

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: P368235

Luminaire Tested: **MSA-SA4A-740-U-SL4-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368235
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-21)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA4A-740-U-SL4-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS
EACH AND TYPE IV SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12822 lumens
Efficiency: N/A
Efficacy: 99.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G3

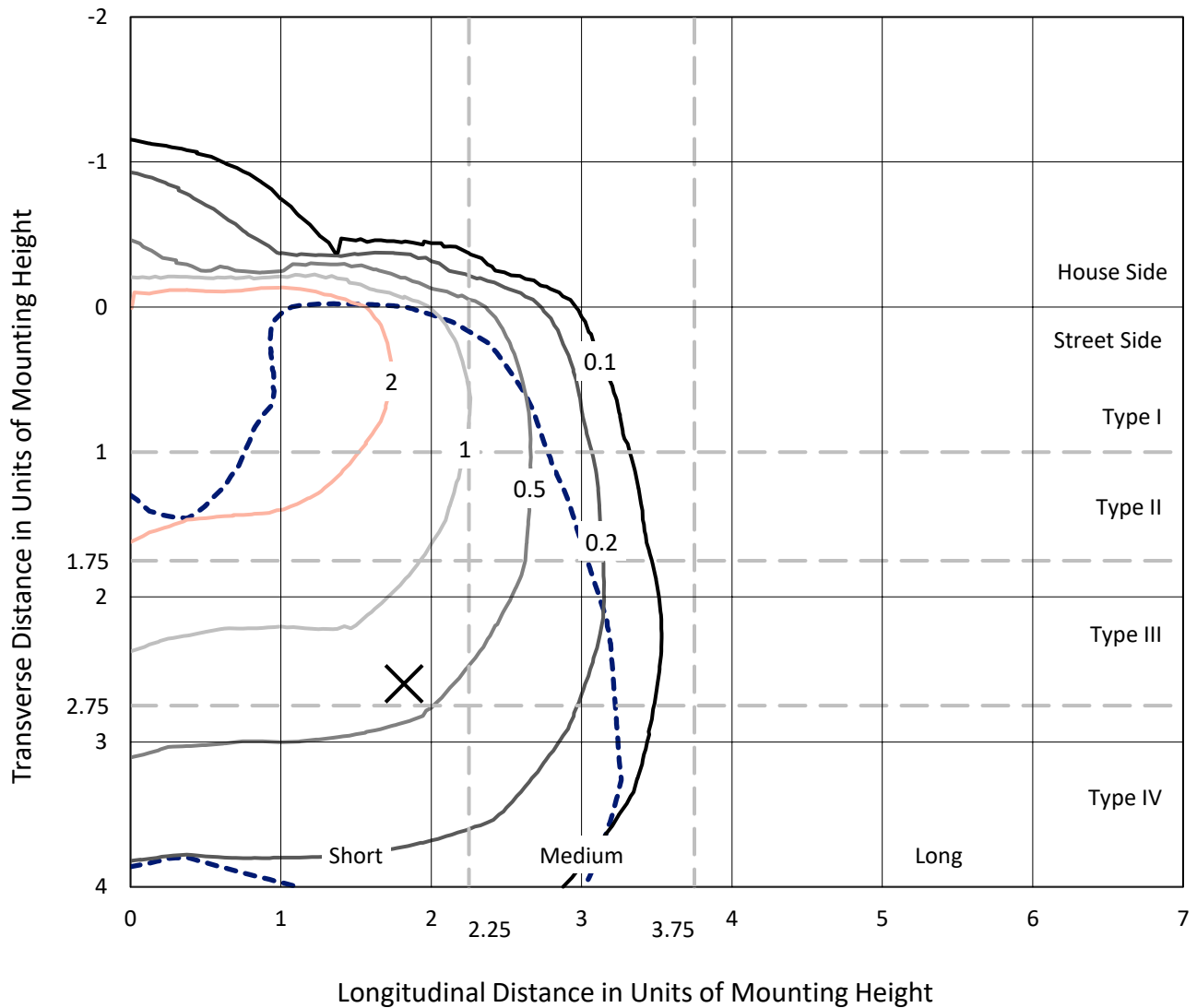
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

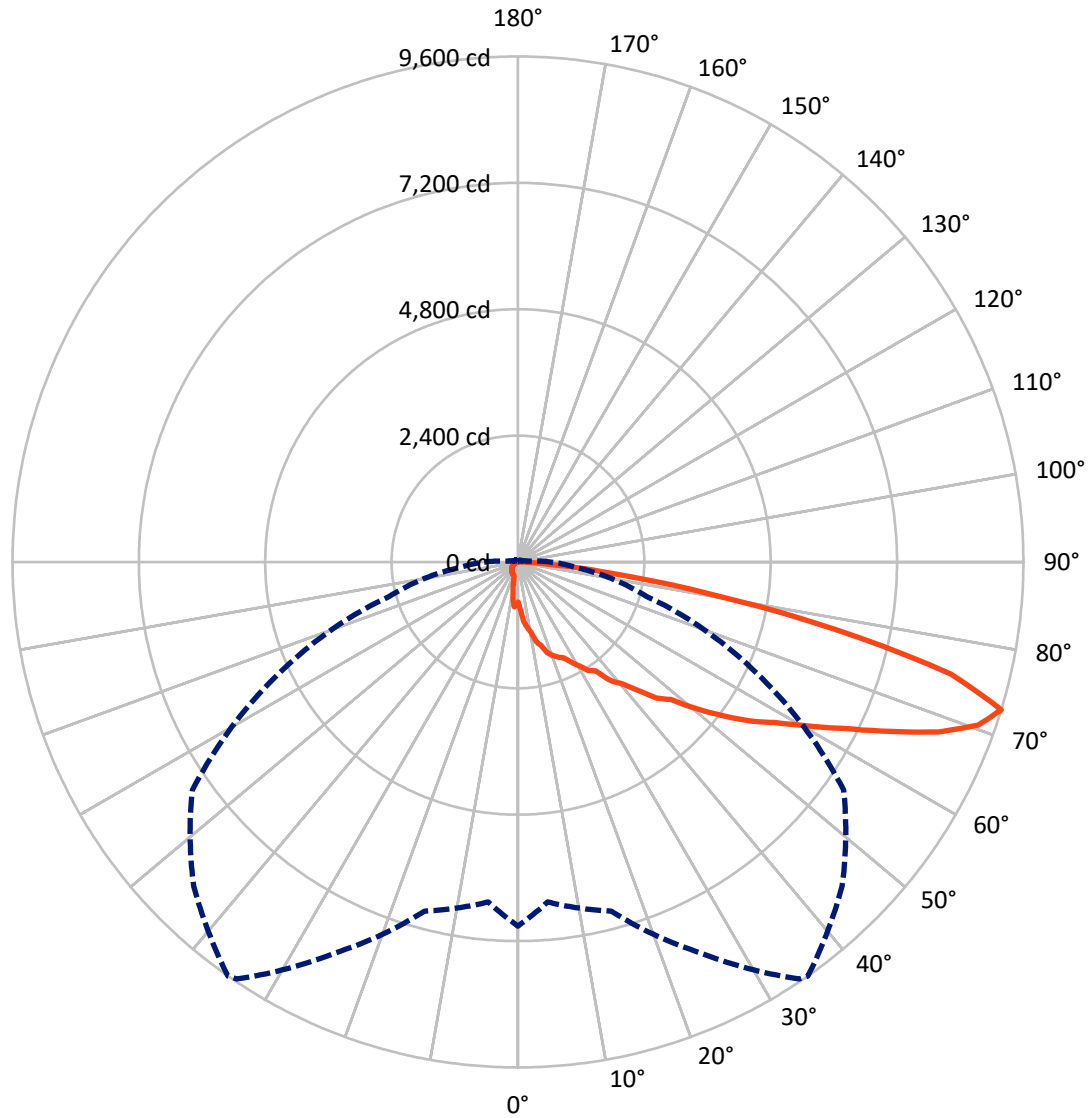
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 4.6 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	1000.1	0.0	1000.1
	% Fixture	7.8	0.0	7.8
Street Side	Lumens	11821.9	0.0	11821.9
	% Fixture	92.2	0.0	92.2
Total	Lumens	12822.0	0.0	12822.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	97.4	0.8
10°-20°	328.1	2.6
20°-30°	597.6	4.7
30°-40°	1030.7	8.0
40°-50°	1832.3	14.3
50°-60°	2734.2	21.3
60°-70°	3493.3	27.2
70°-80°	2430.4	19.0
80°-90°	278.0	2.2
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°	12822.0	100.0
0°-180°	12822.0	100.0

Coefficient of Utilization



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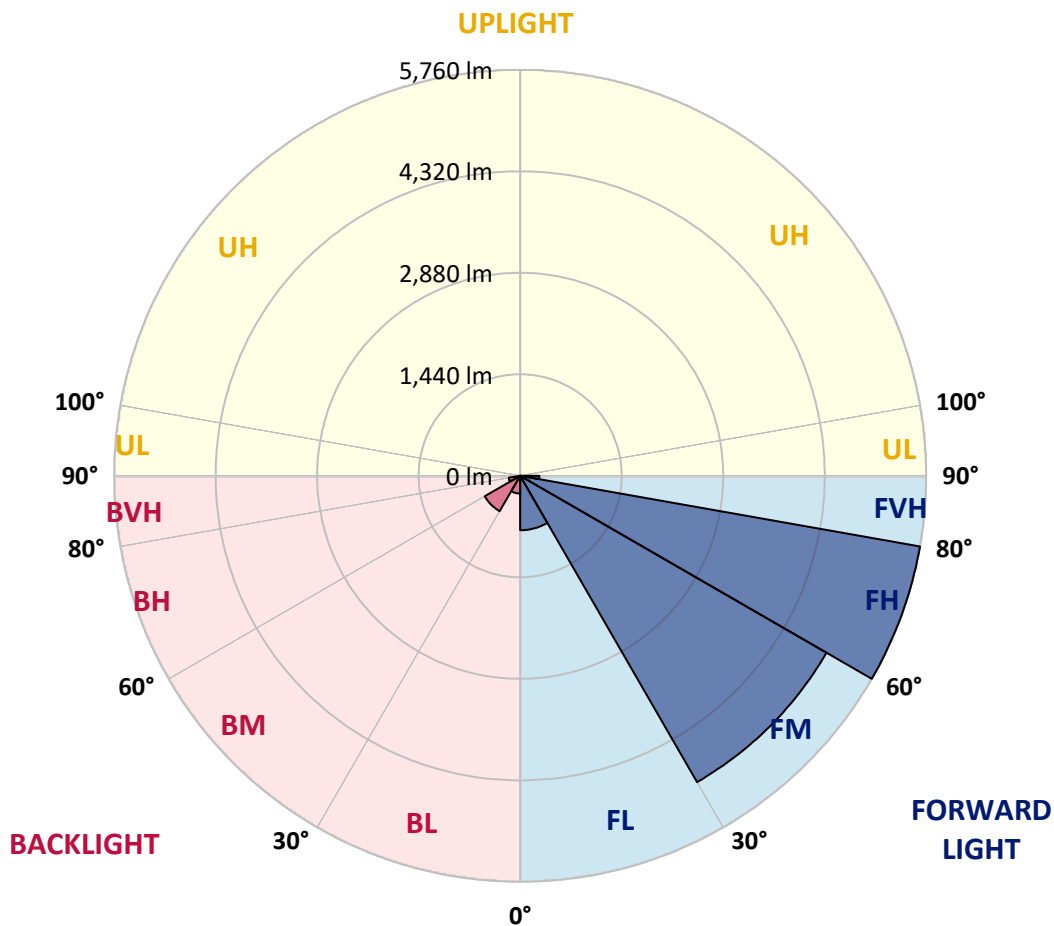
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	771.6	6.0			
FM (30°-60°)	5017.3	39.1			
FH (60°-80°)	5759.7	44.9			G3/7500
FVH (80°-90°)	273.3	2.1			G3/500
BL (0°-30°)	251.5	2.0	B1/500		
BM (30°-60°)	579.9	4.5	B1/1000		
BH (60°-80°)	164.0	1.3	B1/500		G1/500
BVH (80°-90°)	4.7	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 IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	34°	35°	45°	55°	65°	75°	85°
0°	763.8	763.8	763.8	763.8	763.8	763.8	763.8	763.8	763.8	763.8	763.8
2.5°	972.0	934.0	872.1	876.6	904.3	910.1	918.5	896.6	877.2	843.1	909.5
5°	1245.3	1190.5	1155.7	1144.7	1128.6	1129.9	1090.6	1104.8	1100.9	1126.0	1156.3
7.5°	1399.3	1369.0	1325.2	1313.0	1253.7	1247.2	1198.9	1264.0	1270.4	1261.4	1311.0
10°	1460.6	1420.6	1425.8	1380.0	1350.4	1358.1	1365.8	1371.0	1379.4	1387.7	1327.2
12.5°	1496.7	1503.8	1574.0	1526.3	1556.0	1556.0	1608.2	1552.7	1554.7	1494.1	1504.4
15°	1659.1	1698.4	1666.8	1666.2	1634.0	1642.3	1702.9	1659.1	1681.7	1663.6	1594.0
17.5°	1862.8	1870.5	1810.6	1784.1	1813.2	1813.8	1788.0	1786.1	1707.4	1840.2	1755.8
20°	1927.9	1971.7	1886.6	1783.5	1904.0	1898.2	1896.3	1866.0	1735.2	1919.5	1849.9
22.5°	2105.1	2042.6	1984.6	1916.9	1964.0	1964.0	1956.9	1890.5	1839.6	1912.4	1942.1
25°	2160.6	2168.3	2092.9	2071.0	2072.3	2014.3	2009.1	1980.7	1931.7	2056.1	1996.8
27.5°	2351.4	2348.1	2167.0	2228.2	2150.3	2150.9	2008.5	2072.3	2080.6	2063.2	2129.6
30°	2538.9	2591.1	2317.8	2395.2	2313.3	2288.8	2149.6	2206.3	2221.2	2201.2	2285.0
32.5°	2778.1	2854.8	2589.2	2513.1	2388.1	2457.7	2361.7	2227.6	2301.1	2479.6	2526.7
35°	3031.4	3068.8	2785.8	2679.4	2538.3	2537.6	2534.4	2545.4	2626.6	2827.7	2867.7
37.5°	3486.4	3398.1	3142.2	2898.6	2930.2	2859.9	2810.9	2862.5	2946.9	3278.2	3449.0
40°	3740.4	3676.6	3316.3	3171.9	3015.3	3041.0	3173.8	3168.0	3393.0	3739.7	3995.6
42.5°	3987.3	3926.7	3572.2	3455.5	3254.4	3324.6	3382.7	3456.1	3917.0	4476.5	4617.0
45°	4207.0	4029.2	3779.1	3783.6	3679.2	3687.5	3790.0	3857.7	4524.2	5097.8	5196.5
47.5°	4339.8	4193.5	3953.7	3949.2	3942.8	3903.5	4386.2	4448.1	5008.2	5689.5	5698.6
50°	4526.8	4343.7	4133.6	4137.4	4286.3	4369.5	4945.7	4939.3	5475.5	6183.3	5975.1
52.5°	4759.4	4535.8	4304.4	4476.5	4706.6	4841.9	5309.9	5500.7	5977.7	6493.3	6083.4
55°	5057.2	4777.5	4554.5	4774.9	5277.0	5329.2	5666.3	6069.2	6524.9	6809.8	6118.2
57.5°	5406.6	5072.7	4892.2	5247.4	5748.2	5749.5	6185.2	6675.1	6860.7	6938.7	6078.9
60°	5783.0	5393.7	5211.9	5531.6	6267.7	6320.6	6762.1	7009.6	7201.7	7003.8	6008.6
62.5°	6114.3	5684.4	5543.2	5919.0	6837.5	6962.5	7264.8	7229.4	7447.9	7085.7	5830.1
65°	6508.8	6060.8	5968.0	6523.0	7581.3	7753.4	7829.5	7619.4	7530.4	7022.5	5365.3
67.5°	6899.4	6480.4	6477.8	7192.7	8556.5	8615.8	8535.9	8169.2	7434.4	6465.6	4513.9
70°	7174.6	6724.7	6894.2	7926.2	9442.8	9276.5	8940.1	8428.9	6740.8	4955.4	2948.9
72.5°	6916.1	6482.4	6864.6	8187.2	9552.4	9600.1	8706.1	7550.4	5008.2	2534.4	1067.4
75°	5255.8	4990.2	5960.3	7263.6	8481.1	8492.1	7266.8	5325.4	2466.1	688.4	295.2
77.5°	2647.2	2562.8	3772.6	5156.5	6187.8	6169.7	4992.8	2852.8	793.5	228.8	148.9
80°	1340.0	1272.4	1605.6	2781.9	3674.6	3701.7	2850.9	1277.5	400.3	124.4	103.1
82.5°	823.1	781.2	878.5	1258.8	1783.5	1826.7	1081.6	808.9	248.2	73.5	94.1
85°	159.2	167.6	504.7	630.4	712.2	695.5	320.3	665.8	74.8	43.8	68.3
87.5°	0.0	2.6	116.7	205.6	206.3	183.1	72.8	147.6	10.3	12.2	8.4
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°	763.8	763.8	763.8	763.8	763.8	763.8	763.8	763.8	763.8	763.8	763.8
2.5°	920.4	910.8	830.2	821.2	823.1	809.6	805.1	776.7	769.6	813.4	821.2
5°	1143.5	1079.0	1004.2	977.2	935.3	864.4	854.0	836.0	816.0	823.7	817.9
7.5°	1280.1	1194.4	1114.4	972.0	854.0	750.9	734.2	703.2	672.3	672.9	692.9
10°	1302.0	1229.8	1119.6	946.2	811.5	682.6	570.4	489.2	452.5	419.6	429.3
12.5°	1429.0	1362.0	1158.9	938.5	749.6	548.5	401.6	322.3	287.5	275.9	274.6
15°	1530.8	1478.0	1226.0	914.6	612.3	386.1	287.5	264.3	257.8	268.8	265.6
17.5°	1682.3	1586.9	1218.9	816.0	466.7	293.3	264.9	261.7	269.4	275.9	277.8
20°	1748.7	1611.4	1170.5	661.3	349.4	268.8	258.5	252.0	266.2	285.5	281.7
22.5°	1815.7	1653.3	1113.8	541.4	281.0	257.2	251.4	246.2	257.2	275.9	280.4
25°	1846.0	1720.3	1050.6	422.8	261.0	243.6	239.8	241.7	250.7	267.5	265.6
27.5°	1998.8	1728.1	930.1	333.9	252.7	234.0	234.0	238.5	238.5	261.0	259.1
30°	2094.2	1858.9	832.1	281.0	243.0	220.4	228.2	230.1	226.9	251.4	253.3
32.5°	2261.8	1895.0	736.7	257.8	227.5	218.5	217.2	218.5	221.1	244.9	245.6
35°	2519.6	2072.9	606.5	248.8	219.8	208.8	199.8	206.9	213.3	230.8	234.0
37.5°	3023.6	2255.3	494.4	241.7	215.9	199.8	196.6	195.3	206.9	226.9	233.3
40°	3431.6	2578.2	402.2	235.9	208.2	194.7	186.3	186.9	197.2	212.1	221.7
42.5°	4009.2	2811.6	341.0	226.9	197.2	183.7	174.0	179.8	184.3	199.8	206.3
45°	4491.3	2992.7	300.4	221.1	186.3	173.4	165.7	172.1	167.6	175.3	184.3
47.5°	4874.8	3150.6	270.1	206.9	179.2	167.6	157.9	156.0	148.2	150.2	158.6
50°	5085.6	3124.2	244.9	192.7	170.2	161.8	148.2	134.7	124.4	123.8	128.9
52.5°	5160.4	2983.0	224.3	180.5	159.2	148.9	133.4	114.7	104.4	101.2	105.7
55°	5181.0	2780.0	205.6	166.9	148.9	132.8	116.7	96.7	85.7	80.6	85.1
57.5°	5113.9	2467.4	187.6	154.1	136.6	117.3	99.9	79.3	69.0	62.5	66.4
60°	4948.3	2070.3	171.5	137.9	123.8	103.8	84.4	63.8	52.9	47.1	49.0
62.5°	4581.5	1623.0	154.1	123.1	110.2	90.9	70.9	50.3	40.0	34.8	35.5
65°	4023.3	1209.8	134.1	108.9	98.0	78.6	56.7	38.7	30.3	25.8	25.1
67.5°	3205.4	819.9	114.1	94.1	87.0	66.4	45.1	30.3	23.8	20.6	19.3
70°	1884.1	413.2	94.8	81.2	74.8	55.4	35.5	24.5	21.9	19.3	18.0
72.5°	621.4	178.5	74.1	67.0	61.9	44.5	27.7	22.6	21.3	18.7	17.4
75°	216.6	103.1	54.8	51.6	49.0	33.5	23.2	20.6	20.6	18.0	16.1
77.5°	141.8	79.9	40.6	37.4	36.7	24.5	20.0	19.3	18.0	14.8	12.2
80°	118.0	45.1	28.4	26.4	25.8	15.5	16.1	14.2	11.0	6.4	2.6
82.5°	108.9	27.1	14.8	16.1	14.8	5.8	9.0	7.7	5.8	2.6	0.0
85°	63.8	12.2	8.4	8.4	6.4	1.3	4.5	4.5	2.6	0.6	0.0
87.5°	7.1	5.8	4.5	4.5	3.2	0.0	1.9	1.3	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)