	3429.0	4162.6	4632.2	4615.5	4557.6	4777.0	5104.6
65°	1550.8	1468.9	1607.0	1957.4	2810.2	3961.0	4696.3	4718.6	4772.0	4936.9	5268.3
67.5°	901.3	857.8	941.9	1228.8	2001.4	3252.5	4577.1	4896.8	4924.7	5019.3	5375.8
70°	533.1	504.7	539.2	690.2	1133.0	2215.8	3904.2	4818.8	5029.4	5095.1	5484.5
72.5°	406.6	379.9	364.9	408.3	591.6	1144.7	2639.7	4084.7	4945.3	5045.0	5438.8
75°	351.5	325.9	308.0	311.9	352.0	543.7	1431.0	2921.6	4213.9	4593.8	5023.8
77.5°	301.9	279.1	266.3	265.1	270.2	298.6	598.2	1584.2	2639.2	3302.0	3621.8
80°	241.7	223.9	221.1	221.1	213.9	211.7	297.5	602.7	1004.3	1190.9	1141.9
82.5°	176.6	158.8	176.6	174.3	163.2	154.3	189.4	260.7	309.7	244.5	193.3
85°	119.2	103.0	116.4	118.6	108.1	80.2	113.6	130.3	133.7	83.6	69.1
87.5°	41.8	40.7	65.7	57.4	46.8	27.3	41.8	45.1	47.3	29.5	20.1
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):

	91°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	482.4	482.4	482.4	482.4	482.4	482.4	482.4	482.4	482.4	482.4	482.4
2.5°	584.9	578.2	544.8	549.8	562.6	568.7	574.8	549.8	537.5	576.5	572.6
5°	765.9	741.4	714.1	710.2	711.9	687.9	701.9	695.7	698.5	723.6	728.6
7.5°	917.4	887.9	851.7	823.3	774.3	735.3	768.1	784.8	789.9	834.4	851.1
10°	999.3	974.2	963.7	910.2	894.0	889.0	881.2	854.5	884.0	873.4	881.8
12.5°	1159.7	1154.7	1099.6	1064.5	1067.8	1077.3	1028.3	1001.5	963.1	1023.3	1001.5
15°	1296.2	1317.9	1262.8	1198.7	1167.0	1183.1	1145.8	1106.8	1072.3	1090.7	1067.3
17.5°	1470.5	1470.0	1362.5	1294.0	1291.2	1290.1	1234.9	1149.1	1190.4	1177.5	1178.7
20°	1563.0	1548.0	1414.3	1335.2	1402.6	1378.6	1329.1	1218.8	1266.7	1282.3	1292.3
22.5°	1640.4	1632.1	1470.0	1412.1	1455.5	1456.1	1406.5	1348.6	1342.4	1390.9	1364.7
25°	1694.5	1727.9	1575.3	1561.3	1580.3	1561.3	1512.9	1475.0	1450.5	1522.9	1450.5
27.5°	1822.6	1775.2	1591.4	1670.5	1682.2	1587.0	1647.7	1603.1	1535.2	1624.8	1654.4
30°	1913.9	1941.8	1705.1	1824.3	1810.3	1722.3	1747.4	1745.7	1664.4	1839.3	1818.7
32.5°	2071.0	2037.6	1890.5	1881.1	1914.5	1910.6	1868.3	1888.9	1908.9	2035.9	2066.6
35°	2232.0	2267.6	2009.2	2073.2	2063.8	2003.6	2114.5	2101.7	2161.3	2421.9	2335.6
37.5°	2595.2	2425.3	2275.4	2267.1	2330.6	2340.1	2304.4	2360.7	2489.3	2689.9	2782.3
40°	2833.0	2755.6	2501.0	2511.1	2423.1	2574.6	2474.3	2655.3	2753.4	3091.5	3058.6
42.5°	3192.9	3004.0	2759.5	2792.9	2775.1	2702.1	2834.1	2927.2	3067.5	3325.4	3492.0
45°	3460.8	3201.8	3085.9	3065.3	3063.1	3190.1	3173.4	3322.1	3372.2	3566.1	3704.2
47.5°	3664.1	3444.1	3272.5	3295.9	3228.0	3590.6	3397.3	3443.5	3544.9	3727.6	3888.6
50°	3905.3	3660.2	3465.2	3523.2	3688.6	3827.9	3653.0	3573.9	3623.4	3839.0	4018.4
52.5°	4128.7	3870.8	3656.3	3704.8	3974.9	3911.4	3892.5	3692.5	3686.4	3859.6	4063.5
55°	4389.9	4099.1	3909.8	4063.5	4159.3	4080.8	4050.7	3807.3	3656.9	3753.2	3945.4
57.5°	4646.1	4325.3	4137.0	4168.8	4290.2	4212.2	3986.6	3611.7	3424.0	3443.0	3637.4
60°	4886.2	4533.1	4377.7	4347.0	4443.9	4138.1	3743.2	3253.6	3004.6	2958.9	3127.1
62.5°	5091.8	4706.9	4559.8	4476.2	4568.7	4140.9	3363.9	2678.7	2405.2	2250.4	2381.3
65°	5255.0	4851.1	4746.4	4703.0	4736.4	3889.1	2772.9	1966.9	1631.5	1460.0	1536.3
67.5°	5363.6	4931.9	4884.0	4940.8	4495.2	3239.1	2054.3	1258.9	948.6	855.0	902.9
70°	5476.1	5003.2	5001.5	4808.2	3811.7	2233.1	1199.8	725.8	552.0	515.8	545.9
72.5°	5438.2	4918.5	4943.6	4205.0	2641.4	1193.7	633.3	410.5	373.8	386.6	413.3
75°	5036.1	4471.8	4350.9	3023.0	1498.4	554.8	364.9	310.8	308.6	328.1	354.3
77.5°	3653.0	3114.3	2794.6	1713.4	642.2	300.2	268.5	259.6	259.6	275.2	298.6
80°	1204.3	1042.2	1086.2	662.9	303.6	207.2	209.4	213.3	212.2	216.1	235.6
82.5°	197.7	205.0	316.9	270.7	183.3	141.5	158.2	166.0	168.2	150.4	171.0
85°	70.2	79.1	134.8	125.3	105.8	71.3	104.2	116.4	114.7	100.3	110.8
87.5°	21.7	27.9	49.0	37.9	31.8	19.5	39.0	45.7	57.4	23.4	21.2
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)