

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: P597097

Luminaire Tested: **MSA-SA4A-835-U-SL3-HSS**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P597097
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-SA4A-835-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: 10495 lumens
Efficiency: N/A
Efficacy: 81.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G2

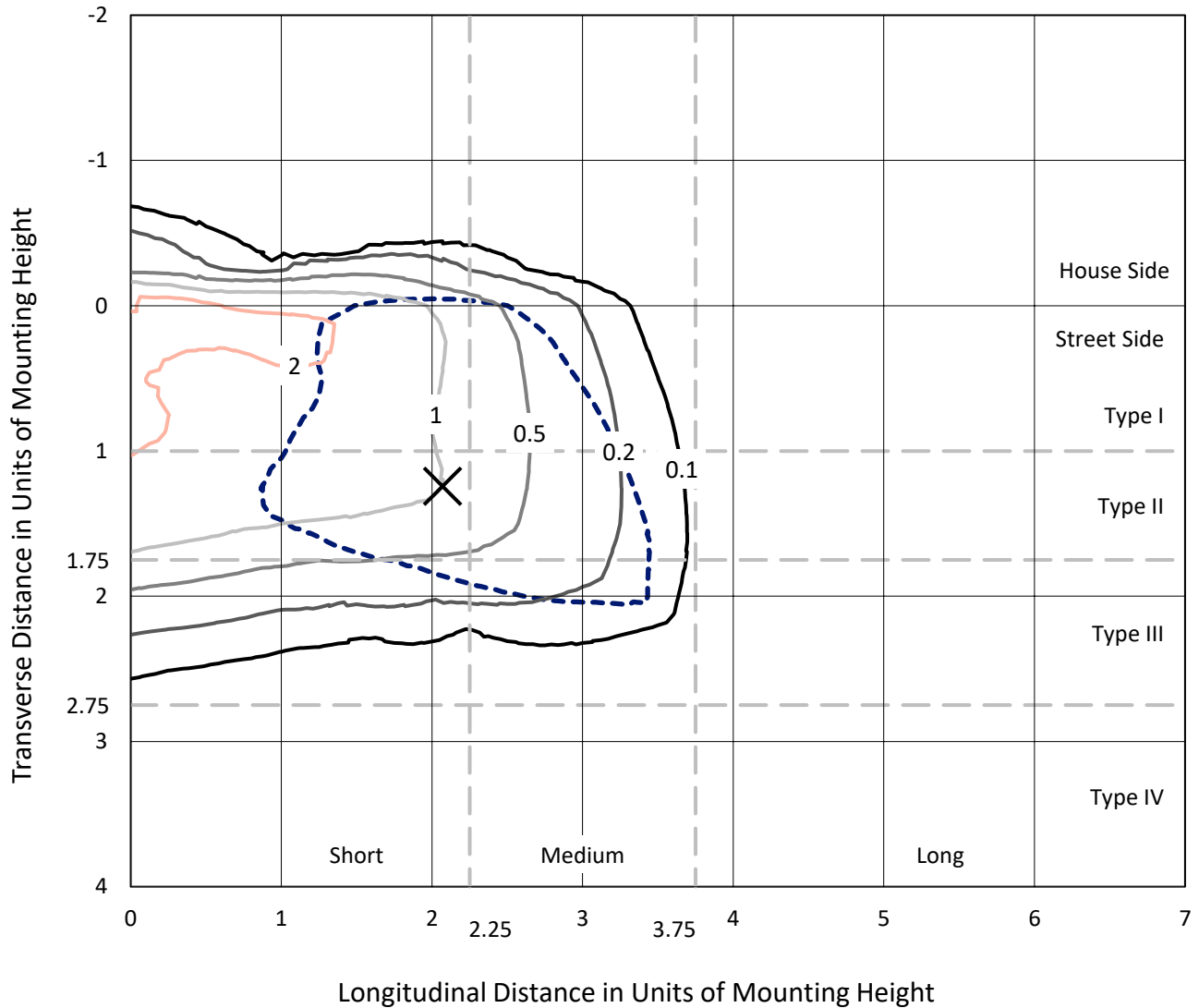
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

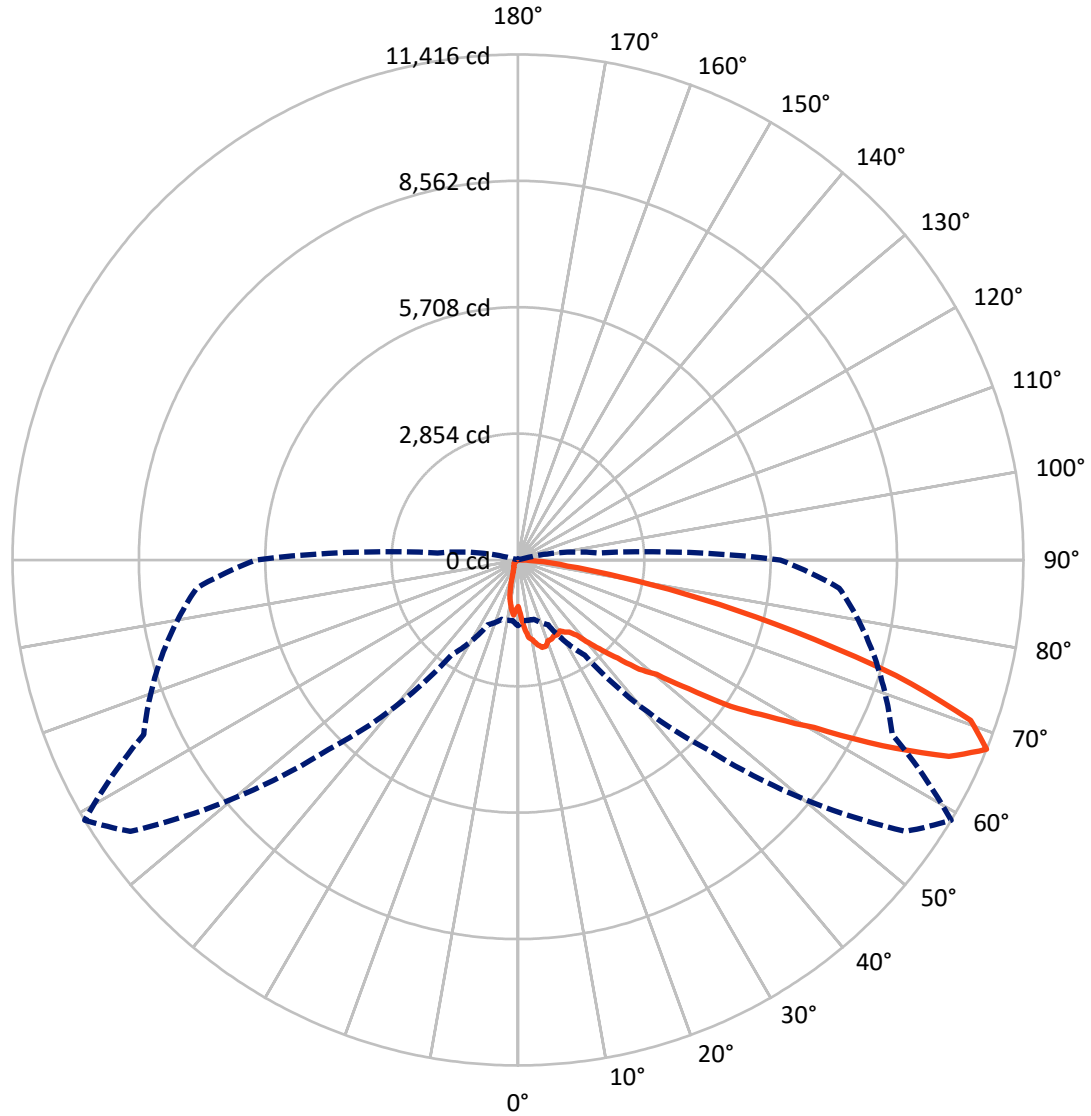
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3 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	892.5	0.0	892.5
	% Fixture	8.5	0.0	8.5
Street Side	Lumens	9602.5	0.0	9602.5
	% Fixture	91.5	0.0	91.5
Total	Lumens	10495.0	0.0	10495.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	127.7	1.2
10°-20°	359.5	3.4
20°-30°	534.7	5.1
30°-40°	825.0	7.9
40°-50°	1472.3	14.0
50°-60°	2620.0	25.0
60°-70°	3051.4	29.1
70°-80°	1357.0	12.9
80°-90°	147.4	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°	10495.0	100.0
0°-180°	10495.0	100.0

Coefficient of Utilization



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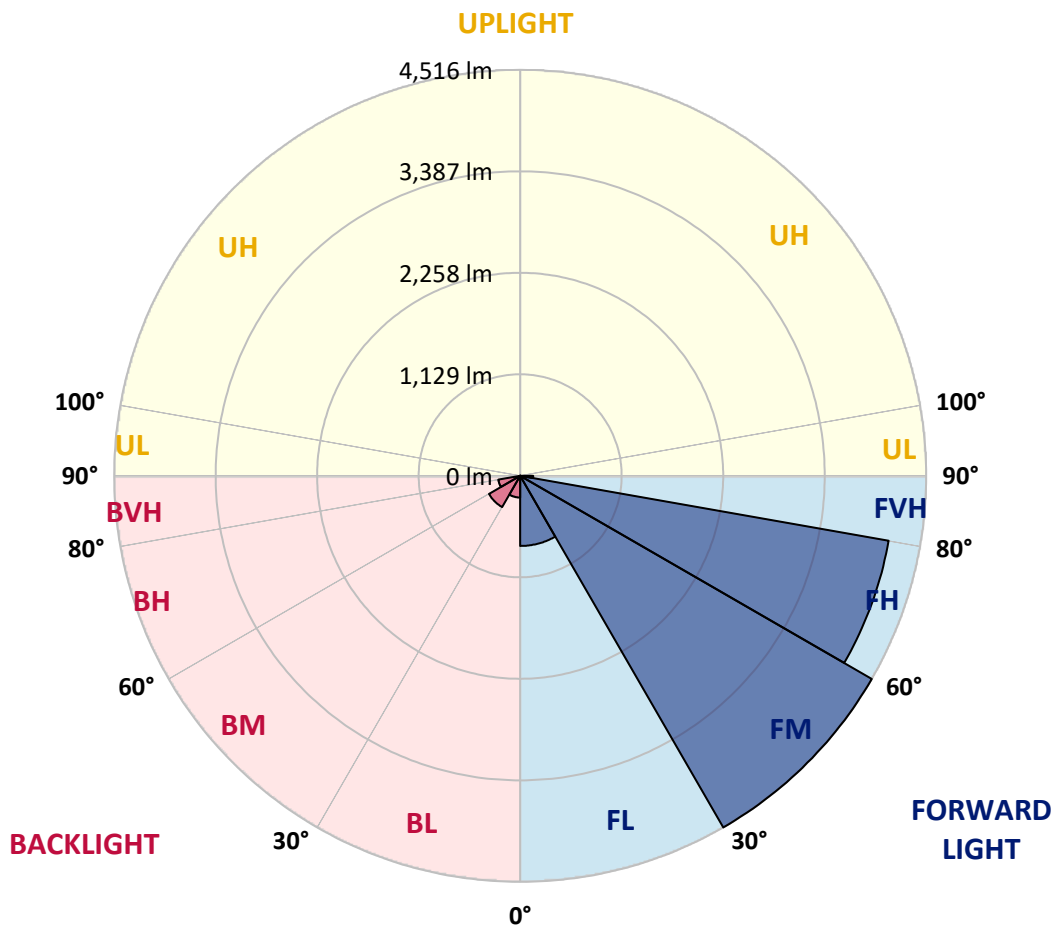
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	780.5	7.4			
FM (30°-60°)	4516.0	43.0			
FH (60°-80°)	4161.2	39.6			G2/5000
FVH (80°-90°)	144.8	1.4			G2/225
BL (0°-30°)	241.4	2.3	B1/500		
BM (30°-60°)	401.3	3.8	B1/1000		
BH (60°-80°)	247.2	2.4	B1/500		G1/500
BVH (80°-90°)	2.6	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-G2

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	1050.1	1050.1	1050.1	1050.1	1050.1	1050.1	1050.1	1050.1	1050.1	1050.1	1050.1
2.5°	1368.9	1317.4	1244.0	1265.8	1285.5	1304.1	1273.2	1255.7	1247.2	1171.8	1266.3
5°	1680.8	1616.5	1583.1	1574.6	1553.3	1506.0	1584.7	1549.6	1561.3	1576.2	1607.0
7.5°	1776.0	1746.7	1698.4	1716.4	1635.7	1628.8	1737.7	1768.0	1807.8	1780.7	1817.9
10°	1727.1	1676.6	1699.4	1693.1	1689.9	1761.1	1837.6	1839.2	1898.7	1927.4	1801.5
12.5°	1630.4	1636.2	1718.0	1711.7	1817.9	1960.4	1977.9	1959.3	2056.5	2006.6	1987.5
15°	1694.7	1742.5	1697.3	1712.7	1750.5	1928.5	1990.6	2048.0	2140.0	2169.7	2040.6
17.5°	1772.2	1777.0	1694.7	1675.5	1770.6	1853.5	2000.2	2047.5	2056.5	2317.5	2160.2
20°	1730.3	1771.2	1672.9	1552.2	1700.0	1812.6	1961.4	1946.5	2007.1	2361.0	2187.3
22.5°	1841.9	1783.4	1657.5	1566.6	1616.5	1719.1	1845.0	1942.3	2033.2	2256.9	2222.3
25°	1852.5	1831.2	1719.1	1638.3	1629.8	1655.9	1831.2	1893.9	2036.3	2350.4	2192.6
27.5°	1972.0	1947.6	1718.0	1726.0	1646.3	1566.1	1764.3	1911.5	2094.3	2293.5	2255.8
30°	2126.2	2128.3	1832.3	1857.3	1743.5	1614.4	1819.0	1859.4	2133.6	2384.4	2302.6
32.5°	2282.4	2346.7	2058.1	1925.8	1890.2	1797.7	1751.0	1937.5	2090.6	2539.6	2419.5
35°	2519.9	2563.5	2244.1	2125.6	1985.9	1880.6	1935.9	2002.9	2245.2	2745.2	2573.1
37.5°	2922.2	2843.6	2577.9	2371.7	2338.2	2183.0	2210.6	2150.6	2403.0	2987.6	2877.0
40°	3148.6	3077.4	2801.0	2700.6	2487.0	2510.9	2423.7	2458.8	2632.1	3240.0	3153.9
42.5°	3384.5	3316.5	3074.2	3003.0	2799.4	2700.6	2661.3	2787.2	2983.3	3660.3	3550.9
45°	3621.5	3448.8	3346.3	3381.9	3290.5	3094.9	3049.2	3161.3	3367.0	4176.9	3969.6
47.5°	3821.3	3675.7	3598.7	3582.2	3546.6	3818.2	3632.2	3681.6	3772.5	4633.9	4491.4
50°	4181.6	4038.2	3917.5	3884.0	4057.3	4442.6	4155.6	4059.9	4241.7	5186.0	5096.2
52.5°	4701.9	4519.1	4327.2	4327.8	4654.6	4866.1	5002.1	4834.2	4868.2	5793.4	5753.5
55°	5120.1	4887.9	4729.0	4854.4	5341.7	5460.2	5979.4	5832.2	5788.1	6356.7	6307.8
57.5°	5177.5	4899.0	4823.6	5043.6	5710.5	6467.2	7025.7	6658.0	6590.5	6828.0	6925.3
60°	4641.8	4346.4	4403.2	4757.1	5830.6	7081.0	7986.5	7686.3	7257.4	7380.2	7447.1
62.5°	3462.1	3226.2	3385.6	3854.3	5367.7	7492.3	9098.7	9238.0	8031.1	7794.7	7780.3
65°	2246.3	2098.5	2203.2	2587.4	4062.1	7445.5	10092.5	10696.1	8640.7	8132.6	7885.0
67.5°	1485.8	1373.7	1388.6	1616.0	2626.7	6055.4	10686.6	11416.2	9326.2	8324.5	7285.0
70°	1107.5	1019.2	1024.6	1147.8	1559.1	3993.5	9858.1	10848.1	9576.5	7659.7	5880.0
72.5°	798.7	739.7	789.1	926.2	1242.4	2111.8	7347.8	8934.0	8350.5	6041.6	3961.6
75°	553.2	514.4	595.2	774.8	1134.0	1311.0	4855.5	6431.1	5852.9	3790.5	1790.8
77.5°	306.6	294.9	411.3	631.3	1029.3	1074.5	2974.3	4225.7	3246.4	1358.8	426.2
80°	133.9	129.7	199.3	474.0	865.1	970.9	1674.5	2343.0	1277.0	242.3	137.6
82.5°	57.4	55.3	85.0	285.4	628.7	812.0	1032.5	1127.6	439.5	74.9	78.1
85°	10.1	11.2	34.0	150.4	382.6	412.4	747.7	667.4	221.1	35.6	55.8
87.5°	0.0	0.0	5.3	29.2	71.7	118.0	324.2	233.8	42.0	11.7	9.6
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°	1050.1	1050.1	1050.1	1050.1	1050.1	1050.1	1050.1	1050.1	1050.1	1050.1	1050.1
2.5°	1279.6	1249.9	1136.7	1122.3	1106.9	1084.1	1075.6	1026.7	1020.3	1083.0	1083.0
5°	1592.6	1486.3	1378.5	1293.4	1217.5	1112.2	1082.5	1051.7	1026.7	1020.3	1040.0
7.5°	1757.9	1628.2	1458.7	1242.4	1067.1	914.5	850.8	806.1	756.2	771.1	779.0
10°	1748.9	1611.2	1394.9	1117.0	922.5	754.1	592.0	497.4	444.8	418.7	415.6
12.5°	1837.6	1707.9	1351.9	1017.1	768.9	536.2	372.5	305.0	266.2	266.8	263.6
15°	1889.1	1747.8	1301.9	890.6	541.5	344.9	258.3	243.4	238.1	243.9	240.7
17.5°	1980.0	1789.8	1188.8	702.0	372.5	260.4	237.5	231.7	238.6	250.8	247.6
20°	1973.1	1717.0	1027.7	494.7	275.3	234.4	224.8	215.8	230.1	242.9	240.7
22.5°	1966.7	1645.8	876.3	365.1	230.1	213.6	205.7	201.9	209.4	224.3	227.4
25°	1910.4	1610.7	722.7	274.2	208.3	194.0	190.2	187.1	189.7	201.9	201.4
27.5°	1979.5	1521.9	558.0	230.1	192.9	175.9	172.7	167.4	162.1	172.7	174.3
30°	1965.1	1534.2	437.3	202.5	177.5	154.6	155.7	144.5	135.0	144.5	144.5
32.5°	2017.2	1444.9	350.2	183.9	162.1	145.6	132.3	120.6	113.7	119.6	120.6
35°	2093.2	1448.6	274.2	172.2	148.8	129.7	113.7	102.0	95.7	98.3	99.9
37.5°	2347.8	1423.1	229.0	163.1	144.0	120.1	103.6	88.2	84.0	87.2	88.7
40°	2513.6	1491.1	201.9	158.4	131.8	110.5	88.7	77.6	73.9	75.5	78.1
42.5°	2826.0	1528.9	188.6	153.0	120.6	94.6	76.0	69.6	64.3	66.4	68.6
45°	3160.3	1593.2	178.6	147.2	112.1	82.9	67.0	61.6	54.7	55.3	57.4
47.5°	3571.0	1746.2	166.9	137.1	100.4	75.5	59.5	51.5	45.2	44.6	47.3
50°	4122.6	1950.8	156.2	124.3	93.0	69.1	52.1	42.0	36.7	35.1	37.2
52.5°	4711.4	2215.4	145.1	115.3	84.0	60.6	44.6	34.0	29.2	28.2	29.8
55°	5294.9	2469.4	134.4	109.5	74.4	52.1	37.7	28.2	23.9	22.9	23.9
57.5°	5959.7	2744.2	120.6	97.8	65.4	45.2	31.4	23.4	19.7	18.6	19.1
60°	6460.3	2840.9	108.9	85.0	56.9	39.9	26.6	18.6	15.9	14.9	15.4
62.5°	6697.8	2683.1	97.8	73.9	50.0	34.5	22.3	15.4	13.3	12.2	12.2
65°	6636.2	2333.4	86.6	63.2	43.0	28.7	17.5	13.3	11.7	10.1	9.6
67.5°	5924.1	1825.9	73.9	53.1	36.1	23.4	14.9	12.8	10.6	9.6	8.0
70°	4698.2	1322.1	60.0	44.1	30.3	19.1	11.7	11.7	10.1	9.6	7.4
72.5°	3079.5	832.2	48.9	35.6	25.0	14.9	9.0	10.6	9.6	9.6	6.9
75°	1334.4	297.6	39.3	28.7	20.7	10.1	8.0	9.6	10.1	9.6	8.0
77.5°	312.5	92.5	30.8	22.9	17.0	6.9	8.0	9.6	10.1	9.0	6.9
80°	117.4	39.3	20.2	14.9	13.3	4.3	6.9	5.8	5.3	3.7	1.1
82.5°	71.2	16.5	10.6	7.4	6.4	1.1	3.2	2.1	1.1	1.1	0.0
85°	50.5	8.0	5.8	5.3	3.2	0.0	0.5	0.0	0.0	0.5	0.0
87.5°	6.9	2.1	2.7	2.7	2.1	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)