

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: P596606

Luminaire Tested: **MSA-SA2B-827-U-T4W**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P596606  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-14)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 5/27/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA2B-827-U-T4W  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS.  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7424 lumens  
Efficiency: N/A  
Efficacy: 87.3 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B2 - U0 - G2

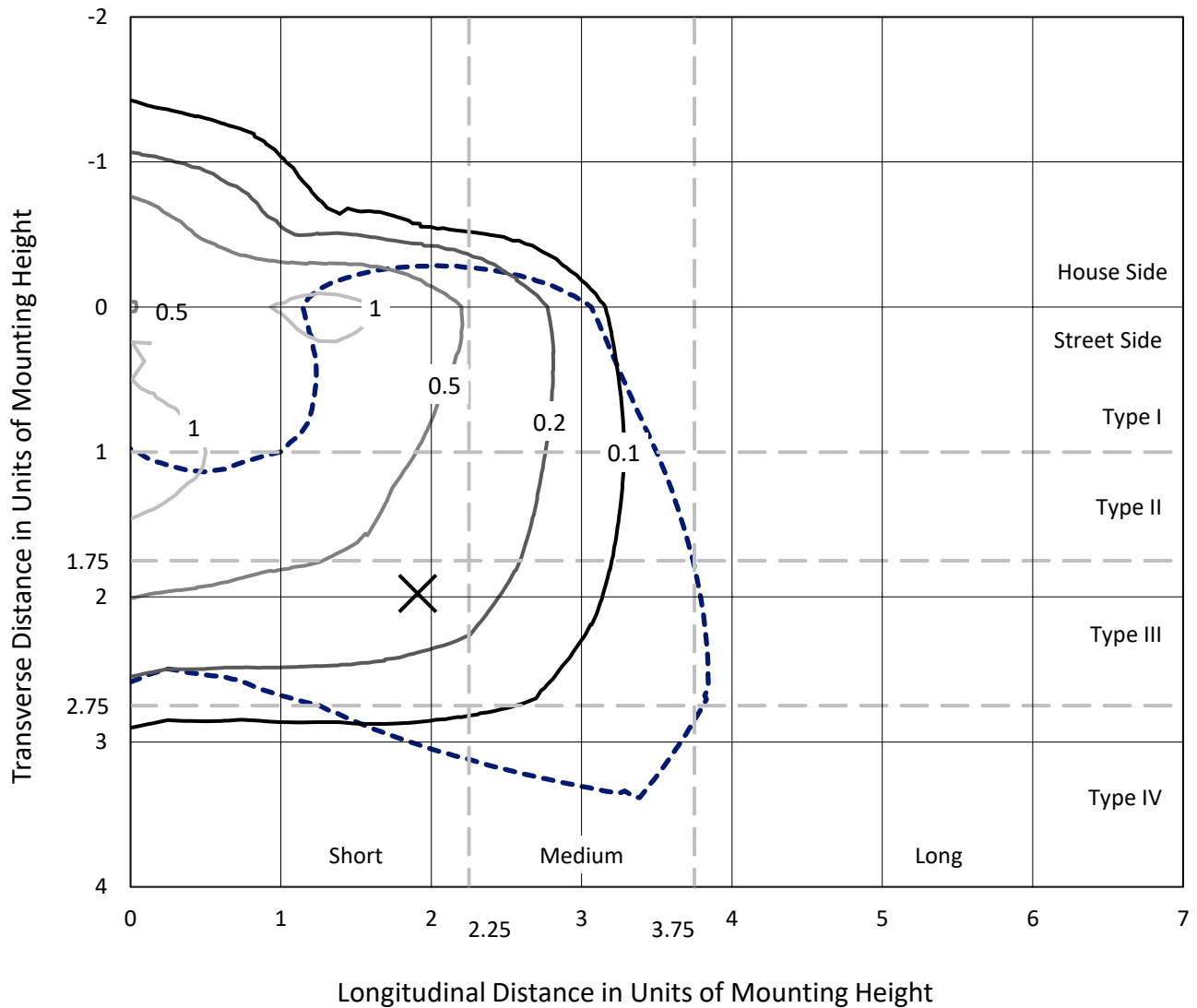
Input Watts (W): 85  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

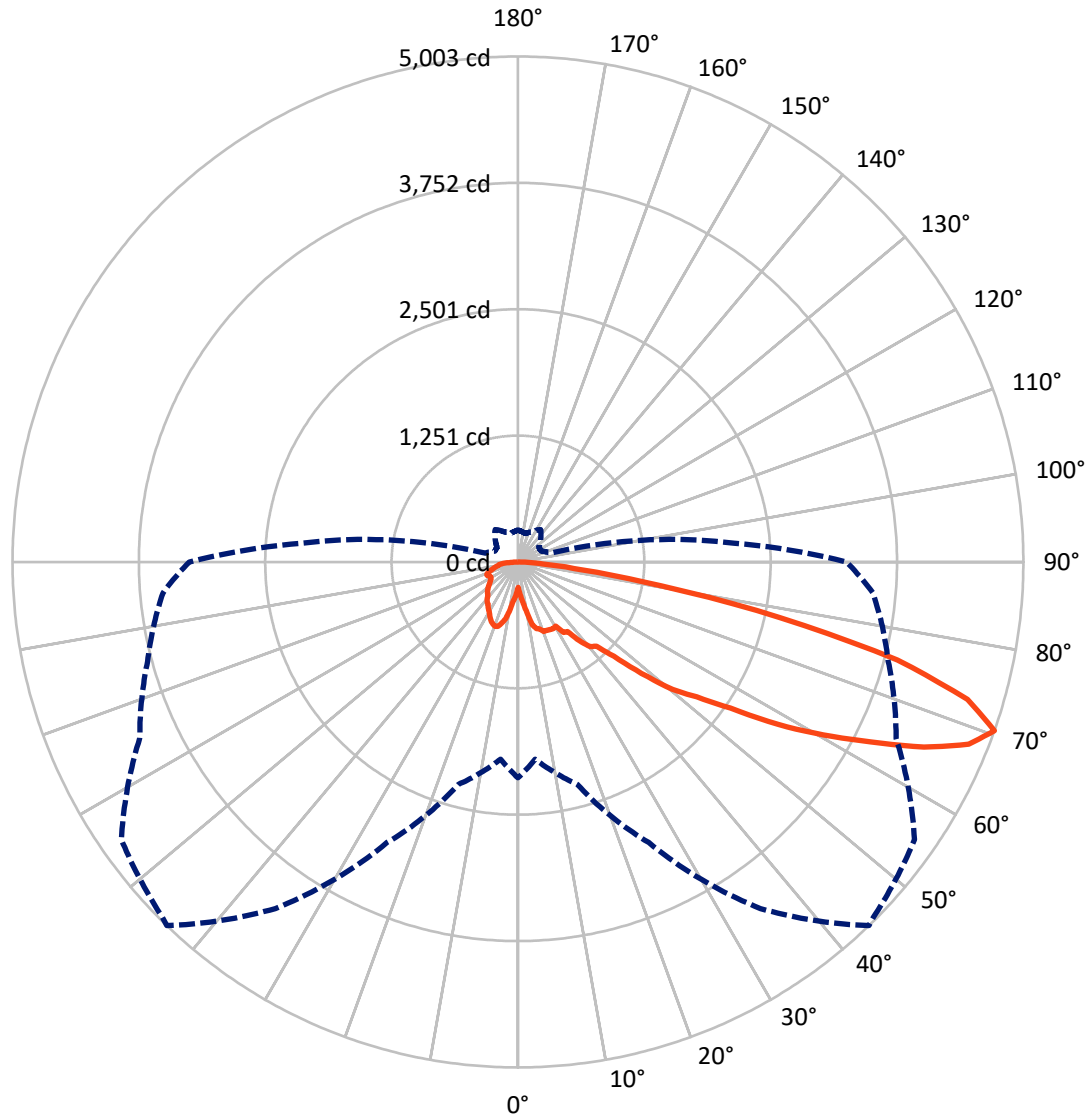
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.4 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 44-Deg Lateral    - - - Horizontal Cone Through 70-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1638.0	0.0	1638.0
	% Fixture	22.1	0.0	22.1
<b>Street Side</b>	Lumens	5786.0	0.0	5786.0
	% Fixture	77.9	0.0	77.9
<b>Total</b>	Lumens	7424.0	0.0	7424.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	39.6	0.5
10°-20°	182.2	2.5
20°-30°	340.5	4.6
30°-40°	546.5	7.4
40°-50°	922.5	12.4
50°-60°	1643.8	22.1
60°-70°	2248.6	30.3
70°-80°	1322.3	17.8
80°-90°	178.0	2.4
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°	7424.0	100.0
0°-180°	7424.0	100.0

**Coefficient of Utilization**



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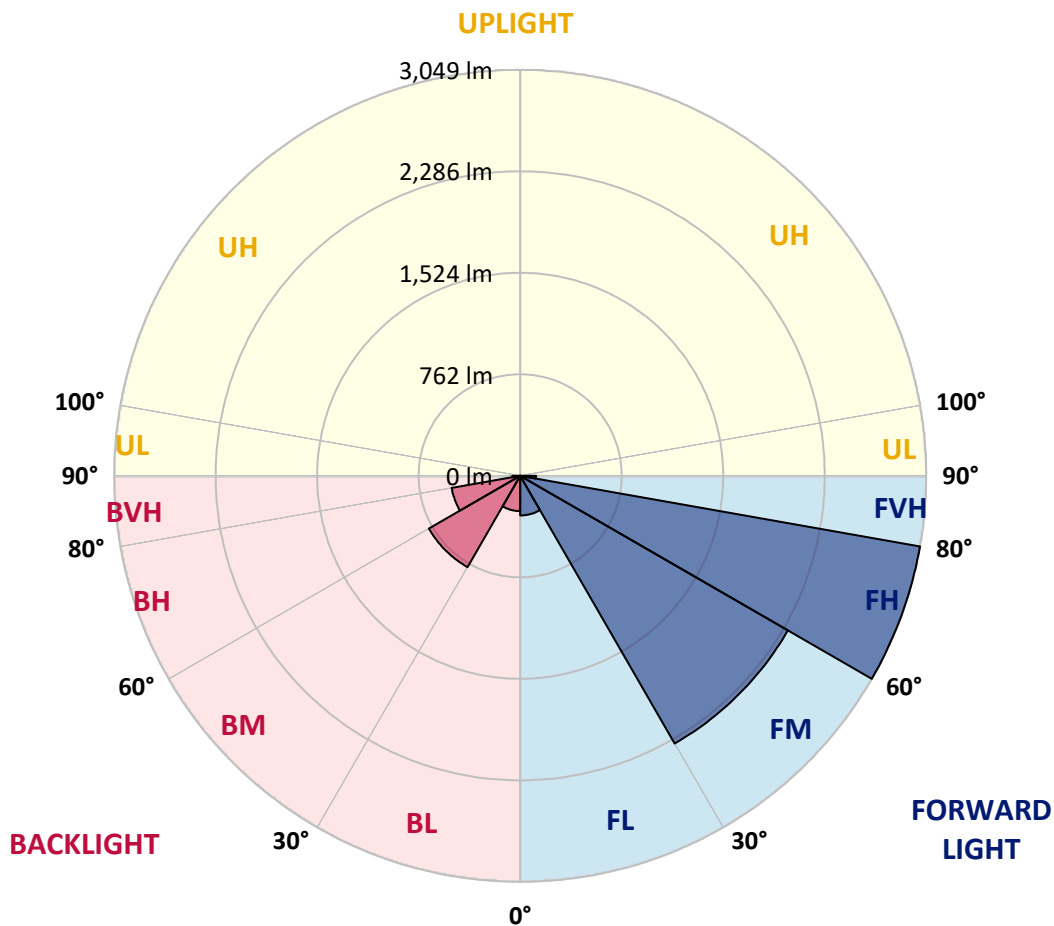
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	297.5	4.0			
FM (30°-60°)	2321.3	31.3			
FH (60°-80°)	3048.5	41.1			G2/5000
FVH (80°-90°)	118.7	1.6			G2/225
BL (0°-30°)	264.7	3.6	B1/500		
BM (30°-60°)	791.6	10.7	B1/1000		
BH (60°-80°)	522.3	7.0	B2/1000		G2/1000
BVH (80°-90°)	59.4	0.8			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G2**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	252.4	252.4	252.4	252.4	252.4	252.4	252.4	252.4	252.4	252.4	252.4
2.5°	306.2	300.1	285.5	290.4	296.5	298.9	298.3	297.7	288.3	284.9	301.7
5°	416.1	402.7	392.1	387.8	373.8	362.9	356.2	373.8	371.1	375.6	387.2
7.5°	519.6	511.1	487.0	478.5	449.9	431.0	428.9	442.9	446.6	439.3	459.0
10°	586.3	571.7	566.8	546.4	526.6	523.6	521.7	515.4	506.5	505.9	488.3
12.5°	638.0	645.6	649.6	626.2	626.8	637.7	631.9	606.1	591.2	565.0	567.1
15°	730.9	741.8	710.5	695.6	667.0	683.4	681.3	659.6	657.5	640.5	620.7
17.5°	811.8	816.7	764.4	730.3	720.5	696.8	703.2	703.8	675.8	706.2	688.6
20°	818.5	835.9	775.6	707.7	737.0	733.9	734.8	728.7	691.9	742.1	735.4
22.5°	851.4	824.9	770.8	721.1	728.7	733.3	737.6	730.3	728.1	756.1	776.5
25°	845.3	836.8	782.0	740.0	740.9	741.8	744.0	765.9	763.4	801.5	812.2
27.5°	902.3	889.2	785.4	775.0	751.3	746.1	731.5	777.1	812.8	811.8	870.6
30°	1010.6	997.2	863.3	833.2	790.2	737.3	765.3	826.2	854.2	863.6	938.2
32.5°	1179.9	1201.8	1016.7	895.3	842.0	830.4	827.4	821.3	890.7	937.3	1005.1
35°	1422.8	1405.4	1197.5	1028.3	896.5	846.9	853.6	890.7	973.2	1003.3	1066.0
37.5°	1701.0	1665.1	1429.2	1179.0	1053.5	991.4	969.2	1005.1	1023.4	1047.2	1175.3
40°	1983.8	1896.1	1656.6	1377.1	1147.9	1101.0	1081.6	1037.4	1080.3	1128.4	1291.3
42.5°	2256.9	2189.0	1904.1	1613.6	1306.8	1139.7	1129.0	1085.8	1218.8	1269.7	1458.7
45°	2543.0	2385.6	2157.6	1880.6	1539.1	1329.3	1313.5	1235.9	1406.4	1512.3	1694.9
47.5°	2735.4	2589.6	2389.9	2097.3	1733.6	1646.5	1616.4	1483.7	1638.3	1775.9	2059.9
50°	2917.4	2767.3	2557.6	2334.5	2085.8	1985.6	1921.4	1700.4	1927.2	2151.2	2527.8
52.5°	3178.0	3043.7	2752.4	2573.4	2464.2	2217.9	2170.1	2048.6	2265.1	2567.3	3039.2
55°	3456.5	3273.6	3009.6	2910.4	2866.3	2550.9	2511.9	2434.6	2715.0	2993.2	3536.3
57.5°	3579.5	3388.6	3243.1	3183.8	3180.1	3034.9	2990.2	2936.3	3174.9	3358.5	4004.1
60°	3677.2	3472.3	3414.2	3447.4	3567.9	3472.3	3414.2	3366.7	3549.4	3719.5	4385.9
62.5°	3659.2	3453.8	3483.6	3584.7	3892.4	3920.4	3875.7	3760.6	3920.4	4015.4	4604.7
65°	3369.5	3179.5	3353.3	3593.2	4194.1	4417.8	4415.4	4114.3	4169.7	4169.7	4581.6
67.5°	2861.7	2665.1	2949.7	3518.0	4402.6	4812.0	4812.6	4489.4	4192.6	4154.2	4223.6
70°	2136.9	1958.8	2278.8	3063.8	4187.4	5002.9	4975.2	4791.9	4129.9	3794.7	3528.1
72.5°	1276.4	1161.3	1455.7	2230.4	3571.9	4651.9	4725.6	4443.4	3780.7	3155.8	2522.0
75°	579.6	529.7	684.0	1281.2	2550.0	3880.2	3960.3	3750.0	3003.0	2269.6	1457.5
77.5°	248.1	234.7	298.6	568.3	1406.0	2653.5	2817.6	2680.0	2034.6	1319.0	644.7
80°	159.5	151.0	183.6	273.4	652.9	1433.7	1575.0	1523.5	1036.5	512.9	227.1
82.5°	95.3	92.5	122.7	171.7	356.2	631.0	711.1	730.0	430.4	230.1	130.0
85°	52.1	52.7	67.3	104.1	213.7	245.7	263.0	286.1	202.7	133.3	63.0
87.5°	17.4	20.1	27.1	42.3	76.1	69.4	69.7	81.0	85.5	55.4	20.1
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°	252.4	252.4	252.4	252.4	252.4	252.4	252.4	252.4	252.4	252.4	252.4
2.5°	304.4	298.9	284.9	285.8	291.0	292.2	293.8	284.9	283.1	299.8	301.4
5°	389.0	371.1	362.9	360.1	352.2	349.5	364.1	370.8	377.5	390.6	396.9
7.5°	456.9	436.8	421.9	408.2	396.6	389.9	414.6	433.5	445.0	471.8	484.0
10°	488.0	470.6	465.1	454.2	463.0	483.1	487.7	488.3	513.8	513.2	518.4
12.5°	549.8	538.5	520.5	524.5	547.6	568.3	562.5	571.4	580.5	602.4	592.4
15°	606.1	603.0	586.3	589.0	593.6	619.5	622.8	631.6	645.6	663.0	651.1
17.5°	675.5	674.3	633.5	629.8	640.5	665.7	657.8	642.3	688.6	707.1	702.3
20°	722.7	713.5	661.2	645.6	672.7	676.1	667.0	642.3	682.5	723.0	733.9
22.5°	761.9	751.3	697.4	667.0	661.5	663.0	663.0	658.4	678.2	711.4	711.1
25°	793.6	803.6	735.1	705.9	676.7	640.2	635.6	639.6	650.8	714.7	712.6
27.5°	873.0	845.3	747.9	726.0	666.0	608.5	621.0	627.1	630.7	700.7	712.3
30°	924.8	933.3	793.6	737.9	650.5	573.2	577.5	595.1	616.4	699.2	702.6
32.5°	994.5	976.2	864.8	718.1	609.1	551.9	544.0	567.7	599.4	674.6	683.7
35°	1059.3	1080.9	895.0	714.4	580.2	519.9	528.4	536.7	569.5	647.2	657.8
37.5°	1211.5	1162.2	979.6	696.8	556.1	503.8	494.7	507.1	535.1	595.1	619.8
40°	1327.2	1330.2	997.8	674.6	510.2	480.7	461.2	473.7	485.5	533.3	544.0
42.5°	1544.2	1477.9	1042.6	625.9	481.3	446.0	435.0	440.5	442.3	462.4	480.0
45°	1820.3	1664.8	1060.2	560.4	443.2	431.6	409.4	406.7	396.6	399.4	414.9
47.5°	2202.4	1956.4	1047.5	490.7	409.4	413.1	381.1	368.6	354.6	358.0	372.6
50°	2696.4	2329.0	1046.5	431.6	386.3	388.7	362.5	340.0	326.0	333.0	345.8
52.5°	3250.7	2702.8	1050.8	391.2	361.0	359.8	350.4	323.0	311.7	319.0	333.6
55°	3781.0	3024.3	1082.5	365.6	334.8	337.0	340.6	317.5	305.0	311.7	326.9
57.5°	4242.5	3278.1	1070.6	338.5	310.5	320.2	330.0	309.9	300.4	310.2	325.4
60°	4565.2	3395.9	976.8	312.6	292.5	305.9	324.8	309.0	307.8	328.8	347.0
62.5°	4683.0	3352.4	794.2	292.2	281.9	304.1	336.7	329.1	330.3	356.2	381.4
65°	4511.0	3123.5	592.4	279.1	273.7	312.9	364.1	340.9	324.2	345.5	368.6
67.5°	4021.8	2716.5	432.9	267.9	264.2	326.9	389.3	339.7	308.7	330.3	349.2
70°	3253.8	2144.2	335.1	253.6	251.7	317.5	391.8	330.6	291.9	305.9	316.6
72.5°	2229.5	1468.1	277.6	239.9	230.1	281.3	372.0	310.2	271.8	280.1	288.9
75°	1245.9	824.0	233.5	222.8	201.5	250.5	348.8	298.0	256.9	259.4	271.5
77.5°	559.2	356.5	198.2	200.3	175.6	221.6	318.7	278.5	234.1	228.6	240.8
80°	211.6	173.8	160.7	169.2	147.6	192.1	287.4	260.9	210.0	203.0	210.0
82.5°	122.7	105.3	119.3	130.3	117.2	176.6	274.3	244.7	185.1	167.4	173.5
85°	56.9	54.5	71.5	84.6	81.9	137.6	234.7	184.2	131.8	111.4	123.3
87.5°	14.9	16.7	25.3	29.8	30.4	47.2	90.4	68.5	51.4	39.0	37.4
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)