

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: P368563

Luminaire Tested: **MSA-SA4C-830-U-SL3-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368563
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-830-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: 15701 lumens
Efficiency: N/A
Efficacy: 69.8 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G3

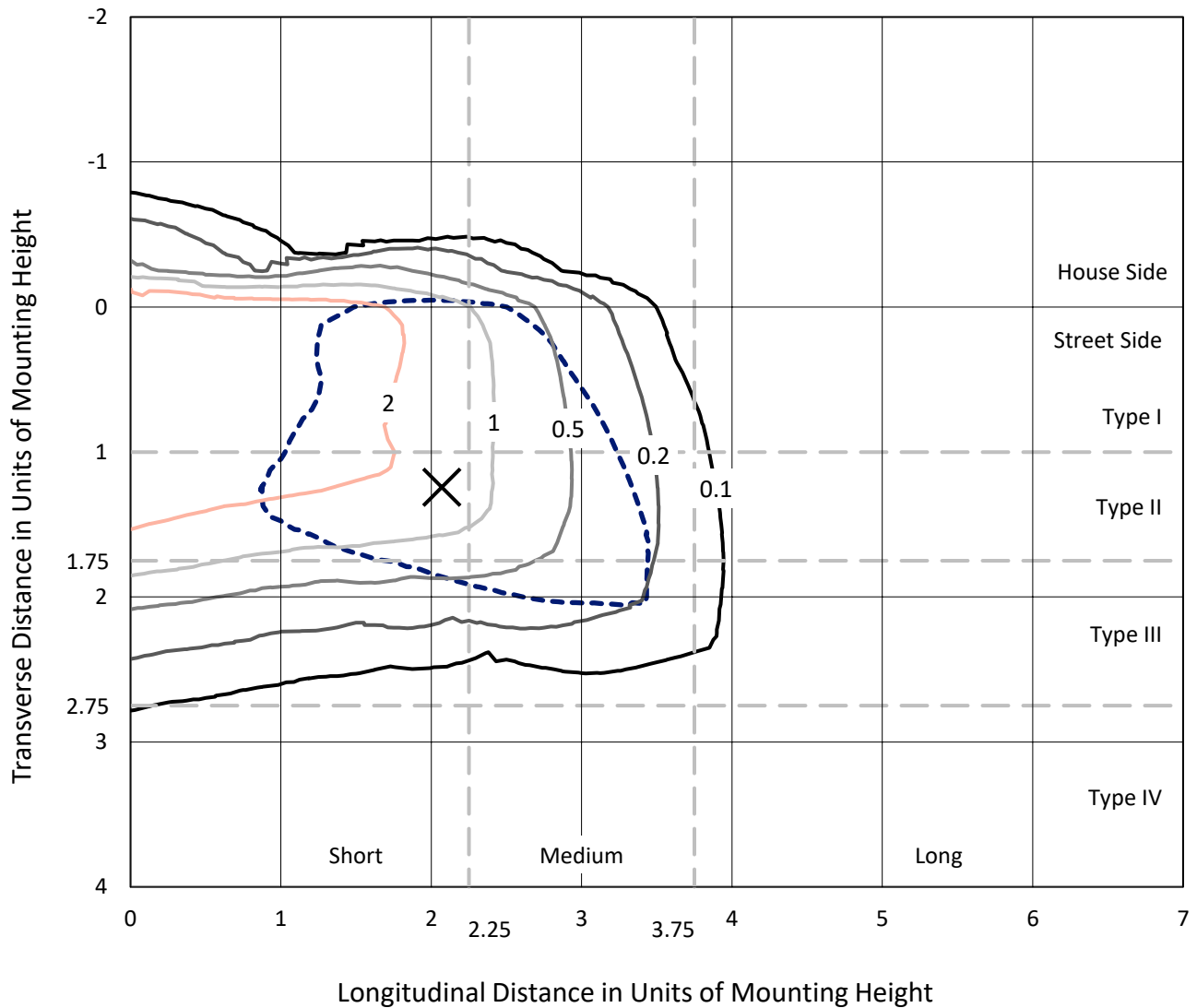
Input Watts (W): 225
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

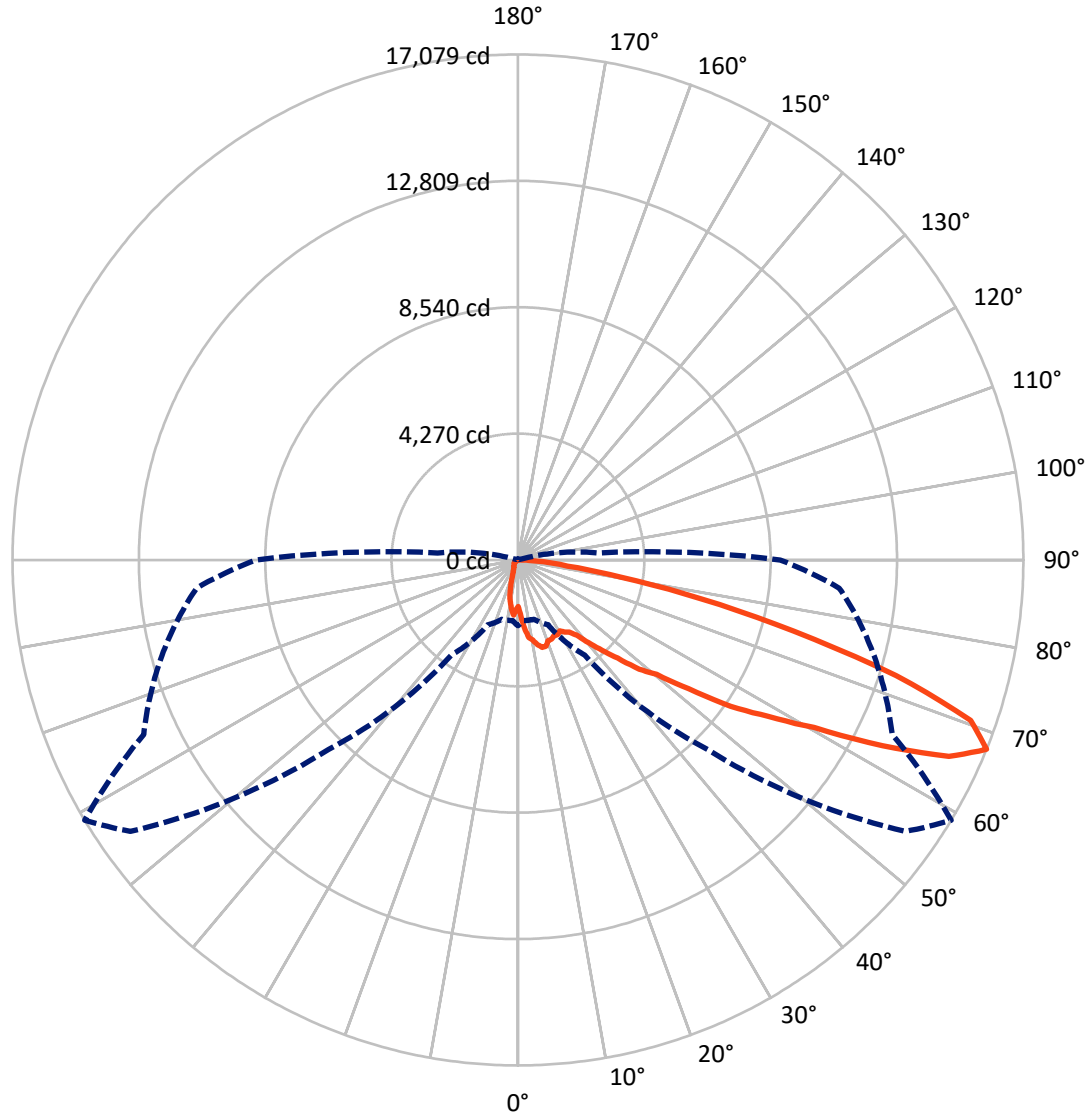
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.5 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	1335.3	0.0	1335.3
	% Fixture	8.5	0.0	8.5
Street Side	Lumens	14365.7	0.0	14365.7
	% Fixture	91.5	0.0	91.5
Total	Lumens	15701.0	0.0	15701.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	191.0	1.2
10°-20°	537.8	3.4
20°-30°	800.0	5.1
30°-40°	1234.2	7.9
40°-50°	2202.6	14.0
50°-60°	3919.7	25.0
60°-70°	4565.1	29.1
70°-80°	2030.1	12.9
80°-90°	220.5	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°	15701.0	100.0
0°-180°	15701.0	100.0

Coefficient of Utilization



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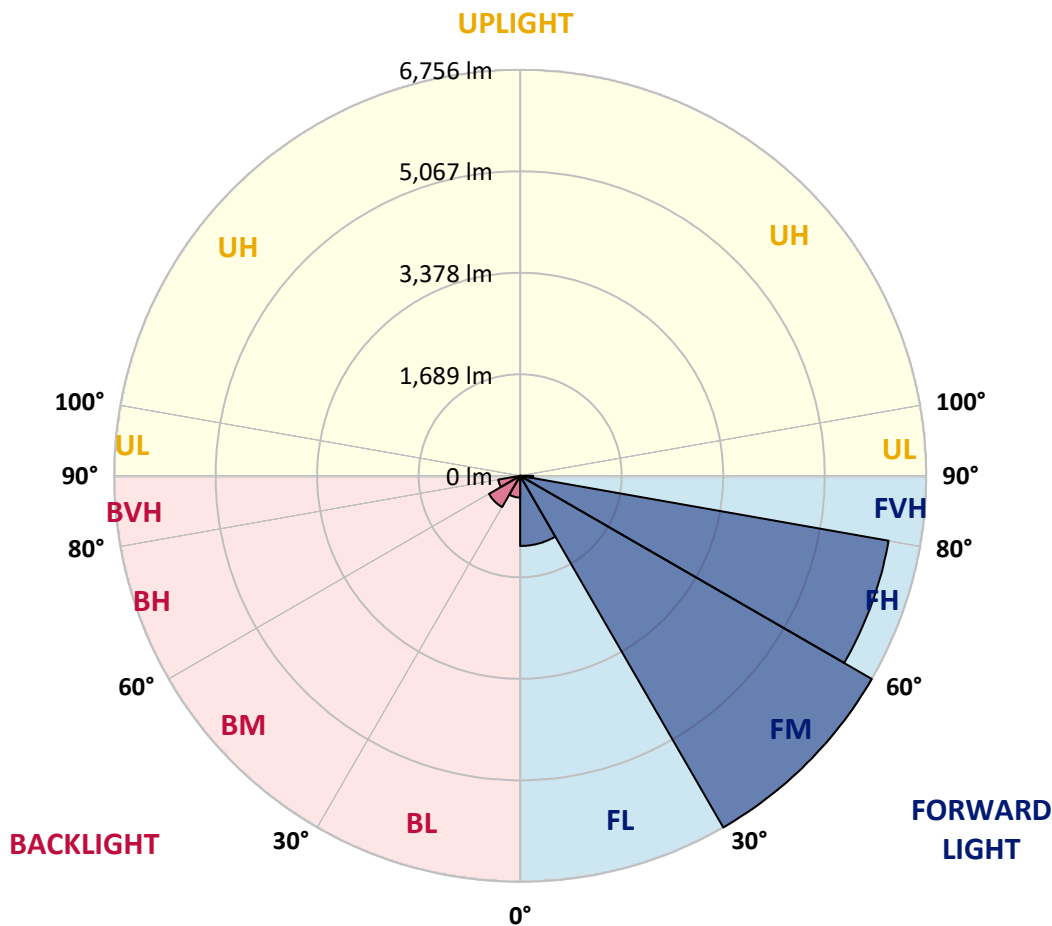
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1167.7	7.4			
FM (30°-60°)	6756.1	43.0			
FH (60°-80°)	6225.3	39.6			G3/7500
FVH (80°-90°)	216.6	1.4			G2/225
BL (0°-30°)	361.1	2.3	B1/500		
BM (30°-60°)	600.4	3.8	B1/1000		
BH (60°-80°)	369.9	2.4	B1/500		G1/500
BVH (80°-90°)	3.9	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°	1570.9	1570.9	1570.9	1570.9	1570.9	1570.9	1570.9	1570.9	1570.9	1570.9	1570.9
2.5°	2047.9	1970.8	1861.1	1893.7	1923.1	1950.9	1904.8	1878.6	1865.9	1753.0	1894.5
5°	2514.6	2418.4	2368.3	2355.6	2323.8	2253.1	2370.7	2318.2	2335.7	2358.0	2404.1
7.5°	2656.9	2613.2	2540.8	2567.9	2447.0	2436.7	2599.7	2645.0	2704.6	2664.1	2719.7
10°	2583.8	2508.2	2542.4	2532.9	2528.1	2634.7	2749.1	2751.5	2840.6	2883.5	2695.1
12.5°	2439.1	2447.8	2570.3	2560.7	2719.7	2932.8	2959.0	2931.2	3076.7	3001.9	2973.3
15°	2535.3	2606.8	2539.3	2562.3	2618.8	2885.1	2978.1	3064.0	3201.5	3246.0	3052.8
17.5°	2651.4	2658.5	2535.3	2506.7	2649.0	2773.0	2992.4	3063.2	3076.7	3467.0	3231.7
20°	2588.5	2649.8	2502.7	2322.2	2543.2	2711.8	2934.4	2912.1	3002.7	3532.2	3272.3
22.5°	2755.5	2668.0	2479.6	2343.7	2418.4	2571.9	2760.3	2905.8	3041.7	3376.4	3324.7
25°	2771.4	2739.6	2571.9	2451.0	2438.3	2477.2	2739.6	2833.4	3046.5	3516.3	3280.2
27.5°	2950.3	2913.7	2570.3	2582.2	2462.9	2342.9	2639.4	2859.6	3133.1	3431.3	3374.8
30°	3180.8	3184.0	2741.2	2778.6	2608.4	2415.2	2721.3	2781.7	3192.0	3567.2	3444.8
32.5°	3414.6	3510.8	3079.1	2881.1	2827.8	2689.5	2619.6	2898.6	3127.6	3799.3	3619.7
35°	3769.9	3835.1	3357.3	3180.0	2970.9	2813.5	2896.2	2996.4	3358.9	4107.0	3849.4
37.5°	4371.7	4254.1	3856.6	3548.1	3498.0	3265.9	3307.2	3217.4	3595.0	4469.5	4304.2
40°	4710.4	4603.9	4190.5	4040.2	3720.6	3756.4	3626.0	3678.5	3937.7	4847.2	4718.4
42.5°	5063.4	4961.6	4599.1	4492.6	4188.1	4040.2	3981.4	4169.8	4463.2	5476.0	5312.2
45°	5418.0	5159.6	5006.2	5059.4	4922.7	4630.1	4561.8	4729.5	5037.2	6248.8	5938.7
47.5°	5716.9	5499.1	5383.8	5359.1	5305.9	5712.1	5433.9	5507.8	5643.8	6932.5	6719.4
50°	6255.9	6041.3	5860.8	5810.7	6069.9	6646.3	6217.0	6073.9	6345.8	7758.5	7624.1
52.5°	7034.2	6760.7	6473.7	6474.5	6963.5	7279.9	7483.4	7232.2	7283.1	8667.2	8607.5
55°	7659.9	7312.5	7074.8	7262.4	7991.4	8168.7	8945.4	8725.2	8659.2	9509.9	9436.7
57.5°	7745.8	7329.2	7216.3	7545.4	8543.2	9675.2	10510.8	9960.7	9859.7	10215.1	10360.5
60°	6944.4	6502.4	6587.4	7116.9	8722.8	10593.5	11948.2	11499.0	10857.4	11041.1	11141.2
62.5°	5179.5	4826.5	5065.0	5766.2	8030.4	11208.8	13612.1	13820.4	12015.0	11661.2	11639.7
65°	3360.5	3139.5	3296.1	3870.9	6077.0	11138.9	15098.8	16001.9	12926.8	12166.8	11796.3
67.5°	2222.8	2055.1	2077.4	2417.6	3929.7	9059.1	15987.6	17079.2	13952.4	12453.8	10898.8
70°	1656.8	1524.8	1532.8	1717.2	2332.6	5974.5	14748.2	16229.3	14326.8	11459.2	8796.8
72.5°	1194.9	1106.7	1180.6	1385.7	1858.7	3159.4	10992.6	13365.7	12492.8	9038.4	5926.8
75°	827.6	769.6	890.4	1159.1	1696.5	1961.3	7264.0	9621.2	8756.2	5670.8	2679.2
77.5°	458.7	441.2	615.3	944.5	1539.9	1607.5	4449.7	6321.9	4856.7	2032.8	637.6
80°	200.3	194.0	298.1	709.1	1294.3	1452.5	2505.1	3505.2	1910.4	362.5	205.9
82.5°	85.9	82.7	127.2	426.9	940.5	1214.8	1544.7	1687.0	657.5	112.1	116.9
85°	15.1	16.7	50.9	225.0	572.4	616.9	1118.6	998.5	330.7	53.3	83.5
87.5°	0.0	0.0	8.0	43.7	107.3	176.5	485.0	349.8	62.8	17.5	14.3
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°	1570.9	1570.9	1570.9	1570.9	1570.9	1570.9	1570.9	1570.9	1570.9	1570.9	1570.9
2.5°	1914.4	1869.9	1700.5	1679.1	1656.0	1621.8	1609.1	1536.0	1526.4	1620.2	1620.2
5°	2382.6	2223.6	2062.3	1935.0	1821.4	1664.0	1619.4	1573.3	1536.0	1526.4	1555.8
7.5°	2629.9	2435.9	2182.3	1858.7	1596.4	1368.2	1272.8	1206.0	1131.3	1153.6	1165.5
10°	2616.4	2410.5	2086.9	1671.1	1380.1	1128.1	885.6	744.1	665.4	626.5	621.7
12.5°	2749.1	2555.2	2022.5	1521.6	1150.4	802.2	557.3	456.3	398.3	399.1	394.3
15°	2826.3	2614.8	1947.8	1332.4	810.1	516.0	386.4	364.1	356.2	364.9	360.1
17.5°	2962.2	2677.6	1778.4	1050.2	557.3	389.6	355.4	346.6	357.0	375.2	370.5
20°	2951.9	2568.7	1537.5	740.2	411.8	350.6	336.3	322.8	344.2	363.3	360.1
22.5°	2942.3	2462.1	1311.0	546.2	344.2	319.6	307.7	302.1	313.2	335.5	340.3
25°	2858.1	2409.7	1081.2	410.2	311.6	290.2	284.6	279.8	283.8	302.1	301.3
27.5°	2961.4	2276.9	834.8	344.2	288.6	263.1	258.4	250.4	242.5	258.4	260.8
30°	2939.9	2295.2	654.3	302.9	265.5	231.3	232.9	216.2	201.9	216.2	216.2
32.5°	3017.8	2161.6	523.9	275.1	242.5	217.8	198.0	180.5	170.1	178.9	180.5
35°	3131.5	2167.2	410.2	257.6	222.6	194.0	170.1	152.6	143.1	147.1	149.5
37.5°	3512.3	2129.0	342.6	244.1	215.4	179.7	155.0	132.0	125.6	130.4	132.8
40°	3760.4	2230.8	302.1	236.9	197.2	165.4	132.8	116.1	110.5	112.9	116.9
42.5°	4227.9	2287.2	282.2	229.0	180.5	141.5	113.7	104.1	96.2	99.4	102.6
45°	4727.9	2383.4	267.1	220.2	167.7	124.0	100.2	92.2	81.9	82.7	85.9
47.5°	5342.5	2612.4	249.6	205.1	150.3	112.9	89.0	77.1	67.6	66.8	70.8
50°	6167.7	2918.5	233.7	186.0	139.1	103.4	77.9	62.8	54.9	52.5	55.7
52.5°	7048.5	3314.4	217.0	172.5	125.6	90.6	66.8	50.9	43.7	42.1	44.5
55°	7921.5	3694.4	201.1	163.8	111.3	77.9	56.4	42.1	35.8	34.2	35.8
57.5°	8916.0	4105.4	180.5	146.3	97.8	67.6	46.9	35.0	29.4	27.8	28.6
60°	9664.9	4250.1	163.0	127.2	85.1	59.6	39.8	27.8	23.9	22.3	23.1
62.5°	10020.3	4014.0	146.3	110.5	74.7	51.7	33.4	23.1	19.9	18.3	18.3
65°	9928.1	3490.9	129.6	94.6	64.4	42.9	26.2	19.9	17.5	15.1	14.3
67.5°	8862.7	2731.6	110.5	79.5	54.1	35.0	22.3	19.1	15.9	14.3	11.9
70°	7028.7	1978.0	89.8	66.0	45.3	28.6	17.5	17.5	15.1	14.3	11.1
72.5°	4607.1	1245.0	73.1	53.3	37.4	22.3	13.5	15.9	14.3	14.3	10.3
75°	1996.3	445.2	58.8	42.9	31.0	15.1	11.9	14.3	15.1	14.3	11.9
77.5°	467.5	138.3	46.1	34.2	25.4	10.3	11.9	14.3	15.1	13.5	10.3
80°	175.7	58.8	30.2	22.3	19.9	6.4	10.3	8.7	8.0	5.6	1.6
82.5°	106.5	24.6	15.9	11.1	9.5	1.6	4.8	3.2	1.6	1.6	0.0
85°	75.5	11.9	8.7	8.0	4.8	0.0	0.8	0.0	0.0	0.8	0.0
87.5°	10.3	3.2	4.0	4.0	3.2	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)