

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: P367409

Luminaire Tested: **MSA-SA2C-727-U-T4FT-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367409
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-SA2C-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: 7726 lumens
Efficiency: N/A
Efficacy: 68.4 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

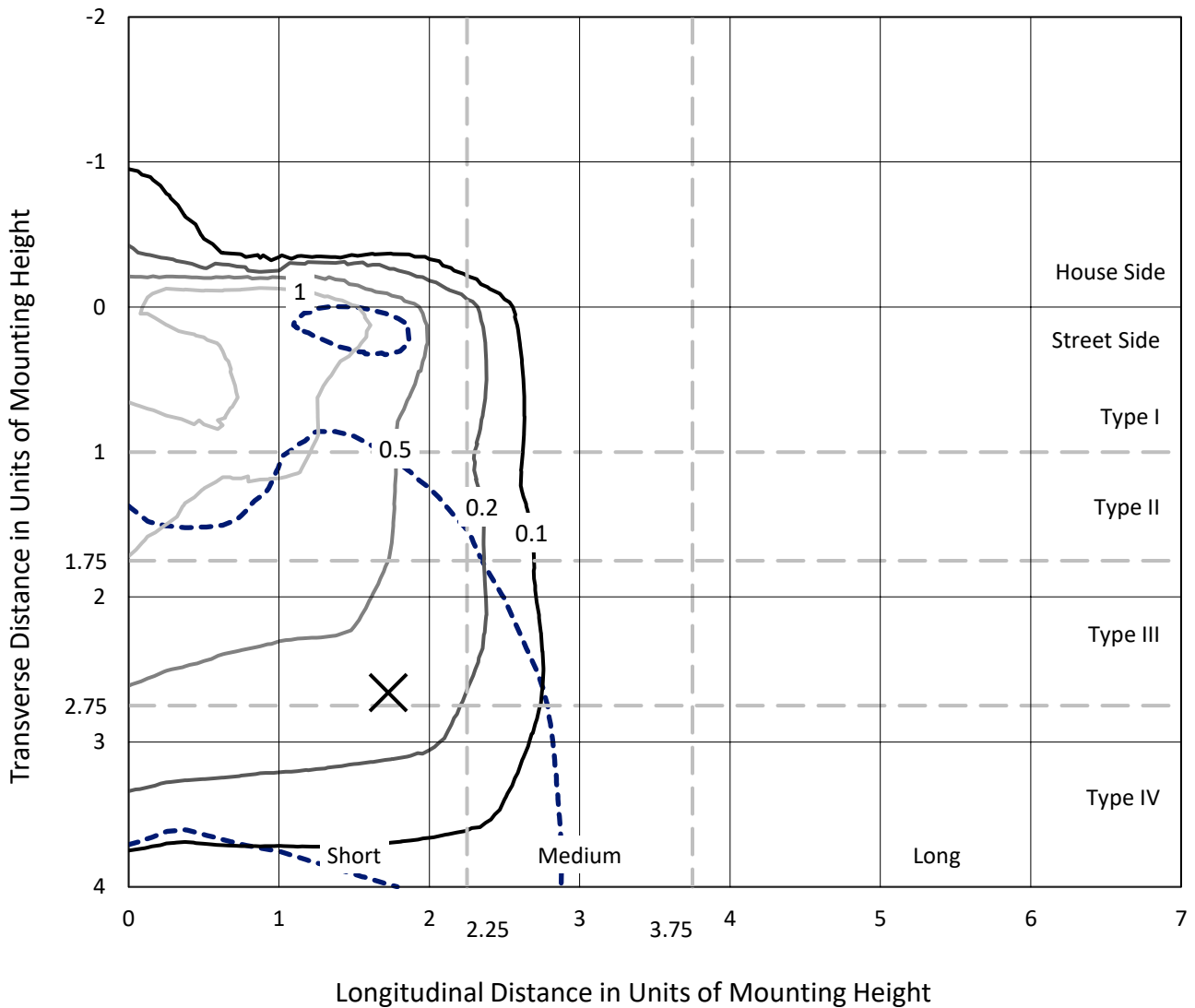
Input Watts (W): 113
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

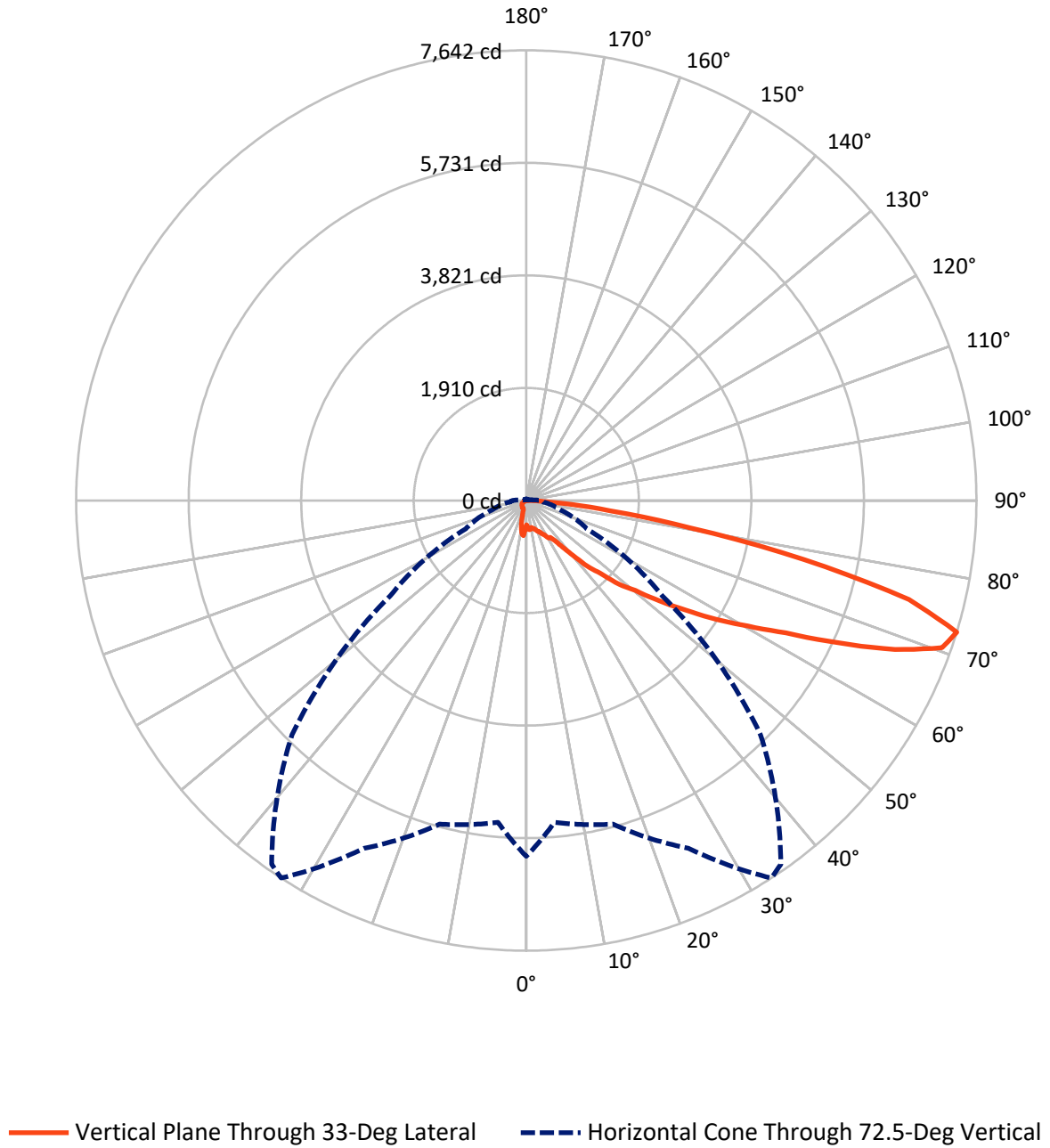
× Max cd
 - - - 1/2 Max cd



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	714.4	0.0	714.4
	% Fixture	9.2	0.0	9.2
Street Side	Lumens	7011.6	0.0	7011.6
	% Fixture	90.8	0.0	90.8
Total	Lumens	7726.0	0.0	7726.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	53.2	0.7
10°-20°	158.5	2.1
20°-30°	268.8	3.5
30°-40°	491.9	6.4
40°-50°	1038.2	13.4
50°-60°	1737.0	22.5
60°-70°	2325.1	30.1
70°-80°	1518.7	19.7
80°-90°	134.6	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°	7726.0	100.0
0°-180°	7726.0	100.0

Coefficient of Utilization

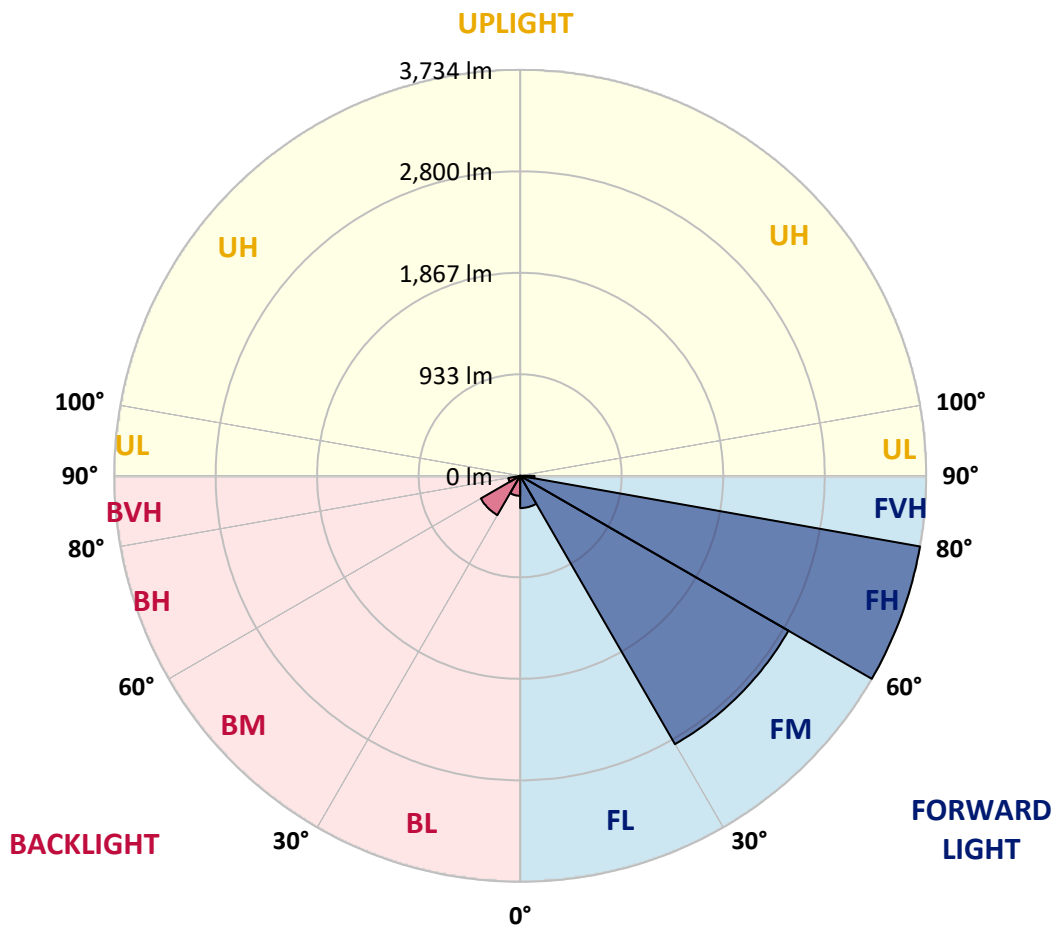


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	296.6	3.8			
FM (30°-60°)	2849.5	36.9			
FH (60°-80°)	3733.5	48.3			G2/5000
FVH (80°-90°)	132.0	1.7			G2/225
BL (0°-30°)	183.9	2.4	B1/500		
BM (30°-60°)	417.6	5.4	B1/1000		
BH (60°-80°)	110.3	1.4	B1/500		G1/500
BVH (80°-90°)	2.6	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°	410.9	410.9	410.9	410.9	410.9	410.9	410.9	410.9	410.9	410.9	410.9
2.5°	489.9	471.0	443.5	445.2	450.0	453.8	464.1	459.8	451.7	451.3	489.9
5°	519.0	498.0	496.3	498.9	497.6	504.4	495.9	523.7	547.3	575.7	621.1
7.5°	504.9	495.0	482.6	495.4	495.0	491.6	497.2	553.8	610.8	646.9	721.9
10°	464.1	453.0	462.4	466.7	463.7	478.7	516.0	562.4	630.6	706.1	742.5
12.5°	452.5	459.4	462.8	462.8	491.6	499.3	556.3	600.1	681.2	740.8	846.7
15°	497.6	510.9	487.3	482.1	491.1	495.4	558.9	611.7	715.5	824.4	913.2
17.5°	569.2	568.4	531.9	511.7	525.9	536.2	571.4	633.1	694.0	890.1	1018.8
20°	618.5	619.4	553.8	511.7	558.5	564.5	603.5	652.9	700.9	923.1	1087.8
22.5°	682.0	659.3	586.8	546.1	577.8	583.4	626.3	665.3	736.1	919.2	1176.2
25°	733.9	719.3	628.0	599.7	628.0	620.3	659.3	718.1	773.8	980.6	1228.1
27.5°	814.6	789.7	657.2	662.3	660.6	666.2	675.2	765.2	840.3	983.6	1348.2
30°	889.6	875.1	722.4	722.4	739.1	728.4	734.8	843.7	904.7	1053.1	1483.3
32.5°	967.3	968.1	799.1	758.4	745.1	789.3	832.6	881.9	982.3	1172.3	1690.1
35°	1172.7	1155.6	946.3	844.6	833.9	831.3	900.8	1034.2	1120.0	1327.6	1968.4
37.5°	1586.7	1527.1	1262.8	1040.2	999.9	986.2	1065.1	1201.9	1287.3	1555.8	2428.7
40°	2011.3	1902.0	1608.6	1357.6	1226.8	1167.6	1259.4	1375.6	1527.5	1808.0	2854.7
42.5°	2384.1	2249.0	1868.9	1699.9	1529.6	1503.9	1417.7	1606.8	1870.6	2175.2	3272.0
45°	2747.4	2481.5	2100.6	1966.7	1760.0	1774.6	1745.4	1909.3	2227.1	2577.6	3642.2
47.5°	2997.5	2758.6	2384.5	2210.8	2128.0	2042.7	2274.3	2444.6	2544.5	2833.2	3962.2
50°	3266.9	3025.0	2628.6	2507.2	2398.3	2484.5	2785.2	2807.9	2799.8	3071.7	4180.1
52.5°	3614.8	3329.5	2908.7	2771.4	2833.2	2919.0	3266.0	3270.3	3026.7	3272.5	4337.1
55°	3936.5	3620.3	3281.9	3152.3	3281.5	3354.0	3738.7	3597.6	3158.8	3408.9	4414.3
57.5°	4389.9	4024.0	3778.2	3550.0	3811.6	3742.2	4154.4	3944.6	3307.2	3499.4	4386.0
60°	4962.9	4532.3	4286.1	4044.6	4325.1	4372.3	4560.2	4117.9	3364.7	3529.0	4215.7
62.5°	5545.9	5112.6	4788.8	4624.9	4943.2	5098.5	4935.9	4204.1	3295.6	3471.1	3830.1
65°	6269.1	5714.5	5336.1	5240.0	5829.9	6058.1	5380.3	4225.2	3162.2	3152.3	3079.4
67.5°	6764.5	6224.5	5877.5	6038.3	6750.8	6769.2	5779.2	4231.6	2713.1	2468.2	2021.2
70°	6882.1	6303.8	6148.6	6622.1	7485.6	7253.5	5907.9	3905.6	2012.2	1464.9	924.0
72.5°	6041.3	5484.5	5686.6	6511.9	7641.7	7535.4	5623.5	2817.8	1132.9	585.9	283.5
75°	3705.7	3369.0	4265.9	5521.0	6707.9	6639.3	4387.3	1455.9	456.4	234.2	106.0
77.5°	1611.6	1496.6	2226.2	3663.2	4820.1	4758.8	2570.7	536.2	235.9	164.7	53.6
80°	533.2	517.3	843.3	1734.7	2823.3	2769.3	1083.1	223.1	168.1	132.1	30.0
82.5°	126.5	125.7	294.3	798.3	1438.3	1393.2	332.4	123.1	121.8	104.2	15.9
85°	31.7	32.6	81.5	326.4	584.2	515.2	86.6	61.3	85.8	70.8	8.2
87.5°	0.0	0.0	21.0	46.8	88.4	55.3	9.4	16.3	24.0	25.3	4.3
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°	410.9	410.9	410.9	410.9	410.9	410.9	410.9	410.9	410.9	410.9	410.9
2.5°	498.4	493.7	455.1	464.6	479.1	477.8	487.3	480.0	473.6	505.3	502.3
5°	634.0	608.3	596.2	613.0	604.0	582.9	600.5	597.5	592.4	603.1	611.3
7.5°	735.6	712.1	701.3	666.2	615.1	574.8	581.2	566.2	552.1	568.8	585.9
10°	769.1	756.2	755.0	686.3	638.3	579.9	510.9	451.3	435.4	414.4	423.8
12.5°	860.0	867.8	819.3	739.1	646.4	534.5	411.8	327.3	293.0	270.7	272.0
15°	934.7	961.7	891.4	747.2	568.8	407.5	274.1	198.2	176.7	171.2	169.4
17.5°	1045.8	1071.9	913.7	689.3	458.5	276.2	176.3	154.4	155.7	159.6	158.7
20°	1128.1	1124.3	894.4	586.8	338.0	181.0	147.6	144.6	151.4	162.6	160.0
22.5°	1207.5	1180.9	882.3	492.0	218.8	145.4	142.4	142.0	148.4	159.1	162.1
25°	1264.1	1268.4	862.2	385.2	159.1	135.1	137.7	141.6	148.0	159.6	157.9
27.5°	1426.3	1306.2	778.1	279.7	134.3	129.5	136.0	143.7	145.8	160.4	160.9
30°	1531.3	1448.6	723.2	188.3	124.0	119.7	132.5	142.8	145.4	164.3	165.6
32.5°	1714.5	1509.9	659.7	139.8	115.4	116.7	124.8	138.6	150.6	170.7	171.6
35°	1942.3	1706.8	544.8	125.7	112.4	110.2	114.1	130.0	149.7	171.6	175.9
37.5°	2376.0	1824.8	432.0	121.8	112.4	108.5	112.4	121.8	147.1	180.2	189.2
40°	2666.3	2065.0	311.4	121.0	110.2	106.8	108.1	117.5	139.8	175.0	188.3
42.5°	3024.1	2166.2	229.5	118.8	108.1	102.9	103.8	115.8	132.5	164.3	174.2
45°	3317.1	2240.0	180.6	118.0	102.9	101.2	102.9	114.5	125.7	141.1	150.1
47.5°	3539.7	2325.8	145.0	112.4	101.7	101.2	99.1	107.2	114.1	118.0	124.0
50°	3702.7	2306.5	120.1	103.8	97.4	99.9	96.1	97.4	99.1	96.9	103.8
52.5°	3802.6	2237.0	99.9	93.5	92.2	94.4	89.7	85.8	82.8	81.1	85.4
55°	3839.1	2097.6	84.9	80.2	83.2	84.1	80.2	73.4	68.2	65.6	69.1
57.5°	3770.0	1885.2	73.8	66.5	73.4	73.4	68.2	60.9	54.9	50.6	54.0
60°	3595.0	1650.6	65.6	55.3	62.6	63.1	57.1	49.3	44.6	40.3	42.5
62.5°	3269.0	1394.9	57.5	48.0	54.0	54.5	47.2	39.9	36.5	31.7	33.5
65°	2617.0	1066.8	48.9	42.5	46.8	45.5	39.0	33.9	29.6	25.3	26.2
67.5°	1698.6	658.4	42.5	38.6	39.5	38.2	33.0	29.6	24.9	21.4	21.9
70°	760.5	283.5	37.3	34.7	34.3	32.2	27.9	27.5	24.5	21.4	21.4
72.5°	234.6	106.8	32.2	31.3	29.6	27.0	24.5	26.2	24.0	20.6	20.2
75°	92.7	48.9	26.6	26.6	25.7	22.3	21.9	23.6	22.3	18.9	18.0
77.5°	48.5	30.9	21.9	22.7	22.3	17.2	19.7	21.4	20.6	15.9	13.3
80°	28.7	18.9	16.3	18.4	18.0	12.0	15.0	13.7	9.9	4.7	1.3
82.5°	15.9	8.6	7.3	10.7	10.7	4.3	7.7	6.9	3.9	0.0	0.0
85°	7.7	6.0	5.6	6.0	4.3	1.3	3.9	3.9	2.1	0.0	0.0
87.5°	3.9	3.4	2.6	2.1	1.7	0.0	1.3	1.7	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)