

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: P596647

Luminaire Tested: **MSA-SA2D-827-U-T4FT-HSS**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596647
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-13)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA2D-827-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: 7425 lumens
Efficiency: N/A
Efficacy: 57.6 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

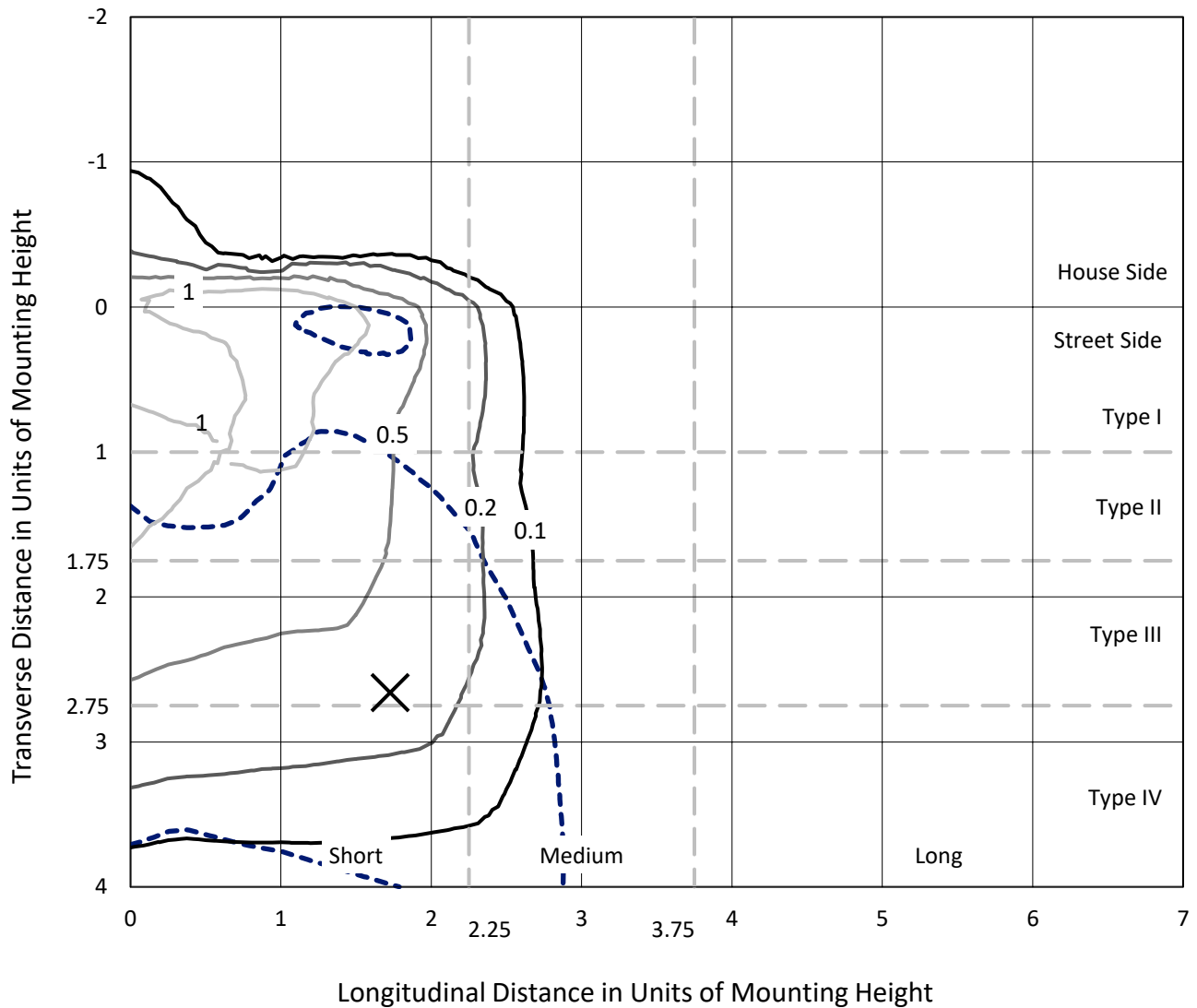
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

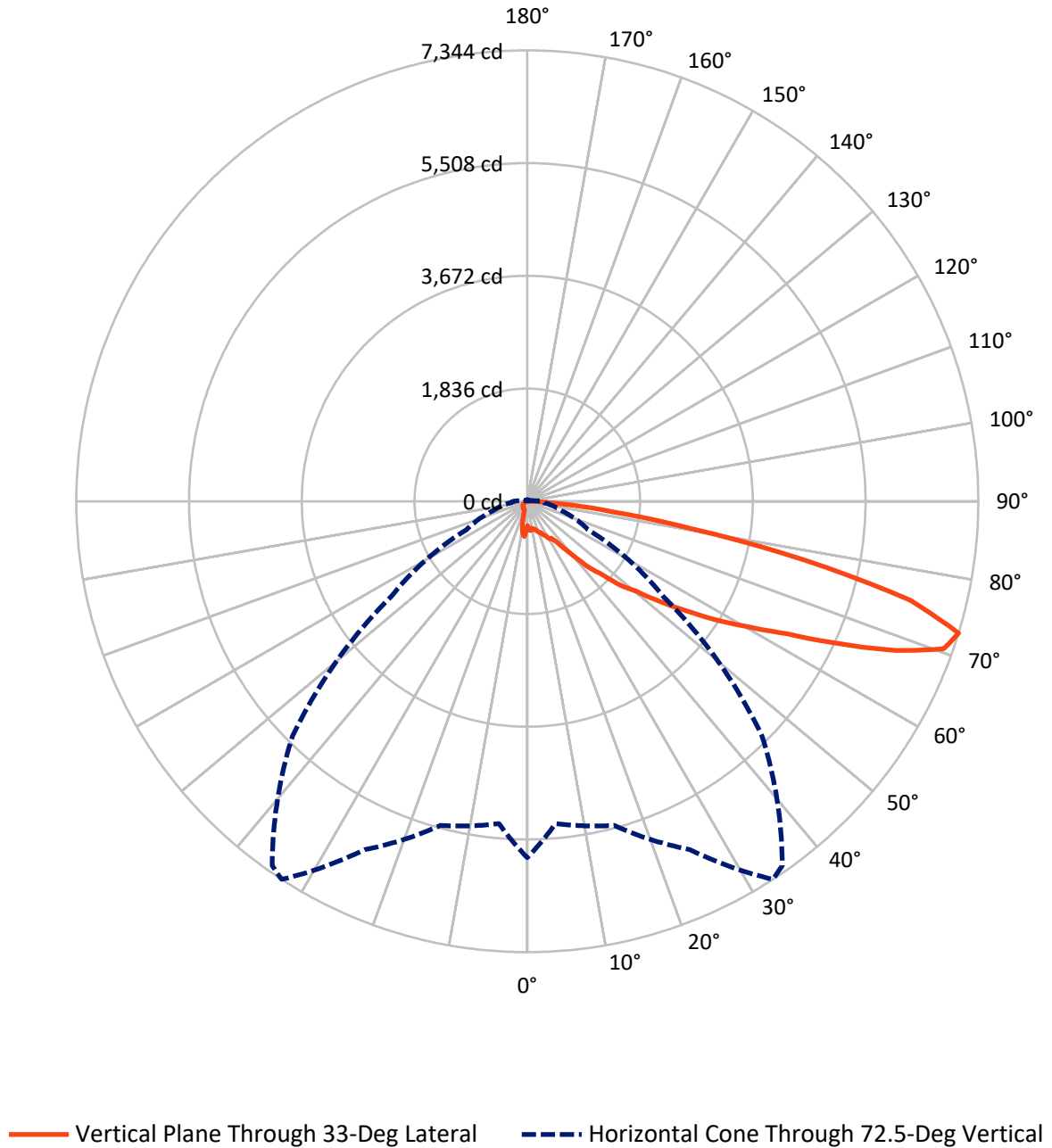
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.9 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	686.5	0.0	686.5
	% Fixture	9.2	0.0	9.2
Street Side	Lumens	6738.4	0.0	6738.4
	% Fixture	90.8	0.0	90.8
Total	Lumens	7425.0	0.0	7425.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	51.1	0.7
10°-20°	152.3	2.1
20°-30°	258.3	3.5
30°-40°	472.7	6.4
40°-50°	997.8	13.4
50°-60°	1669.3	22.5
60°-70°	2234.5	30.1
70°-80°	1459.6	19.7
80°-90°	129.4	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°	7425.0	100.0
0°-180°	7425.0	100.0

Coefficient of Utilization

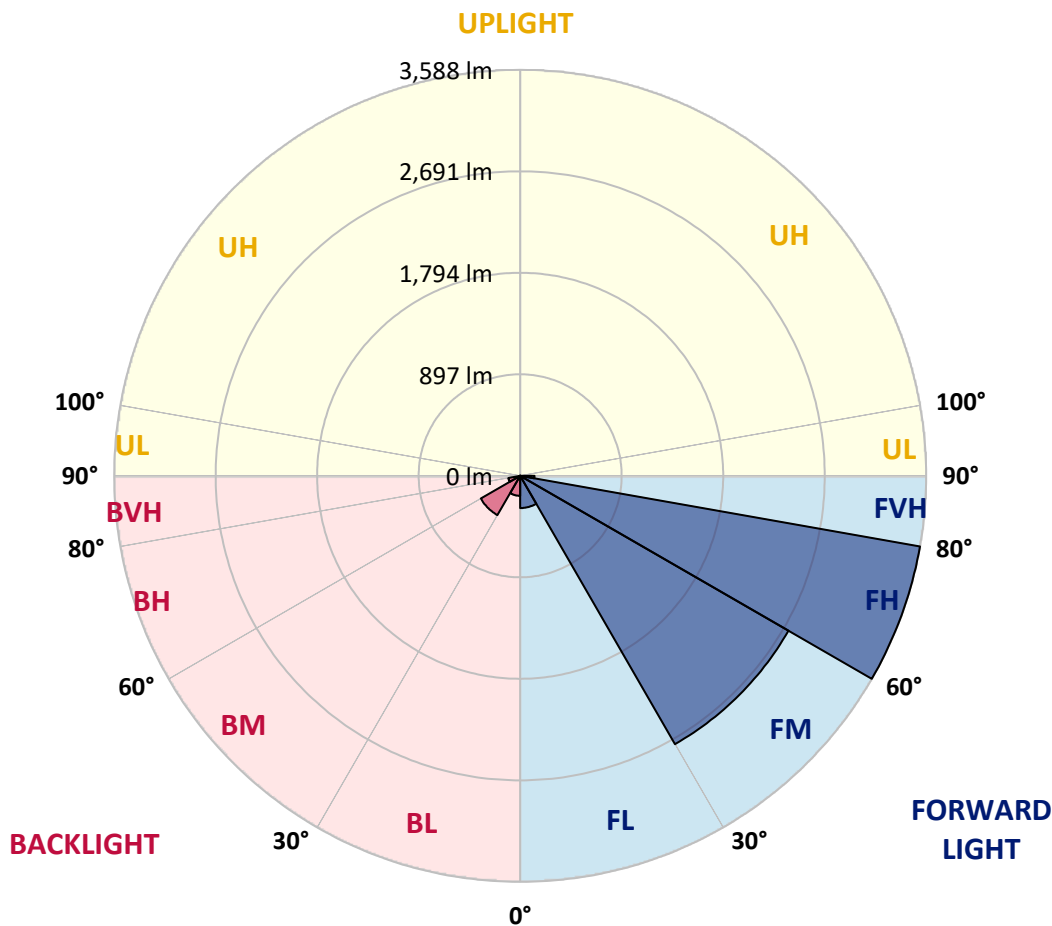


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	285.0	3.8			
FM (30°-60°)	2738.4	36.9			
FH (60°-80°)	3588.1	48.3			G2/5000
FVH (80°-90°)	126.9	1.7			G2/225
BL (0°-30°)	176.7	2.4	B1/500		
BM (30°-60°)	401.4	5.4	B1/1000		
BH (60°-80°)	106.0	1.4	B0/110		G0/110
BVH (80°-90°)	2.5	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-G2
 Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	33°	35°	45°	55°	65°	75°	85°
0°	394.9	394.9	394.9	394.9	394.9	394.9	394.9	394.9	394.9	394.9	394.9
2.5°	470.8	452.6	426.3	427.9	432.4	436.1	446.0	441.9	434.1	433.7	470.8
5°	498.8	478.6	477.0	479.4	478.2	484.8	476.5	503.3	526.0	553.2	596.9
7.5°	485.2	475.7	463.8	476.1	475.7	472.4	477.8	532.2	587.0	621.7	693.8
10°	446.0	435.3	444.4	448.5	445.6	460.1	495.9	540.4	606.0	678.5	713.6
12.5°	434.9	441.5	444.8	444.8	472.4	479.8	534.7	576.7	654.6	711.9	813.8
15°	478.2	491.0	468.3	463.4	472.0	476.1	537.1	587.9	687.6	792.3	877.7
17.5°	547.0	546.2	511.2	491.8	505.4	515.3	549.1	608.5	667.0	855.4	979.1
20°	594.4	595.3	532.2	491.8	536.7	542.5	580.0	627.4	673.6	887.1	1045.4
22.5°	655.5	633.6	563.9	524.8	555.3	560.6	601.9	639.4	707.4	883.4	1130.4
25°	705.3	691.3	603.5	576.3	603.5	596.1	633.6	690.1	743.7	942.4	1180.2
27.5°	782.8	758.9	631.5	636.5	634.8	640.2	648.9	735.4	807.6	945.3	1295.7
30°	855.0	841.0	694.2	694.2	710.3	700.0	706.2	810.9	869.4	1012.0	1425.5
32.5°	929.6	930.4	768.0	728.8	716.1	758.5	800.2	847.6	944.0	1126.6	1624.2
35°	1127.1	1110.6	909.4	811.7	801.4	798.9	865.7	993.9	1076.4	1275.9	1891.8
37.5°	1524.9	1467.6	1213.6	999.7	960.9	947.7	1023.6	1155.1	1237.1	1495.2	2334.1
40°	1933.0	1827.9	1545.9	1304.7	1179.0	1122.1	1210.3	1322.0	1468.0	1737.6	2743.4
42.5°	2291.2	2161.4	1796.1	1633.7	1470.0	1445.3	1362.4	1544.2	1797.8	2090.5	3144.5
45°	2640.4	2384.8	2018.7	1890.1	1691.4	1705.4	1677.4	1834.9	2140.3	2477.1	3500.3
47.5°	2880.7	2651.1	2291.6	2124.7	2045.1	1963.1	2185.7	2349.3	2445.4	2722.8	3807.8
50°	3139.6	2907.1	2526.2	2409.5	2304.8	2387.7	2676.7	2698.5	2690.7	2952.0	4017.3
52.5°	3473.9	3199.8	2795.4	2663.5	2722.8	2805.3	3138.8	3142.9	2908.7	3145.0	4168.1
55°	3783.1	3479.3	3154.0	3029.5	3153.6	3223.3	3593.1	3457.4	3035.7	3276.1	4242.3
57.5°	4218.8	3867.2	3631.0	3411.7	3663.1	3596.4	3992.5	3790.9	3178.4	3363.0	4215.1
60°	4769.6	4355.7	4119.1	3887.0	4156.6	4201.9	4382.5	3957.5	3233.6	3391.5	4051.5
62.5°	5329.8	4913.5	4602.2	4444.7	4750.6	4899.9	4743.6	4040.3	3167.2	3335.8	3680.9
65°	6024.9	5491.8	5128.2	5035.9	5602.7	5822.0	5170.7	4060.5	3039.0	3029.5	2959.5
67.5°	6501.0	5982.0	5648.5	5803.1	6487.8	6505.5	5554.1	4066.7	2607.4	2372.0	1942.5
70°	6613.9	6058.2	5909.0	6364.1	7194.0	6970.9	5677.8	3753.4	1933.8	1407.8	888.0
72.5°	5806.0	5270.9	5465.0	6258.2	7344.0	7241.8	5404.4	2708.0	1088.7	563.1	272.5
75°	3561.3	3237.7	4099.7	5305.9	6446.6	6380.6	4216.4	1399.1	438.6	225.1	101.8
77.5°	1548.8	1438.3	2139.5	3520.5	4632.3	4573.4	2470.5	515.3	226.7	158.3	51.5
80°	512.4	497.2	810.5	1667.1	2713.3	2661.4	1040.9	214.4	161.6	127.0	28.9
82.5°	121.6	120.8	282.8	767.2	1382.2	1338.9	319.5	118.3	117.1	100.2	15.3
85°	30.5	31.3	78.3	313.7	561.5	495.1	83.3	58.9	82.4	68.0	7.8
87.5°	0.0	0.0	20.2	44.9	84.9	53.2	9.1	15.7	23.1	24.3	4.1
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):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	394.9	394.9	394.9	394.9	394.9	394.9	394.9	394.9	394.9	394.9	394.9
2.5°	479.0	474.5	437.4	446.5	460.5	459.2	468.3	461.3	455.1	485.6	482.7
5°	609.3	584.6	573.0	589.1	580.4	560.2	577.1	574.2	569.3	579.6	587.4
7.5°	707.0	684.3	674.0	640.2	591.1	552.4	558.6	544.2	530.5	546.6	563.1
10°	739.1	726.8	725.5	659.6	613.4	557.3	491.0	433.7	418.4	398.2	407.3
12.5°	826.5	834.0	787.4	710.3	621.2	513.6	395.7	314.5	281.6	260.1	261.4
15°	898.3	924.2	856.6	718.1	546.6	391.6	263.4	190.5	169.8	164.5	162.8
17.5°	1005.0	1030.2	878.1	662.5	440.7	265.5	169.4	148.4	149.6	153.4	152.5
20°	1084.2	1080.5	859.5	563.9	324.8	174.0	141.8	138.9	145.5	156.2	153.8
22.5°	1160.4	1134.9	848.0	472.8	210.2	139.7	136.9	136.5	142.6	152.9	155.8
25°	1214.9	1219.0	828.6	370.2	152.9	129.9	132.3	136.0	142.2	153.4	151.7
27.5°	1370.7	1255.3	747.8	268.8	129.0	124.5	130.7	138.1	140.2	154.2	154.6
30°	1471.7	1392.1	695.0	181.0	119.1	115.0	127.4	137.3	139.7	157.9	159.1
32.5°	1647.7	1451.1	634.0	134.4	110.9	112.1	120.0	133.2	144.7	164.1	164.9
35°	1866.6	1640.3	523.5	120.8	108.0	105.9	109.7	124.9	143.9	164.9	169.0
37.5°	2283.4	1753.7	415.1	117.1	108.0	104.3	108.0	117.1	141.4	173.1	181.8
40°	2562.5	1984.5	299.3	116.3	105.9	102.6	103.9	113.0	134.4	168.2	181.0
42.5°	2906.3	2081.8	220.5	114.2	103.9	98.9	99.8	111.3	127.4	157.9	167.4
45°	3187.8	2152.7	173.6	113.4	98.9	97.3	98.9	110.1	120.8	135.6	144.3
47.5°	3401.8	2235.2	139.3	108.0	97.7	97.3	95.2	103.1	109.7	113.4	119.1
50°	3558.4	2216.6	115.4	99.8	93.6	96.1	92.3	93.6	95.2	93.2	99.8
52.5°	3654.5	2149.8	96.1	89.9	88.6	90.7	86.2	82.4	79.6	77.9	82.0
55°	3689.5	2015.8	81.6	77.1	80.0	80.8	77.1	70.5	65.5	63.1	66.4
57.5°	3623.2	1811.8	70.9	63.9	70.5	70.5	65.5	58.5	52.8	48.6	51.9
60°	3455.0	1586.3	63.1	53.2	60.2	60.6	54.8	47.4	42.9	38.8	40.8
62.5°	3141.7	1340.6	55.2	46.2	51.9	52.4	45.3	38.3	35.0	30.5	32.2
65°	2515.1	1025.2	47.0	40.8	44.9	43.7	37.5	32.6	28.4	24.3	25.1
67.5°	1632.5	632.8	40.8	37.1	37.9	36.7	31.7	28.4	23.9	20.6	21.0
70°	730.9	272.5	35.9	33.4	33.0	30.9	26.8	26.4	23.5	20.6	20.6
72.5°	225.5	102.6	30.9	30.1	28.4	26.0	23.5	25.1	23.1	19.8	19.4
75°	89.0	47.0	25.6	25.6	24.7	21.4	21.0	22.7	21.4	18.1	17.3
77.5°	46.6	29.7	21.0	21.8	21.4	16.5	19.0	20.6	19.8	15.3	12.8
80°	27.6	18.1	15.7	17.7	17.3	11.5	14.4	13.2	9.5	4.5	1.2
82.5°	15.3	8.2	7.0	10.3	10.3	4.1	7.4	6.6	3.7	0.0	0.0
85°	7.4	5.8	5.4	5.8	4.1	1.2	3.7	3.7	2.1	0.0	0.0
87.5°	3.7	3.3	2.5	2.1	1.6	0.0	1.2	1.6	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)