

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: P368475

Luminaire Tested: **MSA-SA4C-730-U-SL3-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368475
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-19)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA4C-730-U-SL3-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 17995 lumens
Efficiency: N/A
Efficacy: 80.0 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G3

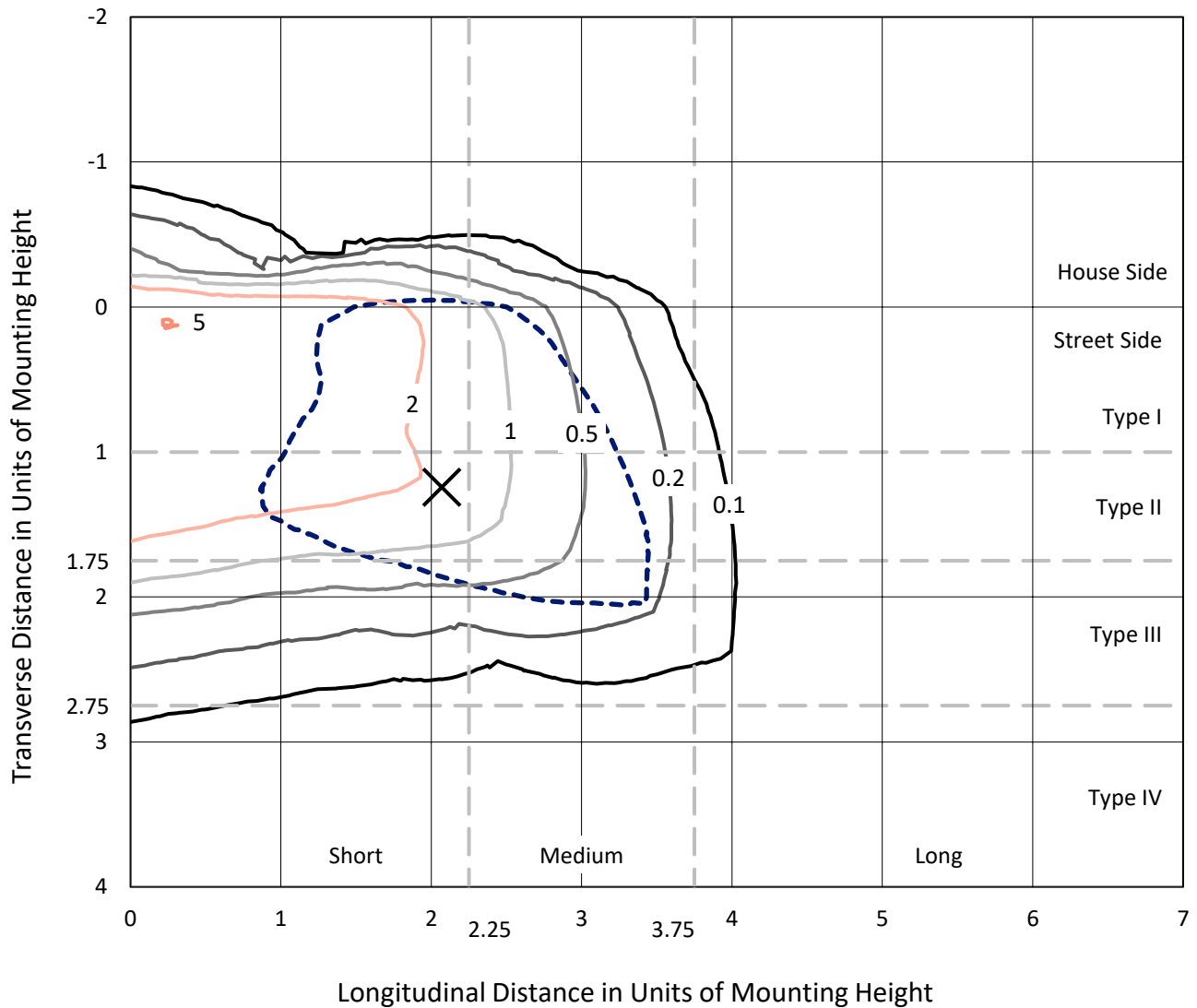
Input Watts (W): 225
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

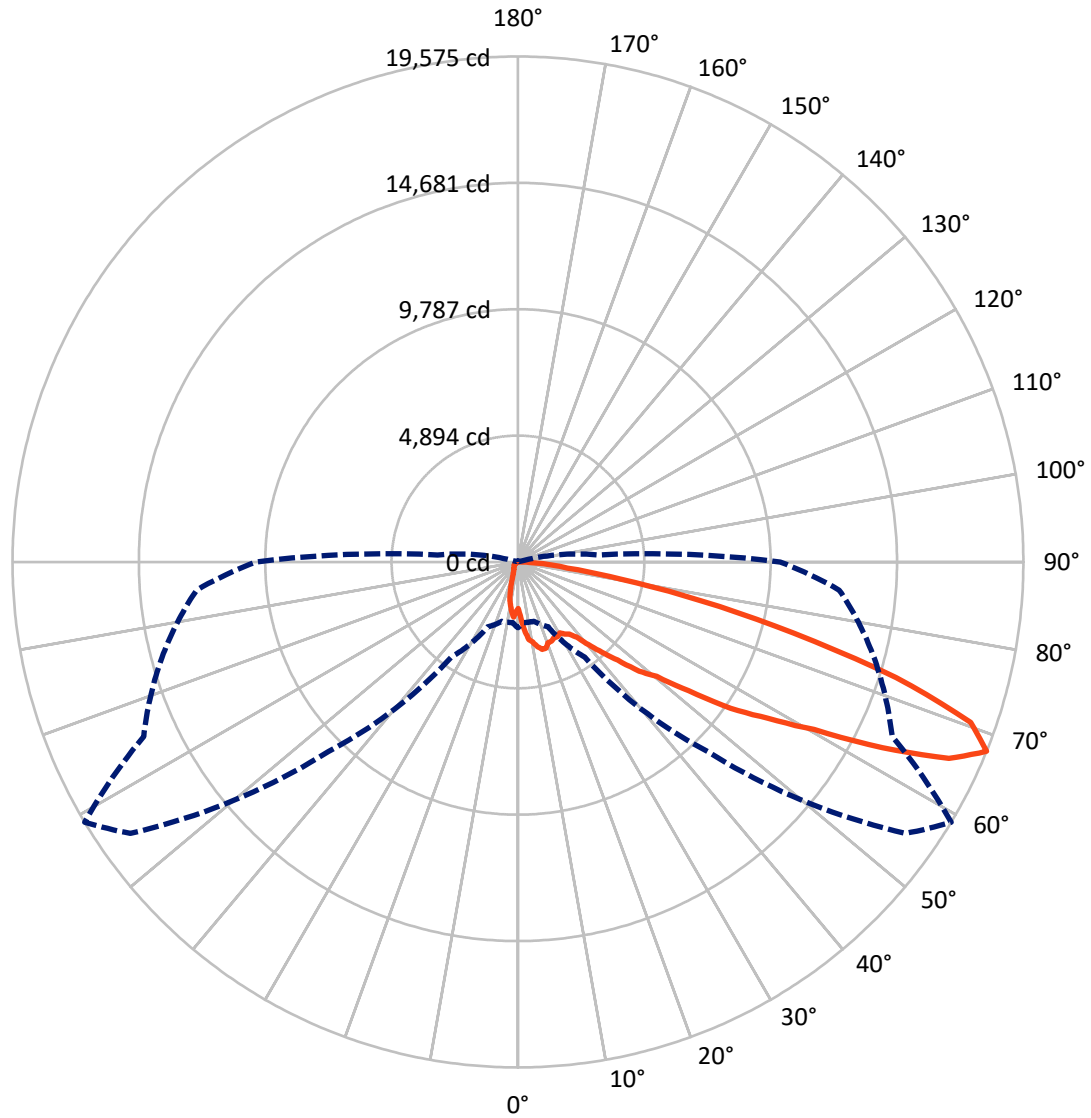
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.1 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1530.4	0.0	1530.4
	% Fixture	8.5	0.0	8.5
Street Side	Lumens	16464.6	0.0	16464.6
	% Fixture	91.5	0.0	91.5
Total	Lumens	17995.0	0.0	17995.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	218.9	1.2
10°-20°	616.4	3.4
20°-30°	916.9	5.1
30°-40°	1414.5	7.9
40°-50°	2524.5	14.0
50°-60°	4492.3	25.0
60°-70°	5232.0	29.1
70°-80°	2326.7	12.9
80°-90°	252.7	1.4
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°	17995.0	100.0
0°-180°	17995.0	100.0

Coefficient of Utilization



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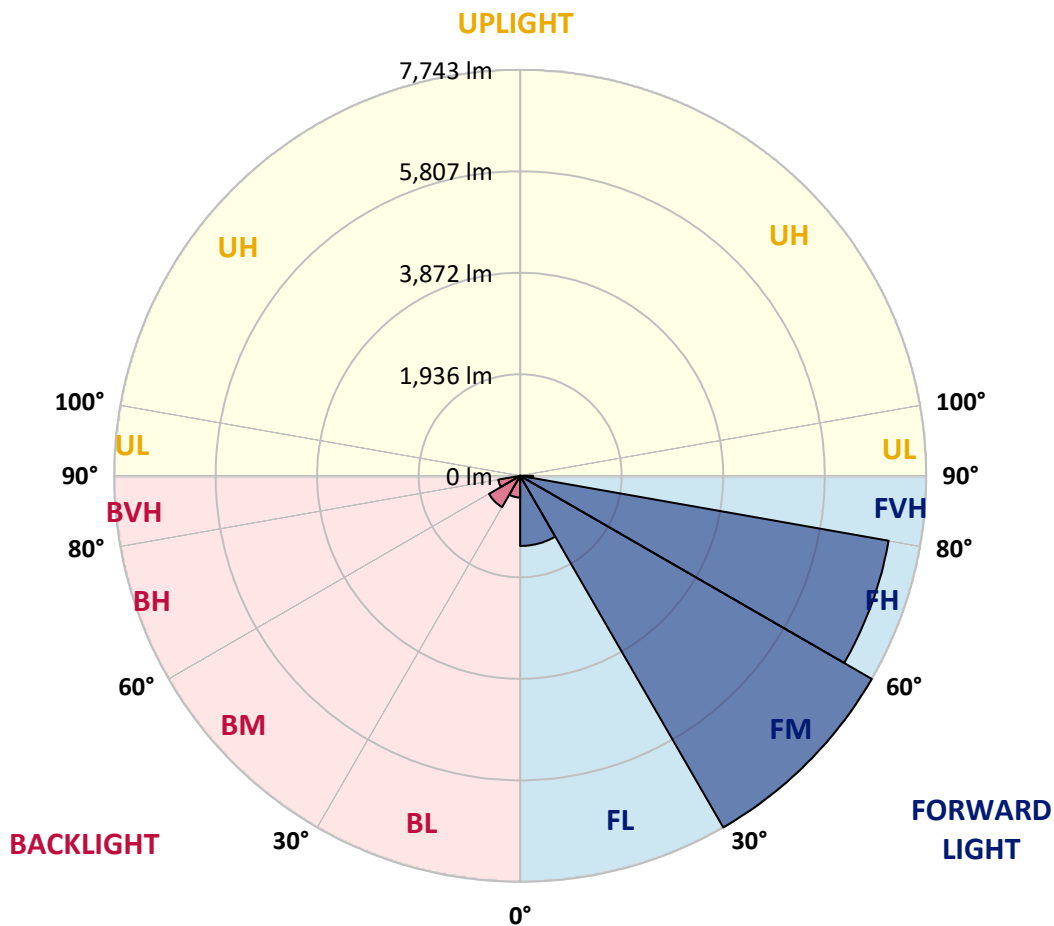
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1338.3	7.4			
FM (30°-60°)	7743.3	43.0			
FH (60°-80°)	7134.9	39.6			G3/7500
FVH (80°-90°)	248.2	1.4			G3/500
BL (0°-30°)	413.9	2.3	B1/500		
BM (30°-60°)	688.1	3.8	B1/1000		
BH (60°-80°)	423.9	2.4	B1/500		G1/500
BVH (80°-90°)	4.5	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-G3

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	1800.5	1800.5	1800.5	1800.5	1800.5	1800.5	1800.5	1800.5	1800.5	1800.5	1800.5
2.5°	2347.2	2258.8	2133.0	2170.4	2204.1	2236.0	2183.1	2153.1	2138.5	2009.1	2171.3
5°	2882.0	2771.8	2714.4	2699.8	2663.3	2582.2	2717.1	2657.0	2677.0	2702.5	2755.4
7.5°	3045.1	2995.0	2912.1	2943.1	2804.6	2792.7	2979.5	3031.4	3099.8	3053.3	3117.1
10°	2961.3	2874.7	2913.9	2903.0	2897.5	3019.6	3150.8	3153.5	3255.6	3304.8	3088.8
12.5°	2795.4	2805.5	2945.8	2934.9	3117.1	3361.3	3391.3	3359.5	3526.2	3440.6	3407.7
15°	2905.7	2987.7	2910.3	2936.7	3001.4	3306.6	3413.2	3511.6	3669.3	3720.3	3498.9
17.5°	3038.7	3046.9	2905.7	2872.9	3036.0	3178.1	3429.6	3510.7	3526.2	3973.6	3703.9
20°	2966.7	3036.9	2868.3	2661.5	2914.8	3108.0	3363.1	3337.6	3441.5	4048.3	3750.3
22.5°	3158.1	3057.9	2841.9	2686.1	2771.8	2947.6	3163.6	3330.3	3486.1	3869.7	3810.5
25°	3176.3	3139.9	2947.6	2809.1	2794.5	2839.2	3139.9	3247.4	3491.6	4030.1	3759.5
27.5°	3381.3	3339.4	2945.8	2959.5	2822.8	2685.2	3025.1	3277.5	3590.9	3932.6	3867.9
30°	3645.6	3649.2	3141.7	3184.5	2989.5	2768.1	3118.9	3188.2	3658.3	4088.4	3948.1
32.5°	3913.4	4023.7	3528.9	3302.1	3241.0	3082.5	3002.3	3322.1	3584.5	4354.4	4148.5
35°	4320.7	4395.4	3847.8	3644.7	3405.0	3224.6	3319.4	3434.2	3849.7	4707.1	4411.8
37.5°	5010.5	4875.6	4420.1	4066.5	4009.1	3743.1	3790.4	3687.5	4120.3	5122.6	4933.0
40°	5398.6	5276.5	4802.7	4630.5	4264.2	4305.2	4155.8	4215.9	4513.0	5555.4	5407.8
42.5°	5803.2	5686.6	5271.1	5149.0	4800.0	4630.5	4563.1	4779.0	5115.3	6276.1	6088.4
45°	6209.6	5913.4	5737.6	5798.6	5641.9	5306.6	5228.3	5420.5	5773.1	7161.7	6806.4
47.5°	6552.2	6302.5	6170.4	6142.1	6081.1	6546.7	6227.8	6312.5	6468.3	7945.3	7701.1
50°	7169.9	6923.9	6717.1	6659.7	6956.7	7617.3	7125.3	6961.3	7272.9	8892.0	8738.0
52.5°	8062.0	7748.5	7419.6	7420.5	7980.9	8343.5	8576.8	8288.8	8347.2	9933.5	9865.2
55°	8779.1	8380.9	8108.4	8323.5	9159.0	9362.2	10252.4	10000.0	9924.4	10899.3	10815.5
57.5°	8877.5	8400.0	8270.6	8647.8	9791.4	11088.8	12046.5	11416.0	11300.2	11707.5	11874.3
60°	7959.0	7452.4	7549.9	8156.7	9997.3	12141.2	13693.9	13179.1	12443.7	12654.2	12769.0
62.5°	5936.2	5531.7	5805.0	6608.7	9203.7	12846.5	15600.9	15839.7	13770.4	13364.9	13340.3
65°	3851.5	3598.2	3777.7	4436.5	6964.9	12766.3	17304.8	18339.9	14815.5	13944.4	13519.8
67.5°	2547.6	2355.4	2380.9	2770.8	4503.9	10382.7	18323.5	19574.5	15990.9	14273.4	12491.1
70°	1898.9	1747.6	1756.7	1968.1	2673.4	6847.4	16903.0	18600.5	16420.1	13133.5	10082.0
72.5°	1369.5	1268.3	1353.1	1588.2	2130.3	3621.0	12598.6	15318.5	14318.0	10359.0	6792.7
75°	948.5	882.0	1020.5	1328.5	1944.4	2247.8	8325.3	11026.9	10035.5	6499.3	3070.6
77.5°	525.7	505.7	705.2	1082.5	1764.9	1842.4	5099.8	7245.6	5566.3	2329.8	730.8
80°	229.6	222.3	341.7	812.8	1483.4	1664.7	2871.1	4017.3	2189.5	415.5	236.0
82.5°	98.4	94.8	145.8	489.3	1077.9	1392.3	1770.4	1933.5	753.5	128.5	133.9
85°	17.3	19.1	58.3	257.9	656.0	707.1	1282.0	1144.4	379.0	61.0	95.7
87.5°	0.0	0.0	9.1	50.1	123.0	202.3	555.8	400.9	72.0	20.0	16.4
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):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1800.5	1800.5	1800.5	1800.5	1800.5	1800.5	1800.5	1800.5	1800.5	1800.5	1800.5
2.5°	2194.1	2143.1	1949.0	1924.4	1898.0	1858.8	1844.2	1760.4	1749.4	1856.9	1856.9
5°	2730.8	2548.5	2363.6	2217.8	2087.5	1907.1	1856.0	1803.2	1760.4	1749.4	1783.1
7.5°	3014.1	2791.8	2501.1	2130.3	1829.6	1568.1	1458.8	1382.2	1296.6	1322.1	1335.8
10°	2998.6	2762.6	2391.8	1915.3	1581.8	1292.9	1015.0	852.8	762.6	718.0	712.5
12.5°	3150.8	2928.5	2318.0	1744.0	1318.5	919.4	638.7	523.0	456.5	457.4	451.9
15°	3239.2	2996.8	2232.3	1527.1	928.5	591.3	442.8	417.3	408.2	418.2	412.8
17.5°	3395.0	3068.8	2038.3	1203.6	638.7	446.5	407.3	397.3	409.1	430.1	424.6
20°	3383.1	2944.0	1762.2	848.3	472.0	401.8	385.4	369.9	394.5	416.4	412.8
22.5°	3372.2	2821.9	1502.5	626.0	394.5	366.3	352.6	346.2	359.0	384.5	390.0
25°	3275.6	2761.7	1239.2	470.2	357.2	332.6	326.2	320.7	325.3	346.2	345.3
27.5°	3394.1	2609.6	956.7	394.5	330.8	301.6	296.1	287.0	277.9	296.1	298.9
30°	3369.5	2630.5	749.9	347.2	304.3	265.1	267.0	247.8	231.4	247.8	247.8
32.5°	3458.8	2477.5	600.5	315.3	277.9	249.7	226.9	206.8	195.0	205.0	206.8
35°	3589.1	2483.8	470.2	295.2	255.1	222.3	195.0	174.9	164.0	168.6	171.3
37.5°	4025.5	2440.1	392.7	279.7	246.9	205.9	177.7	151.3	144.0	149.4	152.2
40°	4309.8	2556.7	346.2	271.5	226.0	189.5	152.2	133.0	126.7	129.4	133.9
42.5°	4845.6	2621.4	323.5	262.4	206.8	162.2	130.3	119.4	110.3	113.9	117.5
45°	5418.7	2731.7	306.2	252.4	192.3	142.1	114.8	105.7	93.8	94.8	98.4
47.5°	6123.0	2994.1	286.1	235.1	172.2	129.4	102.1	88.4	77.4	76.5	81.1
50°	7068.8	3344.9	267.9	213.2	159.5	118.5	89.3	72.0	62.9	60.1	63.8
52.5°	8078.4	3798.6	248.7	197.7	144.0	103.9	76.5	58.3	50.1	48.3	51.0
55°	9078.8	4234.2	230.5	187.7	127.6	89.3	64.7	48.3	41.0	39.2	41.0
57.5°	10218.7	4705.2	206.8	167.7	112.1	77.4	53.8	40.1	33.7	31.9	32.8
60°	11077.0	4871.1	186.8	145.8	97.5	68.3	45.6	31.9	27.3	25.5	26.4
62.5°	11484.3	4600.5	167.7	126.7	85.6	59.2	38.3	26.4	22.8	21.0	21.0
65°	11378.6	4000.9	148.5	108.4	73.8	49.2	30.1	22.8	20.0	17.3	16.4
67.5°	10157.6	3130.8	126.7	91.1	62.0	40.1	25.5	21.9	18.2	16.4	13.7
70°	8055.6	2267.0	103.0	75.6	51.9	32.8	20.0	20.0	17.3	16.4	12.8
72.5°	5280.2	1426.9	83.8	61.0	42.8	25.5	15.5	18.2	16.4	16.4	11.8
75°	2287.9	510.3	67.4	49.2	35.5	17.3	13.7	16.4	17.3	16.4	13.7
77.5°	535.8	158.5	52.8	39.2	29.2	11.8	13.7	16.4	17.3	15.5	11.8
80°	201.4	67.4	34.6	25.5	22.8	7.3	11.8	10.0	9.1	6.4	1.8
82.5°	122.1	28.2	18.2	12.8	10.9	1.8	5.5	3.6	1.8	1.8	0.0
85°	86.6	13.7	10.0	9.1	5.5	0.0	0.9	0.0	0.0	0.9	0.0
87.5°	11.8	3.6	4.6	4.6	3.6	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)