

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: P367510

Luminaire Tested: **MSA-SA2C-830-U-SL4**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P367510  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-20)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA2C-830-U-SL4  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV SPILL LIGHT ELIMINATOR OPTICS.  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 9549 lumens  
Efficiency: N/A  
Efficacy: 84.5 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G3

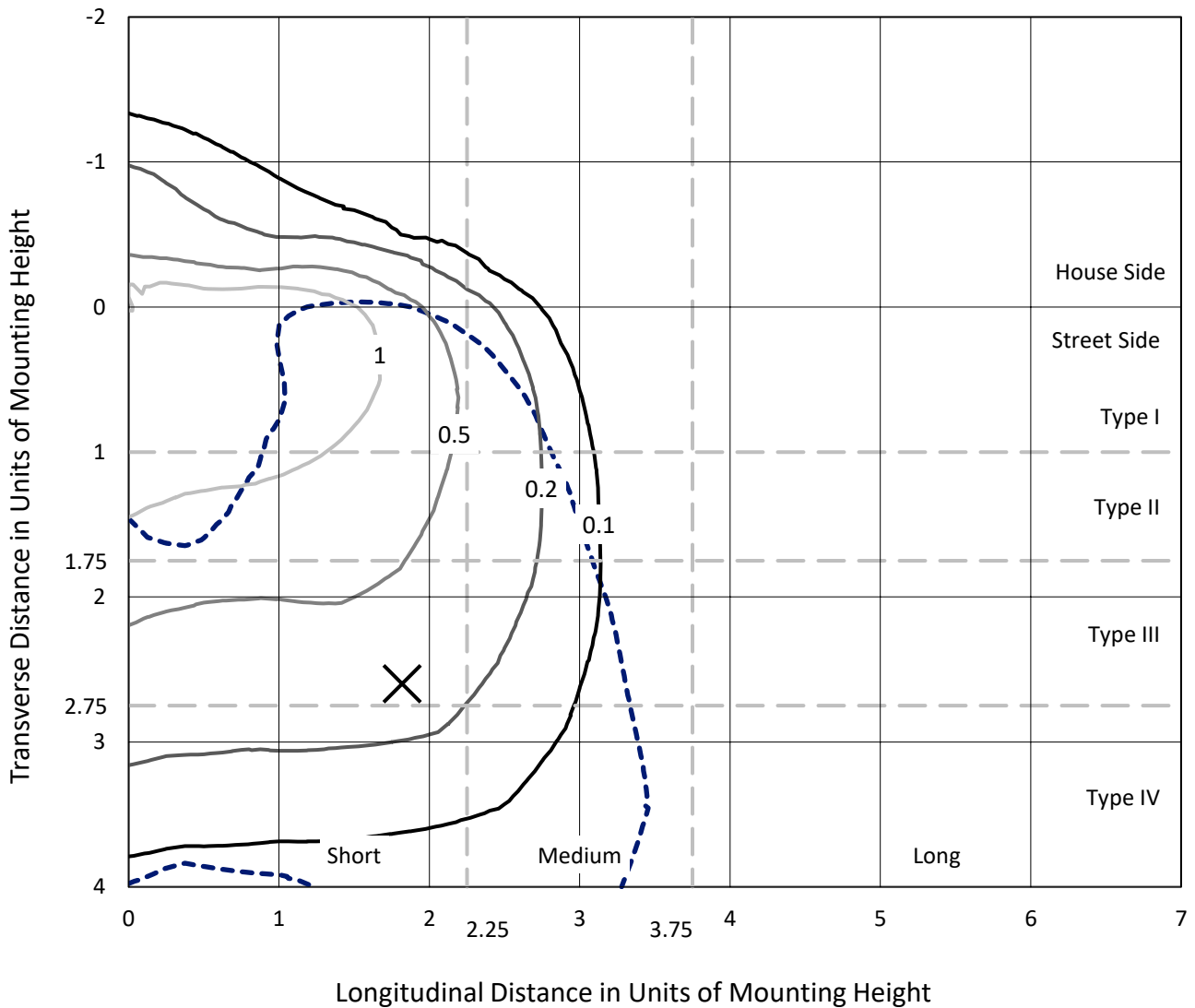
Input Watts (W): 113  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

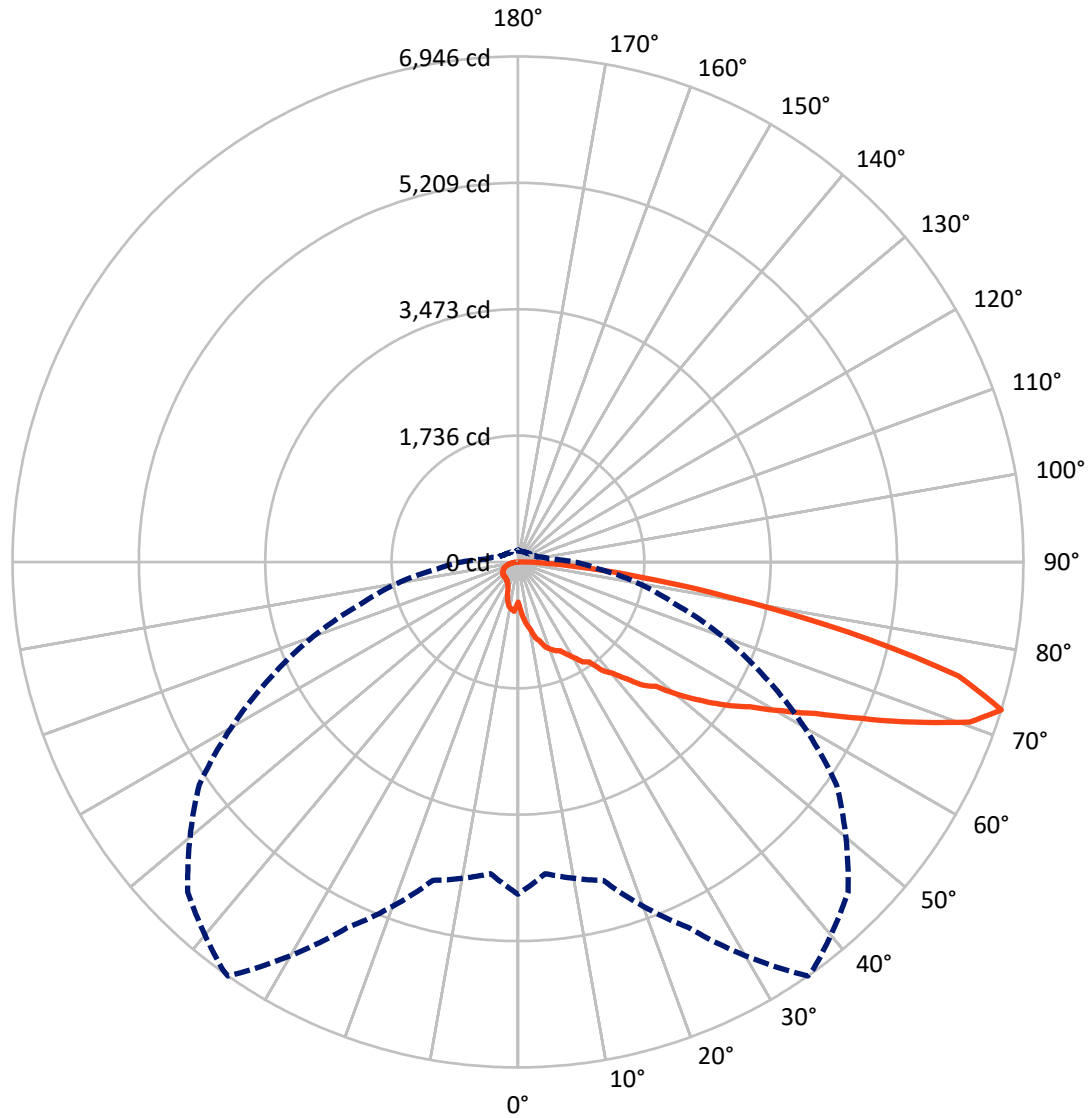
× Max cd  
 - - - 1/2 Max cd



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



— Vertical Plane Through 35-Deg Lateral    - - - Horizontal Cone Through 72.5-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1281.4	0.0	1281.4
	% Fixture	13.4	0.0	13.4
<b>Street Side</b>	Lumens	8267.6	0.0	8267.6
	% Fixture	86.6	0.0	86.6
<b>Total</b>	Lumens	9549.0	0.0	9549.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	73.3	0.8
10°-20°	258.3	2.7
20°-30°	448.9	4.7
30°-40°	750.3	7.9
40°-50°	1302.2	13.6
50°-60°	1968.6	20.6
60°-70°	2550.2	26.7
70°-80°	1881.8	19.7
80°-90°	315.4	3.3
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°	9549.0	100.0
0°-180°	9549.0	100.0

**Coefficient of Utilization**

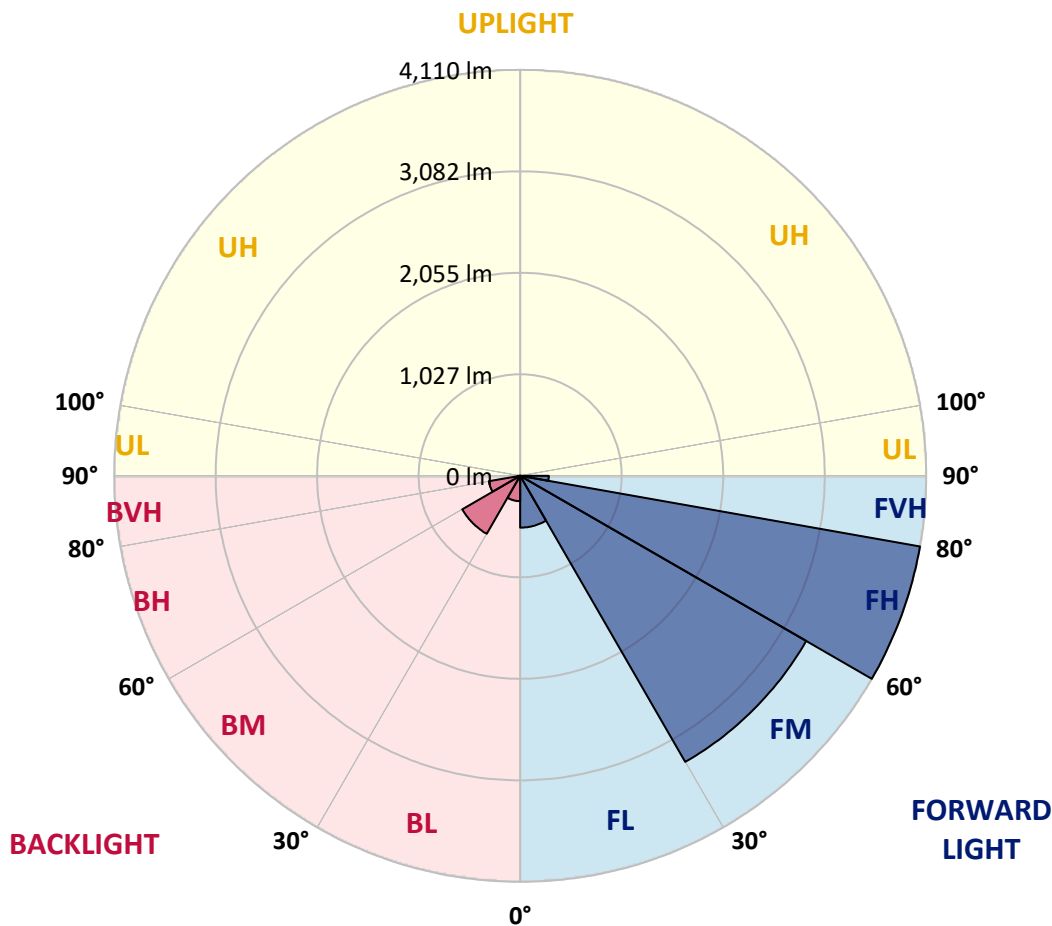


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	524.4	5.5			
FM (30°-60°)	3343.7	35.0			
FH (60°-80°)	4109.8	43.0			G2/5000
FVH (80°-90°)	289.6	3.0			G3/500
BL (0°-30°)	256.1	2.7	B1/500		
BM (30°-60°)	677.3	7.1	B1/1000		
BH (60°-80°)	322.2	3.4	B1/500		G1/500
BVH (80°-90°)	25.8	0.3			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G3**  
 Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	551.8	551.8	551.8	551.8	551.8	551.8	551.8	551.8	551.8	551.8	551.8
2.5°	688.4	655.4	626.8	625.6	652.1	662.3	658.2	649.2	638.7	616.2	665.1
5°	862.4	815.1	806.2	795.6	771.5	778.0	738.9	768.7	778.0	799.6	832.2
7.5°	965.1	937.4	915.8	906.8	865.3	860.4	831.4	873.8	891.7	888.9	937.4
10°	1005.5	980.2	981.8	952.5	939.0	944.7	948.0	948.8	959.8	968.8	944.3
12.5°	1026.2	1036.0	1071.9	1051.9	1069.0	1076.0	1110.2	1075.2	1076.4	1030.3	1055.6
15°	1131.0	1155.4	1134.7	1133.8	1128.5	1140.0	1169.3	1145.7	1164.0	1149.3	1116.7
17.5°	1257.3	1264.7	1224.7	1208.4	1229.6	1226.0	1218.6	1222.3	1176.6	1261.4	1221.5
20°	1296.1	1325.0	1272.4	1208.4	1278.5	1287.9	1286.3	1270.4	1192.1	1314.4	1275.7
22.5°	1408.5	1369.4	1327.8	1287.1	1323.0	1328.2	1319.3	1281.4	1255.3	1301.8	1332.3
25°	1459.5	1450.1	1397.1	1392.2	1352.7	1334.0	1349.4	1338.4	1312.8	1395.5	1361.7
27.5°	1576.0	1565.0	1443.2	1493.3	1435.8	1431.0	1349.0	1385.7	1411.4	1405.3	1455.8
30°	1708.1	1720.7	1542.6	1592.8	1526.3	1517.4	1435.0	1481.5	1499.0	1504.7	1567.9
32.5°	1854.8	1889.5	1712.6	1671.4	1636.0	1642.1	1572.4	1487.6	1555.7	1688.9	1716.2
35°	2013.8	2028.0	1842.6	1780.6	1688.1	1681.6	1682.8	1693.4	1762.3	1914.3	1935.5
37.5°	2307.6	2241.6	2079.0	1922.1	1891.1	1830.4	1871.5	1904.1	1973.0	2206.1	2295.0
40°	2488.6	2439.7	2191.9	2101.0	2015.4	2021.1	2098.1	2097.7	2260.3	2500.8	2636.5
42.5°	2656.1	2602.7	2369.2	2277.9	2196.8	2216.7	2238.7	2277.5	2589.3	2976.8	3038.8
45°	2791.0	2674.0	2506.1	2485.7	2418.9	2392.4	2485.7	2547.7	2982.5	3362.0	3397.9
47.5°	2882.7	2786.5	2622.3	2604.3	2555.0	2619.8	2874.5	2914.5	3287.4	3748.8	3745.9
50°	3022.1	2890.4	2742.1	2732.7	2871.7	2906.3	3216.9	3212.8	3584.1	4069.9	4002.7
52.5°	3182.7	3016.8	2855.8	2956.5	3168.4	3185.5	3454.9	3564.5	3908.1	4379.7	4204.0
55°	3367.3	3181.8	3026.2	3160.7	3476.1	3425.6	3698.2	3966.0	4313.7	4706.1	4349.5
57.5°	3595.9	3371.0	3245.0	3449.6	3756.9	3801.8	4046.7	4383.8	4640.1	4909.1	4455.5
60°	3837.2	3573.1	3457.8	3652.6	4150.2	4201.6	4441.2	4731.0	5006.1	5100.2	4435.5
62.5°	4067.5	3781.8	3677.4	3917.9	4586.3	4713.5	4890.4	5075.0	5310.6	5146.7	4193.8
65°	4323.8	4037.7	3972.1	4332.8	5177.7	5304.0	5535.1	5479.7	5414.9	4982.1	3794.0
67.5°	4595.3	4304.7	4316.9	4814.1	5875.0	5896.6	6251.6	5883.2	5292.2	4546.0	3122.8
70°	4741.2	4443.7	4569.6	5327.3	6584.6	6553.6	6626.2	5991.6	4792.1	3593.5	2152.3
72.5°	4564.3	4299.0	4529.7	5543.3	6945.7	6912.3	6415.9	5348.0	3746.7	2234.7	1115.9
75°	3864.5	3608.6	3961.5	4941.3	6252.8	6283.8	5460.1	3977.0	2145.0	898.7	463.4
77.5°	2625.9	2493.9	2796.3	3683.2	4644.6	4751.8	4051.2	2325.6	900.7	372.1	280.4
80°	1387.8	1325.0	1548.3	2121.8	2941.0	3020.9	2382.2	1158.3	461.4	240.9	200.1
82.5°	754.0	727.5	847.3	1091.0	1671.0	1740.7	1235.3	769.5	311.0	150.8	122.3
85°	506.6	496.4	575.9	586.1	790.3	813.1	647.2	592.6	186.7	73.8	80.7
87.5°	253.5	243.3	303.2	267.8	301.6	302.0	296.7	378.2	47.3	24.5	14.7
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°	551.8	551.8	551.8	551.8	551.8	551.8	551.8	551.8	551.8	551.8	551.8
2.5°	666.0	651.7	602.4	602.0	609.3	604.4	608.1	588.1	579.6	618.7	616.6
5°	827.8	785.0	743.8	729.5	712.8	676.6	678.6	679.0	672.9	696.1	697.7
7.5°	922.7	871.4	833.5	757.7	698.2	651.7	657.8	664.7	657.8	688.8	700.2
10°	936.6	895.8	850.6	766.2	726.7	684.7	642.3	604.8	600.3	586.1	590.6
12.5°	1018.9	985.1	890.5	798.0	752.0	687.6	610.1	567.3	531.5	537.6	526.2
15°	1086.6	1062.5	949.2	828.2	718.1	638.2	555.9	497.2	465.0	461.4	449.9
17.5°	1178.3	1144.0	954.5	807.4	674.5	578.7	485.8	419.4	405.5	399.8	394.1
20°	1222.3	1160.7	935.4	742.2	623.6	507.8	416.5	359.5	355.4	365.6	363.5
22.5°	1260.6	1174.6	918.2	702.6	544.1	436.1	369.3	331.8	327.3	340.3	342.8
25°	1283.0	1214.1	899.5	662.3	494.8	382.7	333.8	312.6	313.4	330.5	328.5
27.5°	1384.1	1228.0	852.2	614.6	438.1	343.2	316.7	305.7	301.2	324.8	326.9
30°	1447.7	1318.5	841.6	564.1	396.2	314.2	301.2	296.7	295.9	324.4	326.5
32.5°	1565.9	1348.6	846.5	509.0	358.2	305.3	289.8	289.4	297.5	324.8	328.1
35°	1729.7	1475.8	822.9	477.7	337.5	291.4	280.8	284.1	297.9	327.7	332.2
37.5°	2049.2	1595.6	830.2	448.3	330.5	286.9	278.4	280.4	302.8	335.0	347.2
40°	2302.3	1812.8	818.8	433.6	321.2	286.1	273.1	281.2	302.4	339.1	350.1
42.5°	2669.1	1986.1	820.0	419.0	320.8	282.8	272.3	282.0	301.6	335.4	350.5
45°	2983.8	2141.3	837.5	410.4	316.7	288.1	271.0	283.3	296.3	322.4	339.1
47.5°	3241.8	2314.6	855.5	402.3	315.0	293.0	269.8	274.7	287.3	307.7	322.8
50°	3452.1	2436.4	878.3	400.6	315.0	290.6	266.5	266.1	276.7	293.0	307.3
52.5°	3615.9	2522.4	893.8	402.7	315.0	281.2	262.5	259.2	265.7	277.6	291.8
55°	3734.5	2548.9	881.2	408.0	314.6	272.7	255.1	252.3	255.5	263.7	277.1
57.5°	3782.2	2479.2	805.8	398.6	314.6	266.5	246.2	242.9	246.2	252.3	265.7
60°	3662.8	2255.0	696.9	374.6	308.5	258.4	236.0	233.9	238.8	244.1	257.2
62.5°	3363.2	1957.1	580.8	346.0	295.9	251.5	226.2	226.6	234.3	241.7	254.7
65°	2897.8	1596.8	484.2	317.1	280.0	240.5	216.0	218.9	229.9	239.6	252.7
67.5°	2280.3	1183.2	407.6	289.0	257.6	222.5	204.6	205.4	213.2	222.5	235.2
70°	1524.3	752.8	335.0	255.9	228.2	199.3	187.1	184.2	182.2	190.3	201.3
72.5°	773.1	444.7	275.1	218.9	196.4	174.0	164.7	157.3	151.6	156.5	165.1
75°	405.1	311.0	222.1	181.8	162.2	147.9	141.0	131.2	127.2	130.0	136.1
77.5°	286.5	243.3	179.7	143.9	132.1	117.4	118.6	108.4	105.2	106.8	113.3
80°	220.1	192.8	138.2	108.8	101.9	87.6	91.7	85.6	81.5	80.7	85.6
82.5°	150.0	145.1	98.2	76.2	71.3	61.1	66.8	64.4	59.1	55.8	58.3
85°	101.1	96.2	59.9	44.0	42.0	31.8	40.8	39.1	34.6	29.8	30.2
87.5°	17.5	32.2	17.1	11.0	10.2	3.7	9.4	9.0	8.2	4.1	3.3
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)