

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: P597141

Luminaire Tested: **MSA-SA4C-835-U-SL3-HSS**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P597141
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-19)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA4C-835-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: 16289 lumens
Efficiency: N/A
Efficacy: 72.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G3

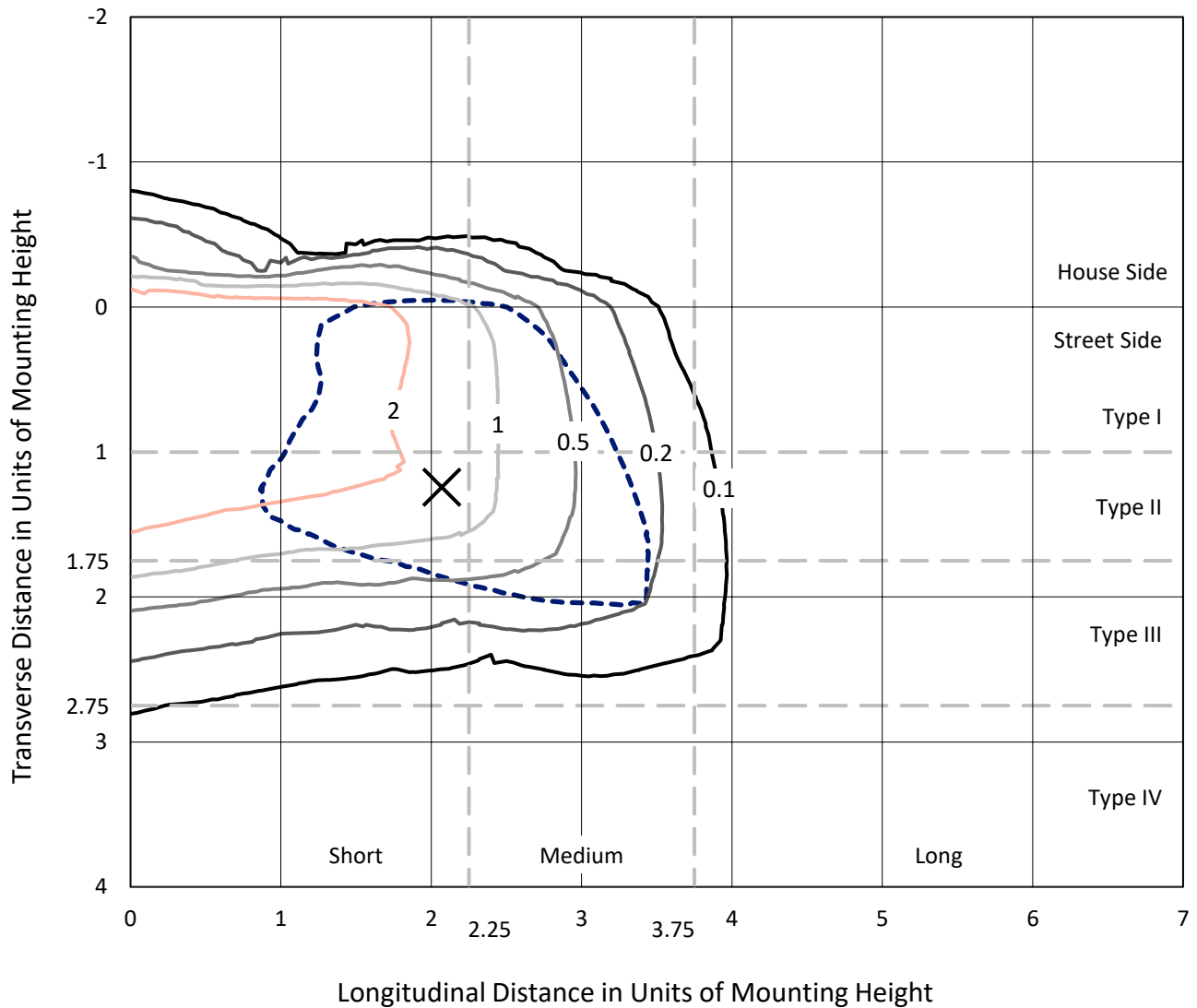
Input Watts (W): 225
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

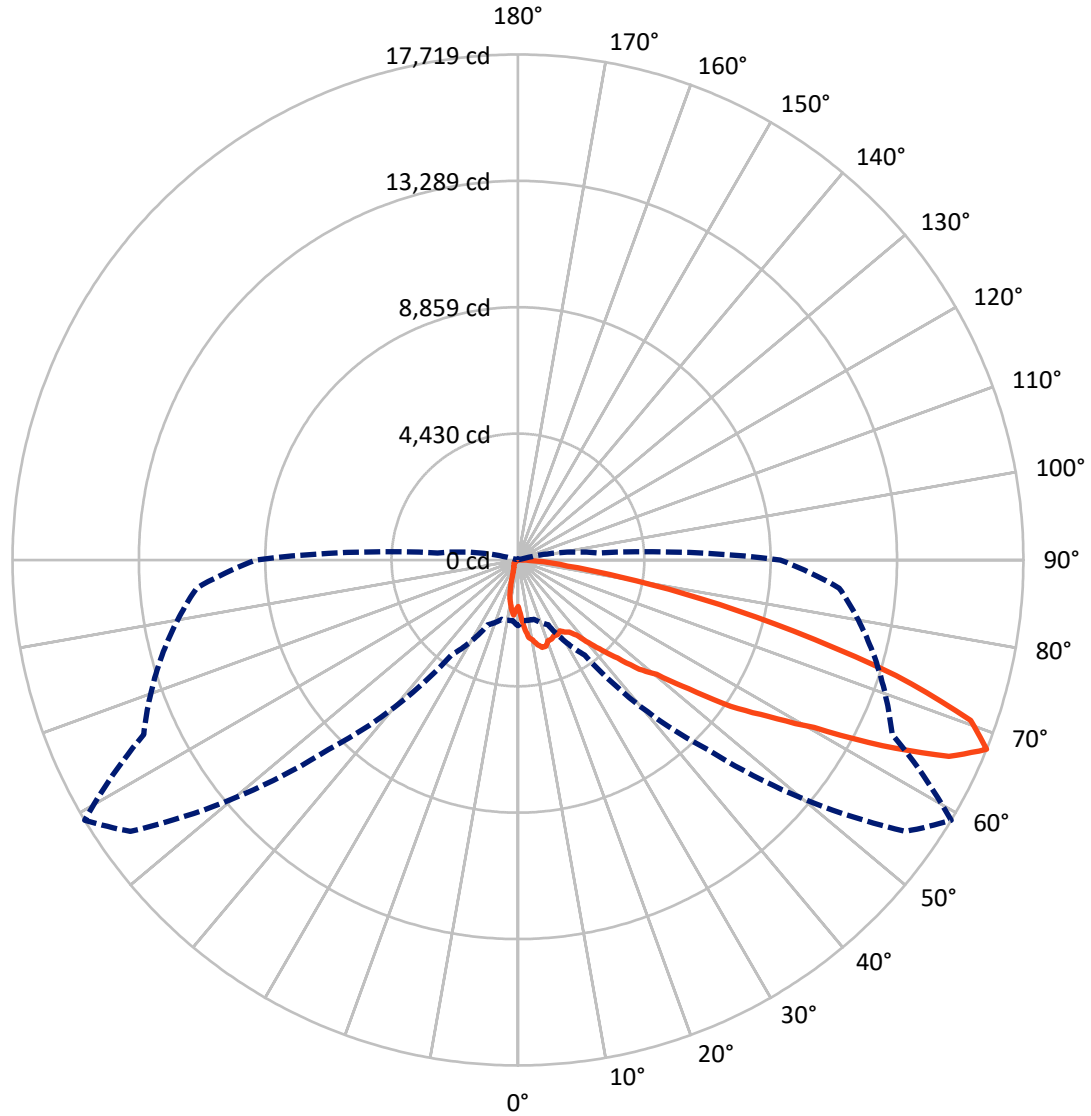
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.7 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	1385.3	0.0	1385.3
	% Fixture	8.5	0.0	8.5
Street Side	Lumens	14903.7	0.0	14903.7
	% Fixture	91.5	0.0	91.5
Total	Lumens	16289.0	0.0	16289.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	198.2	1.2
10°-20°	558.0	3.4
20°-30°	829.9	5.1
30°-40°	1280.4	7.9
40°-50°	2285.1	14.0
50°-60°	4066.5	25.0
60°-70°	4736.0	29.1
70°-80°	2106.2	12.9
80°-90°	228.7	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°	16289.0	100.0
0°-180°	16289.0	100.0

Coefficient of Utilization



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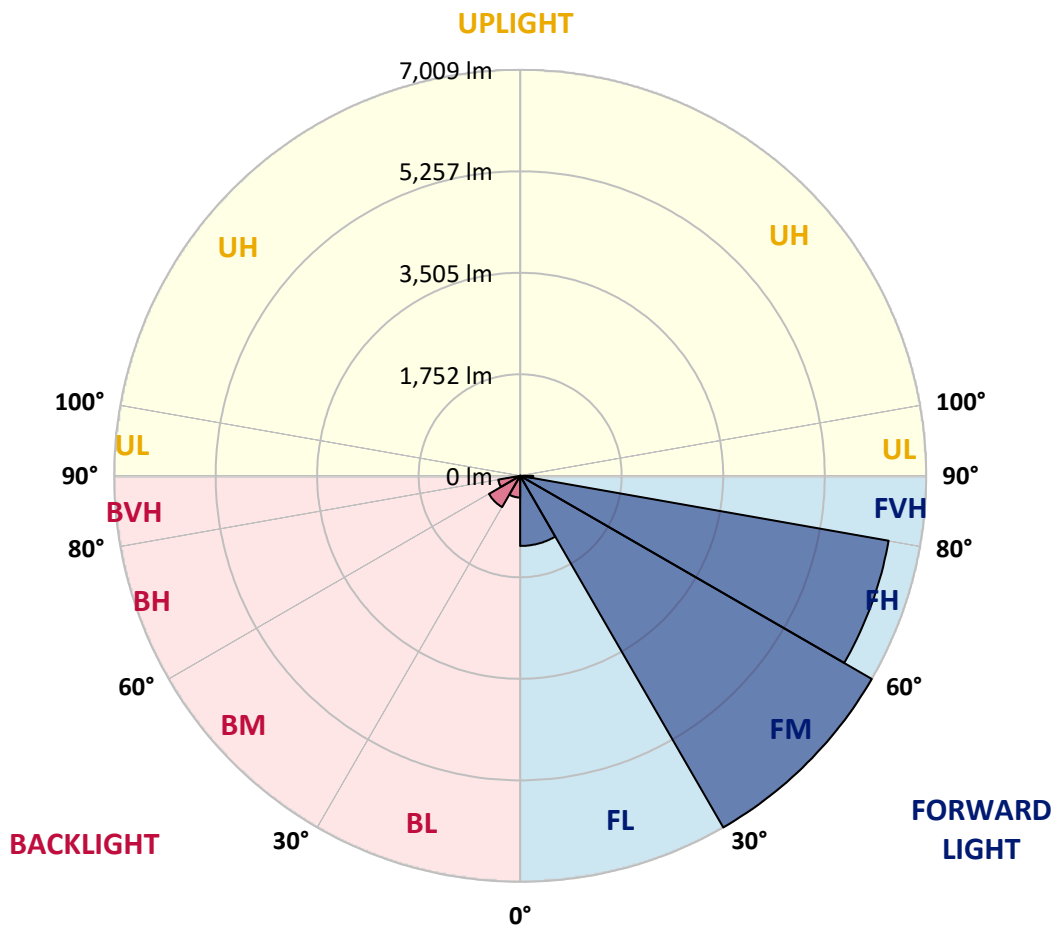
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1211.4	7.4			
FM (30°-60°)	7009.2	43.0			
FH (60°-80°)	6458.5	39.6			G3/7500
FVH (80°-90°)	224.7	1.4			G2/225
BL (0°-30°)	374.6	2.3	B1/500		
BM (30°-60°)	622.9	3.8	B1/1000		
BH (60°-80°)	383.7	2.4	B1/500		G1/500
BVH (80°-90°)	4.1	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°	1629.8	1629.8	1629.8	1629.8	1629.8	1629.8	1629.8	1629.8	1629.8	1629.8	1629.8
2.5°	2124.6	2044.6	1930.8	1964.6	1995.1	2024.0	1976.2	1949.0	1935.8	1818.6	1965.5
5°	2608.8	2509.0	2457.0	2443.8	2410.8	2337.4	2459.5	2405.1	2423.2	2446.3	2494.1
7.5°	2756.4	2711.1	2636.0	2664.0	2538.7	2528.0	2697.0	2744.0	2805.9	2763.8	2821.6
10°	2680.5	2602.2	2637.6	2627.8	2622.8	2733.3	2852.1	2854.6	2946.9	2991.5	2796.0
12.5°	2530.4	2539.5	2666.5	2656.6	2821.6	3042.6	3069.8	3041.0	3191.9	3114.4	3084.7
15°	2630.2	2704.5	2634.3	2658.3	2716.8	2993.1	3089.6	3178.7	3321.4	3367.6	3167.2
17.5°	2750.6	2758.1	2630.2	2600.5	2748.2	2876.8	3104.5	3177.9	3191.9	3596.9	3352.7
20°	2685.5	2749.0	2596.4	2409.2	2638.5	2813.3	3044.3	3021.2	3115.2	3664.5	3394.8
22.5°	2858.7	2768.0	2572.5	2431.5	2509.0	2668.2	2863.6	3014.6	3155.6	3502.8	3449.2
25°	2875.2	2842.2	2668.2	2542.8	2529.6	2570.0	2842.2	2939.5	3160.6	3648.0	3403.0
27.5°	3060.8	3022.8	2666.5	2678.9	2555.2	2430.6	2738.3	2966.7	3250.5	3559.8	3501.2
30°	3299.9	3303.2	2843.8	2882.6	2706.1	2505.7	2823.2	2885.9	3311.5	3700.8	3573.8
32.5°	3542.4	3642.2	3194.4	2989.0	2933.7	2790.2	2717.7	3007.2	3244.7	3941.6	3755.2
35°	3911.1	3978.7	3483.0	3299.1	3082.2	2918.9	3004.7	3108.6	3484.7	4260.8	3993.6
37.5°	4535.5	4413.4	4001.0	3681.0	3629.0	3388.2	3431.1	3337.9	3729.7	4636.9	4465.4
40°	4886.8	4776.3	4347.4	4191.5	3860.0	3897.1	3761.8	3816.3	4085.1	5028.7	4895.1
42.5°	5253.0	5147.5	4771.4	4660.8	4344.9	4191.5	4130.5	4326.0	4630.3	5681.1	5511.2
45°	5620.9	5352.8	5193.6	5248.9	5107.0	4803.5	4732.6	4906.6	5225.8	6482.8	6161.1
47.5°	5931.0	5705.0	5585.4	5559.8	5504.6	5926.0	5637.4	5714.1	5855.1	7192.1	6971.0
50°	6490.2	6267.5	6080.3	6028.3	6297.2	6895.2	6449.8	6301.3	6583.4	8049.0	7909.6
52.5°	7297.7	7013.9	6716.2	6717.0	7224.3	7552.5	7763.7	7503.0	7555.8	8991.8	8929.9
55°	7946.8	7586.3	7339.7	7534.4	8290.7	8474.6	9280.4	9052.0	8983.5	9866.0	9790.1
57.5°	8035.8	7603.7	7486.5	7828.0	8863.1	10037.6	10904.4	10333.7	10228.9	10597.6	10748.5
60°	7204.5	6745.9	6834.1	7383.4	9049.5	10990.2	12395.6	11929.6	11264.0	11454.6	11558.5
62.5°	5373.4	5007.2	5254.7	5982.1	8331.1	11628.6	14121.9	14338.0	12464.9	12097.9	12075.6
65°	3486.3	3257.1	3419.5	4015.9	6304.6	11556.0	15664.2	16601.2	13410.9	12622.4	12238.1
67.5°	2306.1	2132.1	2155.2	2508.2	4076.9	9398.4	16586.3	17718.8	14474.9	12920.2	11306.9
70°	1718.8	1581.9	1590.2	1781.5	2419.9	6198.2	15300.5	16837.1	14863.4	11888.4	9126.2
72.5°	1239.6	1148.1	1224.8	1437.6	1928.3	3277.7	11404.2	13866.2	12960.6	9376.9	6148.7
75°	858.6	798.4	923.8	1202.5	1760.1	2034.7	7536.0	9981.5	9084.1	5883.2	2779.5
77.5°	475.9	457.8	638.4	979.8	1597.6	1667.7	4616.3	6558.7	5038.6	2109.0	661.5
80°	207.8	201.2	309.3	735.7	1342.7	1506.9	2598.9	3636.5	1981.9	376.1	213.6
82.5°	89.1	85.8	132.0	442.9	975.7	1260.3	1602.5	1750.2	682.1	116.3	121.2
85°	15.7	17.3	52.8	233.4	593.8	640.0	1160.5	1035.9	343.1	55.3	86.6
87.5°	0.0	0.0	8.2	45.4	111.3	183.1	503.1	362.9	65.2	18.1	14.8
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°	1629.8	1629.8	1629.8	1629.8	1629.8	1629.8	1629.8	1629.8	1629.8	1629.8	1629.8
2.5°	1986.1	1939.9	1764.2	1741.9	1718.0	1682.6	1669.4	1593.5	1583.6	1680.9	1680.9
5°	2471.9	2306.9	2139.5	2007.5	1889.6	1726.3	1680.1	1632.2	1593.5	1583.6	1614.1
7.5°	2728.4	2527.1	2264.0	1928.3	1656.2	1419.4	1320.5	1251.2	1173.7	1196.8	1209.1
10°	2714.4	2500.7	2165.0	1733.7	1431.8	1170.4	918.8	772.0	690.3	649.9	645.0
12.5°	2852.1	2650.8	2098.2	1578.6	1193.5	832.2	578.2	473.4	413.2	414.0	409.1
15°	2932.1	2712.7	2020.7	1382.3	840.5	535.3	400.8	377.7	369.5	378.6	373.6
17.5°	3073.1	2777.9	1845.0	1089.5	578.2	404.1	368.7	359.6	370.3	389.3	384.3
20°	3062.4	2664.9	1595.1	767.9	427.2	363.7	348.9	334.9	357.1	376.9	373.6
22.5°	3052.5	2554.3	1360.1	566.6	357.1	331.6	319.2	313.4	325.0	348.1	353.0
25°	2965.1	2499.9	1121.7	425.6	323.3	301.0	295.3	290.3	294.4	313.4	312.6
27.5°	3072.3	2362.2	866.0	357.1	299.4	273.0	268.1	259.8	251.6	268.1	270.5
30°	3050.0	2381.1	678.8	314.2	275.5	240.0	241.7	224.3	209.5	224.3	224.3
32.5°	3130.9	2242.6	543.5	285.4	251.6	226.0	205.4	187.2	176.5	185.6	187.2
35°	3248.8	2248.4	425.6	267.2	230.9	201.2	176.5	158.4	148.5	152.6	155.1
37.5°	3643.9	2208.8	355.5	253.2	223.5	186.4	160.8	136.9	130.3	135.3	137.7
40°	3901.2	2314.3	313.4	245.8	204.5	171.6	137.7	120.4	114.6	117.1	121.2
42.5°	4386.2	2372.9	292.8	237.5	187.2	146.8	117.9	108.0	99.8	103.1	106.4
45°	4905.0	2472.7	277.1	228.5	174.0	128.7	103.9	95.7	85.0	85.8	89.1
47.5°	5542.5	2710.2	259.0	212.8	155.9	117.1	92.4	80.0	70.1	69.3	73.4
50°	6398.6	3027.8	242.5	193.0	144.3	107.2	80.8	65.2	56.9	54.4	57.7
52.5°	7312.5	3438.5	225.2	179.0	130.3	94.0	69.3	52.8	45.4	43.7	46.2
55°	8218.1	3832.8	208.7	169.9	115.5	80.8	58.6	43.7	37.1	35.5	37.1
57.5°	9249.9	4259.2	187.2	151.8	101.4	70.1	48.7	36.3	30.5	28.9	29.7
60°	10026.9	4409.3	169.1	132.0	88.3	61.9	41.2	28.9	24.7	23.1	23.9
62.5°	10395.5	4164.3	151.8	114.6	77.5	53.6	34.6	23.9	20.6	19.0	19.0
65°	10299.9	3621.6	134.4	98.1	66.8	44.5	27.2	20.6	18.1	15.7	14.8
67.5°	9194.7	2833.9	114.6	82.5	56.1	36.3	23.1	19.8	16.5	14.8	12.4
70°	7291.9	2052.1	93.2	68.5	47.0	29.7	18.1	18.1	15.7	14.8	11.5
72.5°	4779.6	1291.6	75.9	55.3	38.8	23.1	14.0	16.5	14.8	14.8	10.7
75°	2071.0	461.9	61.0	44.5	32.2	15.7	12.4	14.8	15.7	14.8	12.4
77.5°	485.0	143.5	47.8	35.5	26.4	10.7	12.4	14.8	15.7	14.0	10.7
80°	182.3	61.0	31.3	23.1	20.6	6.6	10.7	9.1	8.2	5.8	1.6
82.5°	110.5	25.6	16.5	11.5	9.9	1.6	4.9	3.3	1.6	1.6	0.0
85°	78.4	12.4	9.1	8.2	4.9	0.0	0.8	0.0	0.0	0.8	0.0
87.5°	10.7	3.3	4.1	4.1	3.3	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)