

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: P367422

Luminaire Tested: **MSA-SA2C-730-U-SL4**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367422
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-730-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: 10943 lumens
Efficiency: N/A
Efficacy: 96.8 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G3

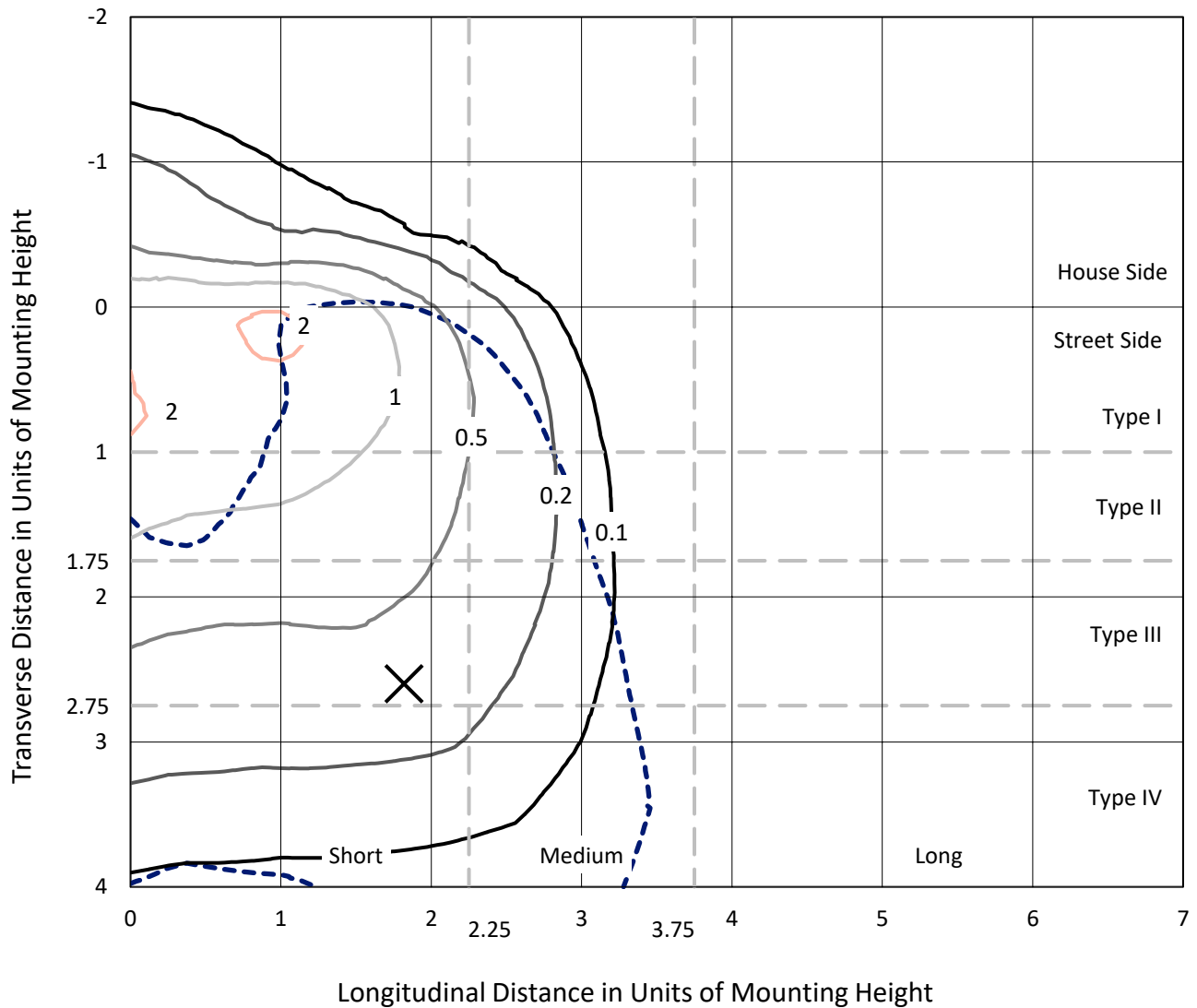
Input Watts (W): 113
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

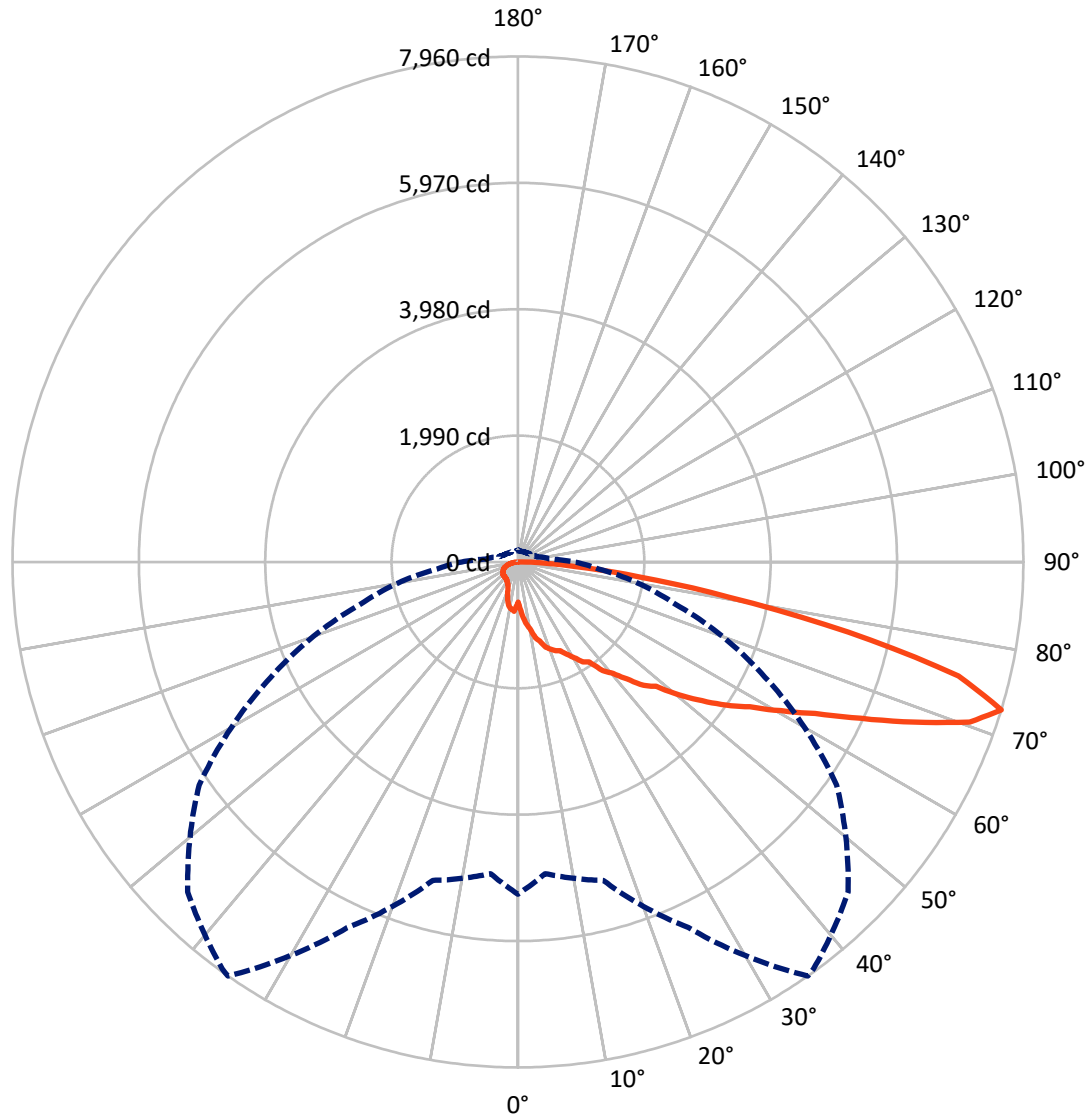
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.2 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
House Side	Lumens	1468.5	0.0	1468.5
	% Fixture	13.4	0.0	13.4
Street Side	Lumens	9474.5	0.0	9474.5
	% Fixture	86.6	0.0	86.6
Total	Lumens	10943.0	0.0	10943.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	84.1	0.8
10°-20°	296.1	2.7
20°-30°	514.4	4.7
30°-40°	859.8	7.9
40°-50°	1492.3	13.6
50°-60°	2255.9	20.6
60°-70°	2922.5	26.7
70°-80°	2156.5	19.7
80°-90°	361.4	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°	10943.0	100.0
0°-180°	10943.0	100.0

Coefficient of Utilization



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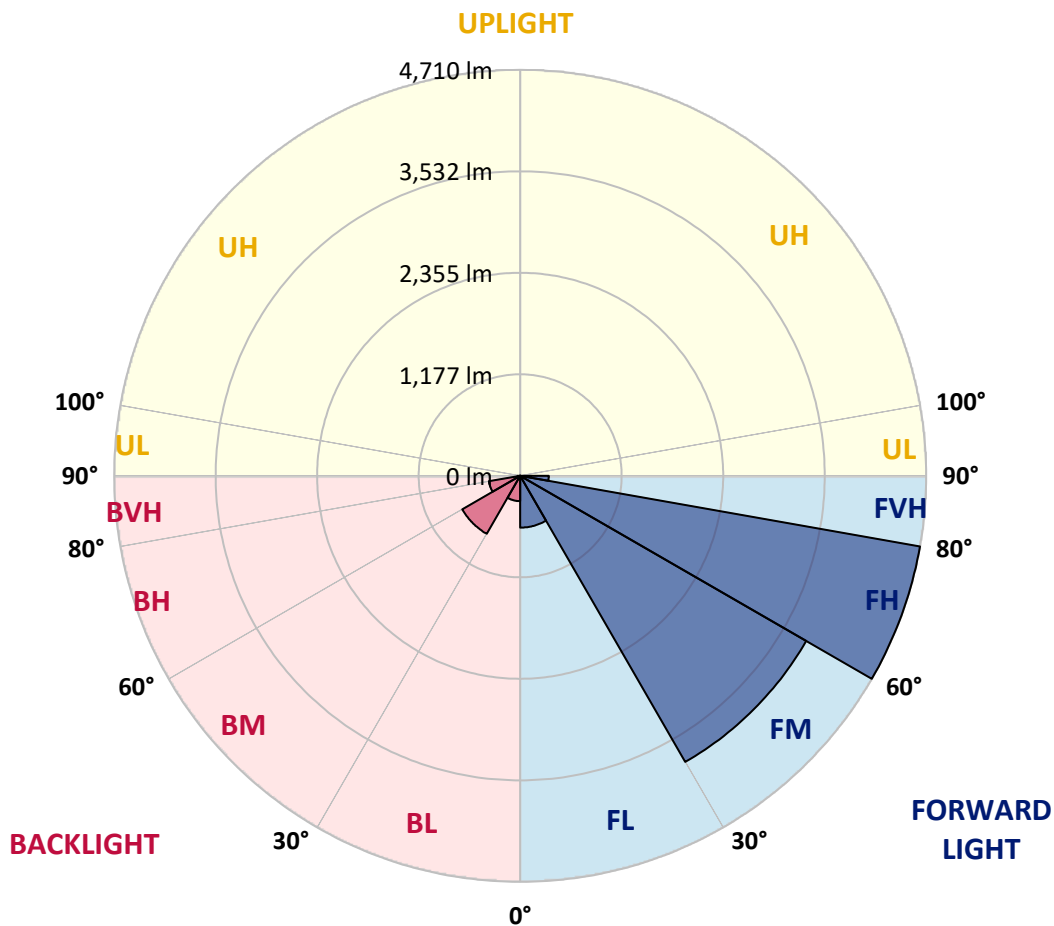
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	601.0	5.5			
FM (30°-60°)	3831.9	35.0			
FH (60°-80°)	4709.8	43.0			G2/5000
FVH (80°-90°)	331.8	3.0			G3/500
BL (0°-30°)	293.5	2.7	B1/500		
BM (30°-60°)	776.1	7.1	B1/1000		
BH (60°-80°)	369.3	3.4	B1/500		G1/500
BVH (80°-90°)	29.6	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°	632.4	632.4	632.4	632.4	632.4	632.4	632.4	632.4	632.4	632.4	632.4
2.5°	788.9	751.0	718.3	716.9	747.3	759.0	754.3	744.0	731.9	706.2	762.2
5°	988.3	934.1	923.8	911.7	884.1	891.6	846.8	880.9	891.6	916.4	953.7
7.5°	1106.0	1074.2	1049.5	1039.2	991.6	986.0	952.8	1001.4	1021.9	1018.7	1074.2
10°	1152.2	1123.3	1125.2	1091.5	1076.1	1082.6	1086.4	1087.3	1099.9	1110.2	1082.2
12.5°	1176.1	1187.3	1228.4	1205.5	1225.1	1233.0	1272.3	1232.1	1233.5	1180.7	1209.7
15°	1296.1	1324.1	1300.3	1299.4	1293.3	1306.4	1340.0	1312.9	1333.9	1317.1	1279.7
17.5°	1440.9	1449.3	1403.5	1384.8	1409.1	1404.9	1396.5	1400.7	1348.4	1445.6	1399.8
20°	1485.3	1518.4	1458.2	1384.8	1465.2	1475.9	1474.0	1455.8	1366.2	1506.3	1461.9
22.5°	1614.2	1569.3	1521.7	1475.0	1516.1	1522.2	1511.9	1468.4	1438.5	1491.8	1526.8
25°	1672.5	1661.8	1601.1	1595.5	1550.2	1528.7	1546.4	1533.8	1504.4	1599.2	1560.5
27.5°	1806.1	1793.5	1653.9	1711.3	1645.5	1639.9	1546.0	1588.0	1617.4	1610.4	1668.3
30°	1957.5	1971.9	1767.8	1825.3	1749.1	1738.9	1644.5	1697.8	1717.9	1724.4	1796.8
32.5°	2125.6	2165.3	1962.6	1915.4	1874.8	1881.8	1801.9	1704.8	1782.8	1935.5	1966.8
35°	2307.7	2324.1	2111.6	2040.6	1934.6	1927.1	1928.5	1940.6	2019.6	2193.8	2218.1
37.5°	2644.5	2568.8	2382.5	2202.7	2167.2	2097.6	2144.7	2182.1	2261.0	2528.2	2630.0
40°	2851.9	2795.8	2511.9	2407.7	2309.6	2316.2	2404.4	2404.0	2590.3	2865.9	3021.4
42.5°	3043.8	2982.7	2715.0	2610.4	2517.5	2540.3	2565.6	2609.9	2967.2	3411.4	3482.4
45°	3198.4	3064.4	2872.0	2848.6	2772.0	2741.6	2848.6	2919.6	3418.0	3852.8	3893.9
47.5°	3303.5	3193.3	3005.1	2984.5	2928.0	3002.3	3294.2	3340.0	3767.3	4296.0	4292.8
50°	3463.3	3312.4	3142.4	3131.6	3290.9	3330.6	3686.5	3681.8	4107.3	4664.1	4587.0
52.5°	3647.3	3457.2	3272.7	3388.1	3630.9	3650.5	3959.3	4084.9	4478.6	5019.0	4817.7
55°	3858.9	3646.3	3467.9	3622.1	3983.6	3925.6	4238.1	4545.0	4943.4	5393.2	4984.5
57.5°	4120.9	3863.1	3718.7	3953.2	4305.4	4356.7	4637.4	5023.7	5317.5	5625.8	5105.9
60°	4397.4	4094.7	3962.5	4185.8	4756.1	4814.9	5089.6	5421.6	5736.9	5844.8	5083.0
62.5°	4661.3	4333.9	4214.3	4489.9	5255.8	5401.6	5604.3	5815.8	6085.8	5898.0	4806.1
65°	4955.1	4627.2	4552.0	4965.3	5933.5	6078.3	6343.2	6279.6	6205.4	5709.4	4347.9
67.5°	5266.1	4933.1	4947.1	5516.9	6732.7	6757.4	7164.3	6742.0	6064.8	5209.6	3578.6
70°	5433.3	5092.4	5236.7	6105.0	7545.8	7510.3	7593.5	6866.3	5491.7	4118.1	2466.5
72.5°	5230.6	4926.6	5190.9	6352.5	7959.7	7921.4	7352.5	6128.8	4293.7	2560.9	1278.8
75°	4428.7	4135.4	4539.8	5662.6	7165.7	7201.1	6257.2	4557.6	2458.1	1029.9	531.0
77.5°	3009.3	2857.9	3204.5	4220.8	5322.6	5445.5	4642.6	2665.1	1032.2	426.4	321.3
80°	1590.3	1518.4	1774.4	2431.5	3370.3	3461.9	2730.0	1327.4	528.7	276.0	229.3
82.5°	864.1	833.7	971.0	1250.3	1915.0	1994.8	1415.7	881.8	356.4	172.8	140.1
85°	580.6	568.9	660.0	671.6	905.6	931.8	741.7	679.1	213.9	84.5	92.5
87.5°	290.5	278.8	347.5	306.9	345.6	346.1	340.0	433.4	54.2	28.0	16.8
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°	632.4	632.4	632.4	632.4	632.4	632.4	632.4	632.4	632.4	632.4	632.4
2.5°	763.2	746.8	690.3	689.8	698.3	692.7	696.9	674.0	664.2	709.0	706.7
5°	948.6	899.6	852.4	836.0	816.9	775.3	777.7	778.1	771.1	797.7	799.6
7.5°	1057.4	998.6	955.1	868.3	800.1	746.8	753.8	761.8	753.8	789.3	802.4
10°	1073.3	1026.6	974.8	878.1	832.8	784.7	736.1	693.1	688.0	671.6	676.8
12.5°	1167.7	1128.9	1020.5	914.5	861.7	787.9	699.2	650.1	609.0	616.1	603.0
15°	1245.2	1217.6	1087.8	949.1	823.0	731.4	637.1	569.8	532.9	528.7	515.6
17.5°	1350.3	1311.0	1093.9	925.2	773.0	663.2	556.7	480.6	464.7	458.2	451.6
20°	1400.7	1330.2	1071.9	850.5	714.6	582.0	477.3	411.9	407.3	419.0	416.6
22.5°	1444.6	1346.1	1052.3	805.2	623.5	499.8	423.2	380.2	375.1	390.0	392.8
25°	1470.3	1391.4	1030.8	759.0	567.0	438.6	382.5	358.2	359.2	378.8	376.5
27.5°	1586.1	1407.3	976.6	704.3	502.1	393.3	362.9	350.3	345.2	372.2	374.6
30°	1659.0	1510.9	964.5	646.4	454.0	360.1	345.2	340.0	339.1	371.8	374.1
32.5°	1794.4	1545.5	970.1	583.4	410.5	349.8	332.1	331.6	341.0	372.2	376.0
35°	1982.2	1691.2	943.0	547.4	386.7	333.9	321.8	325.5	341.4	375.5	380.7
37.5°	2348.4	1828.5	951.4	513.8	378.8	328.8	319.0	321.3	347.0	383.9	397.9
40°	2638.4	2077.5	938.3	497.0	368.0	327.9	312.9	322.3	346.6	388.6	401.2
42.5°	3058.8	2276.0	939.7	480.1	367.6	324.1	312.0	323.2	345.6	384.4	401.7
45°	3419.4	2453.9	959.8	470.3	362.9	330.2	310.6	324.6	339.6	369.4	388.6
47.5°	3715.0	2652.4	980.4	461.0	361.0	335.8	309.2	314.8	329.3	352.6	369.9
50°	3956.0	2792.1	1006.5	459.1	361.0	333.0	305.5	305.0	317.1	335.8	352.2
52.5°	4143.8	2890.6	1024.3	461.5	361.0	322.3	300.8	297.1	304.5	318.1	334.4
55°	4279.7	2921.0	1009.8	467.5	360.6	312.5	292.4	289.1	292.8	302.2	317.6
57.5°	4334.3	2841.1	923.4	456.8	360.6	305.5	282.1	278.4	282.1	289.1	304.5
60°	4197.5	2584.2	798.7	429.2	353.6	296.1	270.4	268.1	273.7	279.8	294.7
62.5°	3854.2	2242.8	665.6	396.5	339.1	288.2	259.2	259.7	268.6	277.0	291.9
65°	3320.8	1829.9	554.9	363.4	320.9	275.6	247.5	250.8	263.4	274.6	289.6
67.5°	2613.2	1355.9	467.1	331.1	295.2	255.0	234.5	235.4	244.3	255.0	269.5
70°	1746.8	862.7	383.9	293.3	261.6	228.4	214.4	211.1	208.8	218.1	230.7
72.5°	886.0	509.6	315.3	250.8	225.1	199.4	188.7	180.3	173.7	179.4	189.2
75°	464.3	356.4	254.5	208.3	185.9	169.5	161.6	150.4	145.7	149.0	156.0
77.5°	328.3	278.8	206.0	164.9	151.3	134.5	135.9	124.2	120.5	122.4	129.8
80°	252.2	220.9	158.3	124.7	116.8	100.4	105.1	98.1	93.4	92.5	98.1
82.5°	171.9	166.3	112.6	87.3	81.7	70.1	76.6	73.8	67.7	64.0	66.8
85°	115.8	110.2	68.7	50.4	48.1	36.4	46.7	44.8	39.7	34.1	34.6
87.5°	20.1	36.9	19.6	12.6	11.7	4.2	10.7	10.3	9.3	4.7	3.7
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)