

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: P596811

Luminaire Tested: **MSA-SA4D-827-U-SL3-HSS**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596811
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-SA4D-827-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: 15881 lumens
Efficiency: N/A
Efficacy: 61.3 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G3

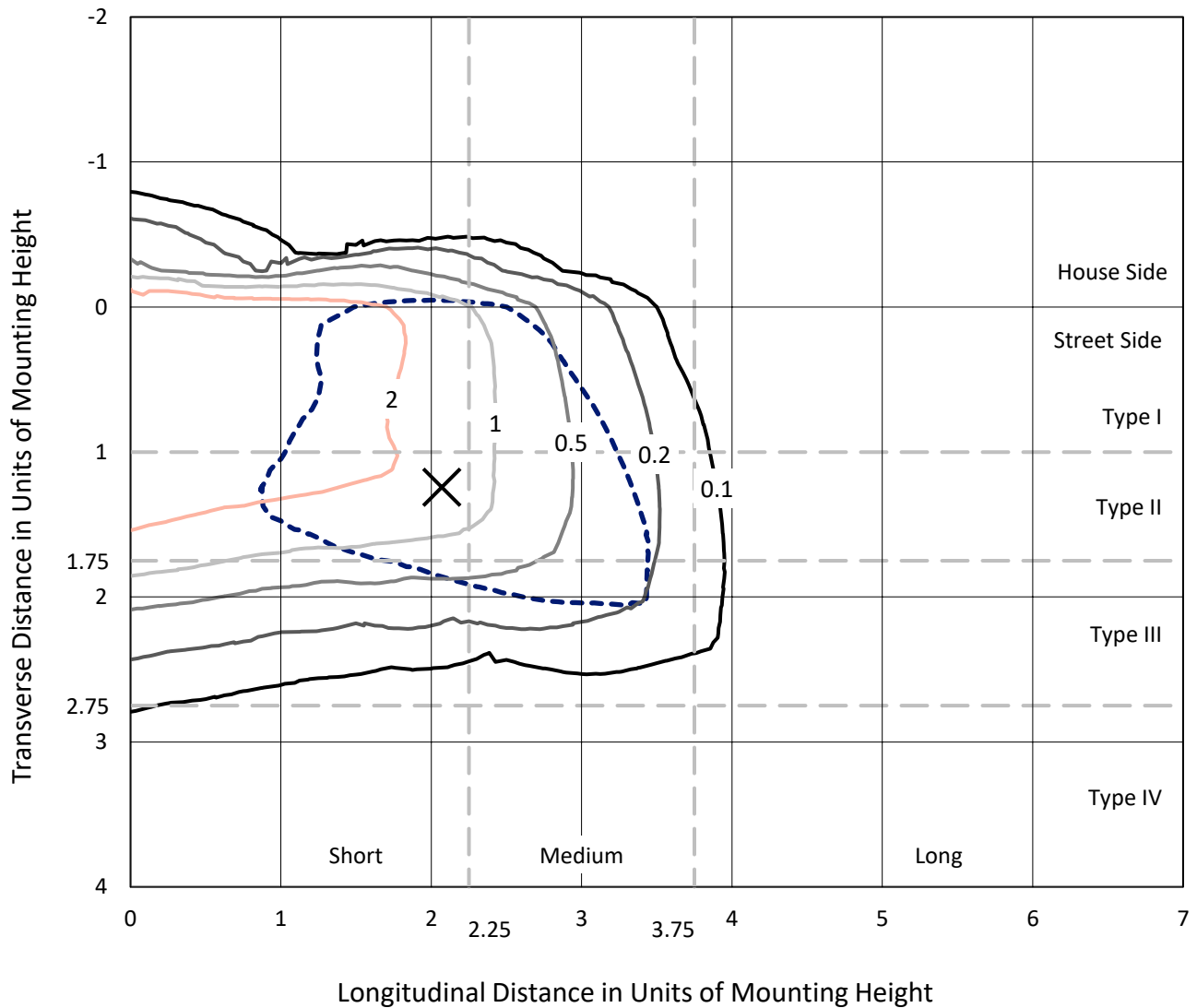
Input Watts (W): 259
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

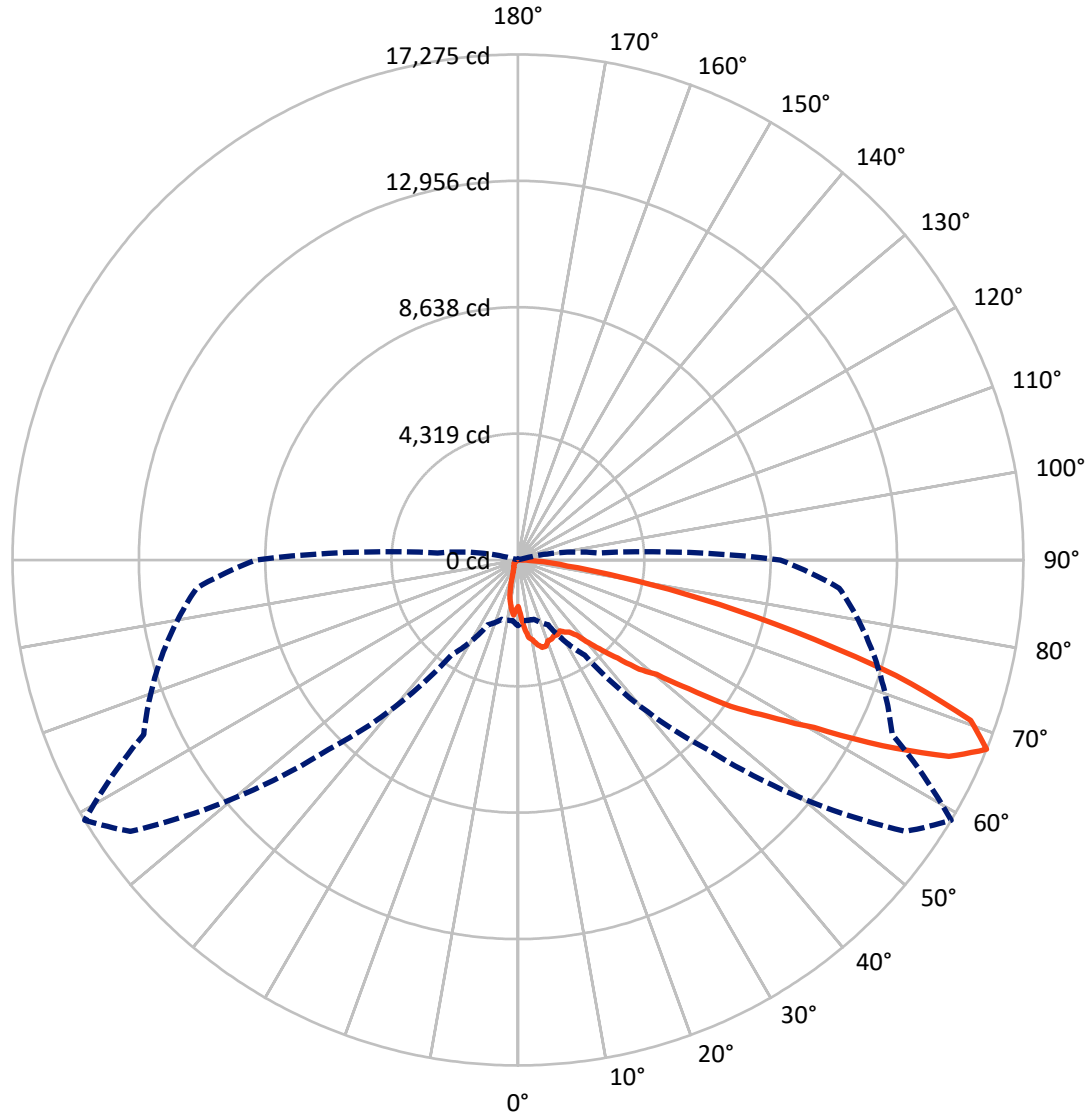
✕ Max cd
 - - - 1/2 Max cd



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	1350.6	0.0	1350.6
	% Fixture	8.5	0.0	8.5
Street Side	Lumens	14530.4	0.0	14530.4
	% Fixture	91.5	0.0	91.5
Total	Lumens	15881.0	0.0	15881.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	193.2	1.2
10°-20°	544.0	3.4
20°-30°	809.1	5.1
30°-40°	1248.4	7.9
40°-50°	2227.9	14.0
50°-60°	3964.6	25.0
60°-70°	4617.4	29.1
70°-80°	2053.4	12.9
80°-90°	223.0	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°	15881.0	100.0
0°-180°	15881.0	100.0

Coefficient of Utilization



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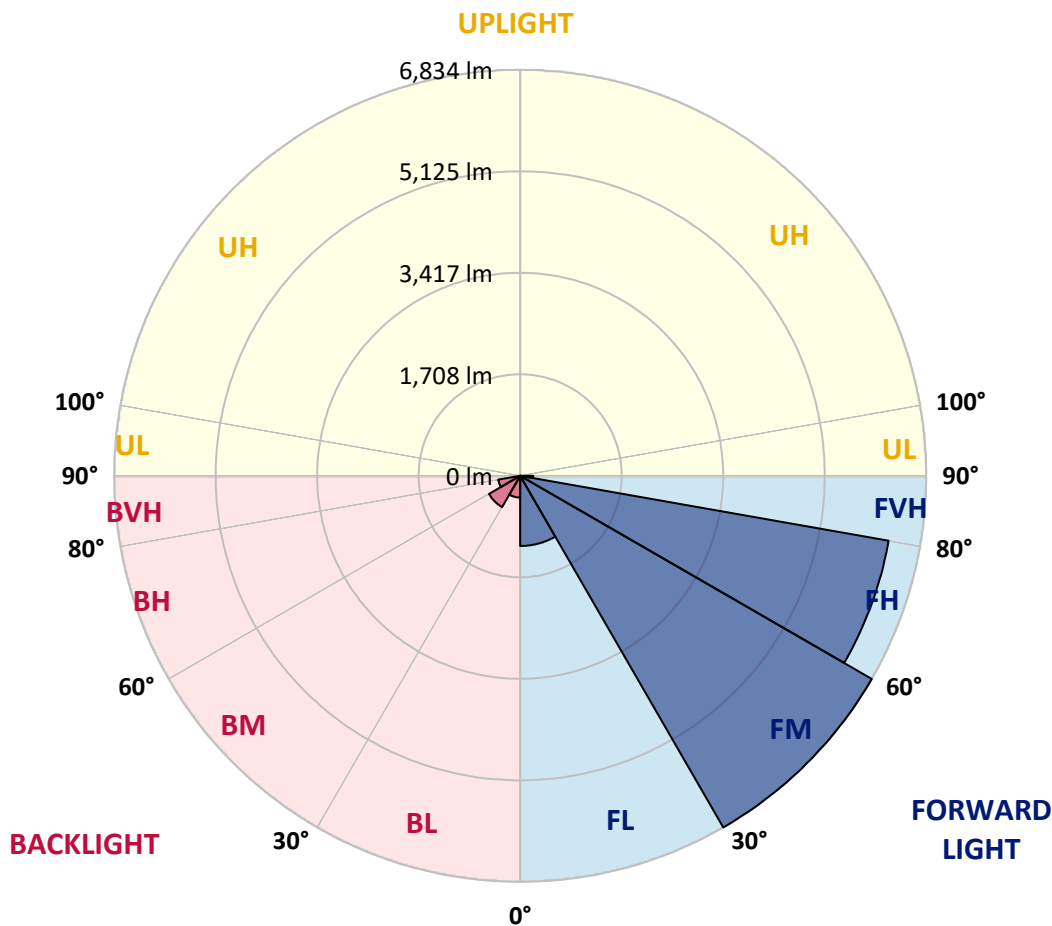
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1181.1	7.4			
FM (30°-60°)	6833.6	43.0			
FH (60°-80°)	6296.7	39.6			G3/7500
FVH (80°-90°)	219.0	1.4			G2/225
BL (0°-30°)	365.2	2.3	B1/500		
BM (30°-60°)	607.3	3.8	B1/1000		
BH (60°-80°)	374.1	2.4	B1/500		G1/500
BVH (80°-90°)	4.0	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°	1588.9	1588.9	1588.9	1588.9	1588.9	1588.9	1588.9	1588.9	1588.9	1588.9	1588.9
2.5°	2071.4	1993.4	1882.4	1915.4	1945.2	1973.3	1926.7	1900.1	1887.3	1773.1	1916.2
5°	2543.4	2446.1	2395.5	2382.6	2350.4	2278.9	2397.9	2344.8	2362.5	2385.0	2431.7
7.5°	2687.4	2643.1	2570.0	2597.3	2475.1	2464.6	2629.5	2675.3	2735.6	2694.6	2750.9
10°	2613.4	2537.0	2571.6	2561.9	2557.1	2664.9	2780.7	2783.1	2873.1	2916.6	2726.0
12.5°	2467.0	2475.9	2599.7	2590.1	2750.9	2966.4	2992.9	2964.8	3112.0	3036.4	3007.4
15°	2564.3	2636.7	2568.4	2591.7	2648.8	2918.2	3012.2	3099.1	3238.2	3283.2	3087.8
17.5°	2681.7	2689.0	2564.3	2535.4	2679.3	2804.8	3026.7	3098.3	3112.0	3506.8	3268.8
20°	2618.2	2680.1	2531.4	2348.8	2572.4	2742.9	2968.0	2945.5	3037.2	3572.7	3309.8
22.5°	2787.1	2698.6	2508.1	2370.6	2446.1	2601.3	2791.9	2939.1	3076.6	3415.1	3362.8
25°	2803.2	2771.0	2601.3	2479.1	2466.2	2505.6	2771.0	2865.9	3081.4	3556.6	3317.8
27.5°	2984.1	2947.1	2599.7	2611.8	2491.2	2369.7	2669.7	2892.4	3169.0	3470.6	3413.5
30°	3217.3	3220.5	2772.6	2810.4	2638.3	2442.9	2752.5	2813.6	3228.5	3608.1	3484.3
32.5°	3453.7	3551.0	3114.4	2914.1	2860.3	2720.3	2649.6	2931.8	3163.4	3842.9	3661.2
35°	3813.1	3879.1	3395.8	3216.5	3005.0	2845.8	2929.4	3030.7	3397.4	4154.1	3893.6
37.5°	4421.9	4302.9	3900.8	3588.8	3538.1	3303.3	3345.1	3254.3	3636.2	4520.8	4353.5
40°	4764.4	4656.7	4238.5	4086.5	3763.3	3799.5	3667.6	3720.7	3982.8	4902.7	4772.5
42.5°	5121.5	5018.5	4651.8	4544.1	4236.1	4086.5	4027.0	4217.6	4514.3	5538.8	5373.1
45°	5480.1	5218.8	5063.6	5117.4	4979.1	4683.2	4614.1	4783.7	5094.9	6320.4	6006.8
47.5°	5782.4	5562.1	5445.5	5420.6	5366.7	5777.6	5496.2	5571.0	5708.5	7011.9	6796.4
50°	6327.6	6110.5	5928.0	5877.3	6139.5	6722.5	6288.2	6143.5	6418.5	7847.4	7711.5
52.5°	7114.9	6838.3	6548.0	6548.8	7043.3	7363.3	7569.2	7315.1	7366.6	8766.5	8706.2
55°	7747.7	7396.3	7155.9	7345.7	8083.0	8262.4	9048.0	8825.2	8758.5	9618.9	9544.9
57.5°	7834.6	7413.2	7299.0	7631.9	8641.1	9786.2	10631.3	10074.8	9972.7	10332.2	10479.3
60°	7024.0	6576.9	6663.0	7198.5	8822.8	10714.9	12085.1	11630.8	10981.9	11167.6	11269.0
62.5°	5238.9	4881.8	5123.1	5832.3	8122.4	11337.3	13768.2	13978.9	12152.7	11794.9	11773.1
65°	3399.0	3175.5	3333.9	3915.3	6146.7	11266.6	15271.9	16185.4	13075.0	12306.3	11931.6
67.5°	2248.3	2078.7	2101.2	2445.3	3974.8	9163.0	16170.9	17275.0	14112.3	12596.6	11023.7
70°	1675.8	1542.3	1550.3	1736.9	2359.3	6043.0	14917.3	16415.3	14491.1	11590.6	8897.6
72.5°	1208.6	1119.3	1194.1	1401.6	1880.0	3195.6	11118.6	13518.9	12636.0	9142.1	5994.7
75°	837.1	778.4	900.6	1172.4	1716.0	1983.8	7347.3	9731.5	8856.6	5735.8	2709.9
77.5°	464.0	446.3	622.4	955.3	1557.6	1625.9	4500.7	6394.4	4912.4	2056.1	644.9
80°	202.6	196.2	301.5	717.3	1309.1	1469.1	2533.8	3545.4	1932.3	366.7	208.3
82.5°	86.8	83.6	128.7	431.8	951.3	1228.7	1562.4	1706.3	665.0	113.4	118.2
85°	15.3	16.9	51.5	227.6	579.0	624.0	1131.4	1010.0	334.5	53.9	84.4
87.5°	0.0	0.0	8.0	44.2	108.6	178.5	490.5	353.8	63.5	17.7	14.5
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°	1588.9	1588.9	1588.9	1588.9	1588.9	1588.9	1588.9	1588.9	1588.9	1588.9	1588.9
2.5°	1936.3	1891.3	1720.0	1698.3	1675.0	1640.4	1627.5	1553.6	1543.9	1638.8	1638.8
5°	2410.0	2249.1	2085.9	1957.2	1842.2	1683.0	1638.0	1591.4	1553.6	1543.9	1573.7
7.5°	2660.0	2463.8	2207.3	1880.0	1614.7	1383.9	1287.4	1219.9	1144.3	1166.8	1178.8
10°	2646.4	2438.1	2110.8	1690.3	1396.0	1141.0	895.8	752.7	673.1	633.6	628.8
12.5°	2780.7	2584.4	2045.7	1539.1	1163.6	811.4	563.7	461.6	402.9	403.7	398.8
15°	2858.7	2644.8	1970.1	1347.7	819.4	521.9	390.8	368.3	360.2	369.1	364.3
17.5°	2996.2	2708.3	1798.8	1062.2	563.7	394.0	359.4	350.6	361.1	379.5	374.7
20°	2985.7	2598.1	1555.2	748.6	416.5	354.6	340.1	326.5	348.2	367.5	364.3
22.5°	2976.1	2490.4	1326.0	552.4	348.2	323.3	311.2	305.6	316.8	339.3	344.2
25°	2890.8	2437.3	1093.6	414.9	315.2	293.5	287.9	283.1	287.1	305.6	304.8
27.5°	2995.4	2303.0	844.3	348.2	291.9	266.2	261.3	253.3	245.3	261.3	263.8
30°	2973.6	2321.5	661.8	306.4	268.6	234.0	235.6	218.7	204.2	218.7	218.7
32.5°	3052.4	2186.4	529.9	278.2	245.3	220.3	200.2	182.5	172.1	180.9	182.5
35°	3167.4	2192.0	414.9	260.5	225.2	196.2	172.1	154.4	144.7	148.8	151.2
37.5°	3552.6	2153.4	346.6	246.9	217.9	181.7	156.8	133.5	127.1	131.9	134.3
40°	3803.5	2256.4	305.6	239.6	199.4	167.3	134.3	117.4	111.8	114.2	118.2
42.5°	4276.3	2313.5	285.5	231.6	182.5	143.1	115.0	105.3	97.3	100.5	103.7
45°	4782.1	2410.8	270.2	222.7	169.7	125.4	101.3	93.3	82.8	83.6	86.8
47.5°	5403.7	2642.3	252.5	207.5	152.0	114.2	90.1	78.0	68.4	67.5	71.6
50°	6238.4	2951.9	236.4	188.2	140.7	104.5	78.8	63.5	55.5	53.1	56.3
52.5°	7129.3	3352.4	219.5	174.5	127.1	91.7	67.5	51.5	44.2	42.6	45.0
55°	8012.3	3736.8	203.4	165.6	112.6	78.8	57.1	42.6	36.2	34.6	36.2
57.5°	9018.2	4152.5	182.5	148.0	98.9	68.4	47.4	35.4	29.8	28.1	28.9
60°	9775.7	4298.8	164.8	128.7	86.0	60.3	40.2	28.1	24.1	22.5	23.3
62.5°	10135.2	4060.0	148.0	111.8	75.6	52.3	33.8	23.3	20.1	18.5	18.5
65°	10041.9	3530.9	131.1	95.7	65.1	43.4	26.5	20.1	17.7	15.3	14.5
67.5°	8964.4	2763.0	111.8	80.4	54.7	35.4	22.5	19.3	16.1	14.5	12.1
70°	7109.2	2000.7	90.9	66.7	45.8	28.9	17.7	17.7	15.3	14.5	11.3
72.5°	4659.9	1259.3	74.0	53.9	37.8	22.5	13.7	16.1	14.5	14.5	10.5
75°	2019.2	450.3	59.5	43.4	31.4	15.3	12.1	14.5	15.3	14.5	12.1
77.5°	472.8	139.9	46.6	34.6	25.7	10.5	12.1	14.5	15.3	13.7	10.5
80°	177.7	59.5	30.6	22.5	20.1	6.4	10.5	8.8	8.0	5.6	1.6
82.5°	107.8	24.9	16.1	11.3	9.6	1.6	4.8	3.2	1.6	1.6	0.0
85°	76.4	12.1	8.8	8.0	4.8	0.0	0.8	0.0	0.0	0.8	0.0
87.5°	10.5	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)