

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: P368345

Luminaire Tested: **MSA-SA4B-730-U-SL4-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368345
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-SA4B-730-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: 14634 lumens
Efficiency: N/A
Efficacy: 85.6 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G3

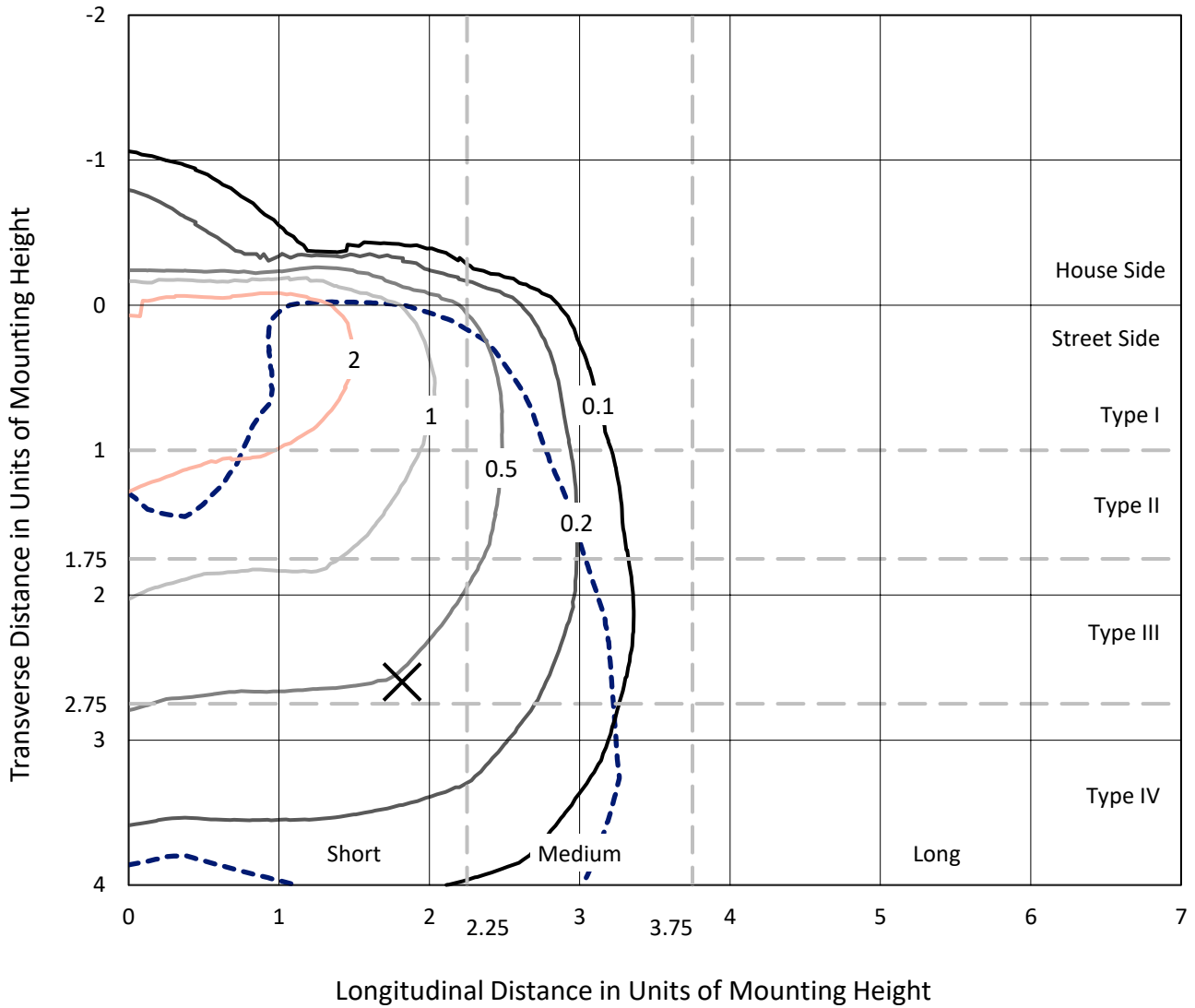
Input Watts (W): 171
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

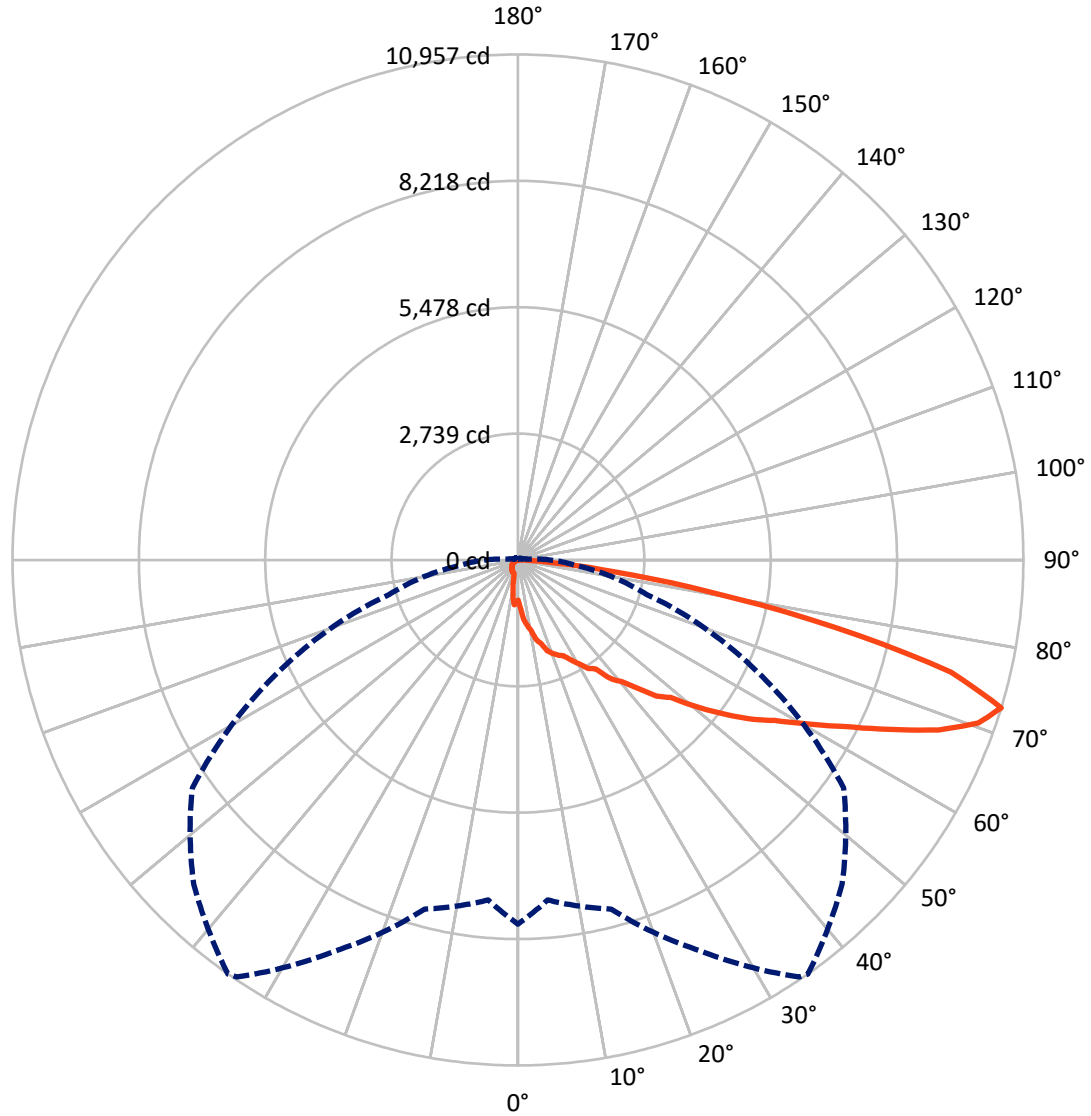
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.3 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	1141.4	0.0	1141.4
	% Fixture	7.8	0.0	7.8
Street Side	Lumens	13492.6	0.0	13492.6
	% Fixture	92.2	0.0	92.2
Total	Lumens	14634.0	0.0	14634.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	111.2	0.8
10°-20°	374.5	2.6
20°-30°	682.0	4.7
30°-40°	1176.4	8.0
40°-50°	2091.2	14.3
50°-60°	3120.6	21.3
60°-70°	3986.9	27.2
70°-80°	2773.8	19.0
80°-90°	317.3	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°	14634.0	100.0
0°-180°	14634.0	100.0

Coefficient of Utilization



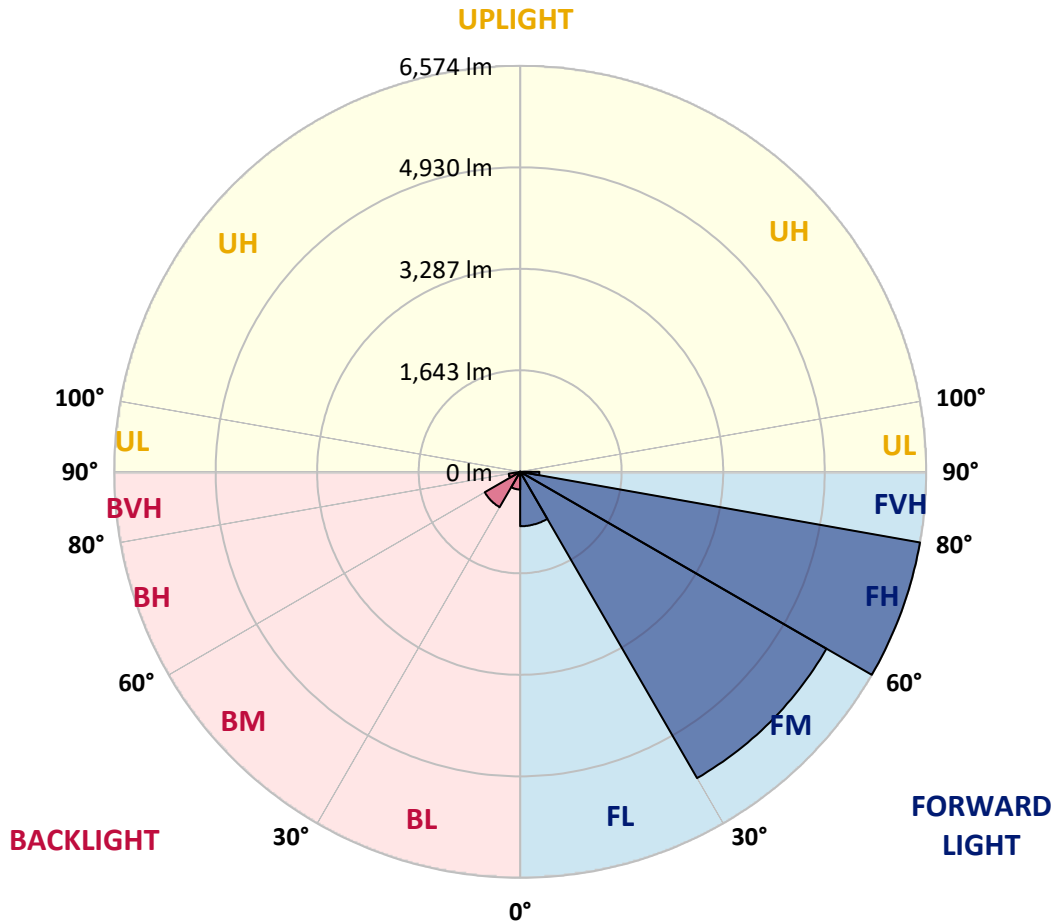
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	880.6	6.0			
FM (30°-60°)	5726.3	39.1			
FH (60°-80°)	6573.6	44.9			G3/7500
FVH (80°-90°)	312.0	2.1			G3/500
BL (0°-30°)	287.1	2.0	B1/500		
BM (30°-60°)	661.9	4.5	B1/1000		
BH (60°-80°)	187.1	1.3	B1/500		G1/500
BVH (80°-90°)	5.3	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°	871.7	871.7	871.7	871.7	871.7	871.7	871.7	871.7	871.7	871.7	871.7
2.5°	1109.4	1066.0	995.3	1000.5	1032.1	1038.7	1048.3	1023.3	1001.2	962.2	1038.0
5°	1421.3	1358.7	1319.0	1306.5	1288.1	1289.6	1244.7	1260.9	1256.5	1285.2	1319.8
7.5°	1597.1	1562.5	1512.5	1498.5	1430.8	1423.5	1368.3	1442.6	1450.0	1439.7	1496.3
10°	1667.0	1621.4	1627.3	1575.0	1541.2	1550.0	1558.8	1564.7	1574.3	1583.9	1514.7
12.5°	1708.2	1716.3	1796.5	1742.0	1775.9	1775.9	1835.4	1772.2	1774.4	1705.2	1717.0
15°	1893.6	1938.4	1902.4	1901.7	1864.9	1874.4	1943.6	1893.6	1919.3	1898.7	1819.3
17.5°	2126.0	2134.9	2066.4	2036.3	2069.4	2070.1	2040.7	2038.5	1948.7	2100.3	2003.9
20°	2200.3	2250.4	2153.2	2035.5	2173.1	2166.5	2164.3	2129.7	1980.4	2190.8	2111.3
22.5°	2402.6	2331.3	2265.1	2187.8	2241.5	2241.5	2233.4	2157.7	2099.5	2182.7	2216.5
25°	2465.9	2474.7	2388.7	2363.6	2365.1	2298.9	2293.0	2260.7	2204.7	2346.7	2279.0
27.5°	2683.7	2680.0	2473.3	2543.1	2454.1	2454.9	2292.3	2365.1	2374.7	2354.8	2430.6
30°	2897.7	2957.3	2645.4	2733.7	2640.2	2612.3	2453.4	2518.1	2535.1	2512.2	2607.9
32.5°	3170.7	3258.2	2955.1	2868.3	2725.6	2805.0	2695.4	2542.4	2626.3	2830.0	2883.7
35°	3459.8	3502.4	3179.5	3058.1	2897.0	2896.3	2892.6	2905.1	2997.8	3227.3	3272.9
37.5°	3979.1	3878.3	3586.3	3308.2	3344.3	3264.1	3208.2	3267.0	3363.4	3741.5	3936.5
40°	4269.0	4196.1	3784.9	3620.1	3441.4	3470.8	3622.3	3615.7	3872.5	4268.2	4560.3
42.5°	4550.7	4481.6	4077.0	3943.8	3714.3	3794.5	3860.7	3944.6	4470.5	5109.1	5269.5
45°	4801.6	4598.5	4313.1	4318.3	4199.1	4208.7	4325.6	4402.9	5163.5	5818.3	5930.8
47.5°	4953.1	4786.1	4512.5	4507.3	4500.0	4455.1	5006.1	5076.7	5716.0	6493.6	6503.9
50°	5166.5	4957.5	4717.7	4722.1	4892.1	4987.0	5644.6	5637.3	6249.3	7057.1	6819.5
52.5°	5432.0	5176.8	4912.7	5109.1	5371.7	5526.2	6060.3	6278.0	6822.4	7410.9	6943.1
55°	5771.9	5452.6	5198.1	5449.7	6022.8	6082.4	6467.1	6926.9	7447.0	7772.1	6982.8
57.5°	6170.6	5789.6	5583.6	5988.9	6560.5	6562.0	7059.3	7618.4	7830.3	7919.3	6937.9
60°	6600.3	6155.9	5948.5	6313.3	7153.5	7213.8	7717.7	8000.2	8219.4	7993.6	6857.7
62.5°	6978.4	6487.7	6326.6	6755.5	7803.8	7946.5	8291.5	8251.1	8500.4	8087.0	6654.0
65°	7428.6	6917.3	6811.4	7444.8	8652.7	8849.1	8935.9	8696.1	8594.6	8014.9	6123.6
67.5°	7874.4	7396.2	7393.3	8209.1	9765.8	9833.4	9742.2	9323.6	8485.0	7379.3	5151.8
70°	8188.5	7675.0	7868.5	9046.3	10777.3	10587.5	10203.5	9620.1	7693.4	5655.7	3365.6
72.5°	7893.5	7398.4	7834.7	9344.2	10902.3	10956.8	9936.4	8617.4	5716.0	2892.6	1218.2
75°	5998.5	5695.4	6802.6	8290.0	9679.7	9692.2	8293.7	6077.9	2814.6	785.7	336.9
77.5°	3021.3	2924.9	4305.8	5885.2	7062.2	7041.6	5698.3	3256.0	905.6	261.2	169.9
80°	1529.4	1452.2	1832.5	3175.1	4193.9	4224.8	3253.8	1458.1	456.8	142.0	117.7
82.5°	939.4	891.6	1002.7	1436.7	2035.5	2084.8	1234.4	923.2	283.2	83.9	107.4
85°	181.7	191.3	576.0	719.5	812.9	793.8	365.6	759.9	85.3	50.0	78.0
87.5°	0.0	2.9	133.2	234.7	235.4	208.9	83.1	168.5	11.8	14.0	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°	871.7	871.7	871.7	871.7	871.7	871.7	871.7	871.7	871.7	871.7	871.7
2.5°	1050.5	1039.5	947.5	937.2	939.4	924.0	918.8	886.5	878.4	928.4	937.2
5°	1305.0	1231.5	1146.1	1115.2	1067.4	986.5	974.7	954.1	931.3	940.2	933.5
7.5°	1461.0	1363.2	1271.9	1109.4	974.7	857.0	837.9	802.6	767.3	768.0	790.8
10°	1486.0	1403.6	1277.8	1079.9	926.2	779.1	651.1	558.4	516.4	478.9	489.9
12.5°	1630.9	1554.4	1322.7	1071.1	855.6	626.0	458.3	367.8	328.1	314.9	313.4
15°	1747.2	1686.8	1399.2	1043.9	698.9	440.7	328.1	301.6	294.3	306.8	303.1
17.5°	1920.0	1811.2	1391.1	931.3	532.6	334.7	302.4	298.7	307.5	314.9	317.1
20°	1995.8	1839.1	1335.9	754.8	398.7	306.8	295.0	287.6	303.8	325.9	321.5
22.5°	2072.3	1886.9	1271.2	617.9	320.7	293.5	286.9	281.0	293.5	314.9	320.0
25°	2106.9	1963.5	1199.1	482.6	297.9	278.1	273.7	275.9	286.2	305.3	303.1
27.5°	2281.3	1972.3	1061.5	381.1	288.4	267.0	267.0	272.2	272.2	297.9	295.7
30°	2390.1	2121.6	949.7	320.7	277.3	251.6	260.4	262.6	258.9	286.9	289.1
32.5°	2581.4	2162.8	840.8	294.3	259.7	249.4	247.9	249.4	252.3	279.5	280.3
35°	2875.7	2365.9	692.2	284.0	250.9	238.4	228.1	236.1	243.5	263.4	267.0
37.5°	3450.9	2574.0	564.2	275.9	246.4	228.1	224.4	222.9	236.1	258.9	266.3
40°	3916.6	2942.6	459.0	269.2	237.6	222.2	212.6	213.3	225.1	242.0	253.1
42.5°	4575.7	3208.9	389.2	258.9	225.1	209.7	198.6	205.2	210.4	228.1	235.4
45°	5126.0	3415.6	342.8	252.3	212.6	197.9	189.1	196.4	191.3	200.1	210.4
47.5°	5563.7	3595.9	308.2	236.1	204.5	191.3	180.2	178.0	169.2	171.4	181.0
50°	5804.3	3565.7	279.5	220.0	194.2	184.6	169.2	153.8	142.0	141.2	147.1
52.5°	5889.6	3404.6	256.0	206.0	181.7	169.9	152.3	130.9	119.2	115.5	120.6
55°	5913.2	3172.9	234.7	190.5	169.9	151.5	133.2	110.3	97.8	92.0	97.1
57.5°	5836.6	2816.1	214.1	175.8	156.0	133.9	114.0	90.5	78.7	71.4	75.8
60°	5647.6	2362.9	195.7	157.4	141.2	118.4	96.4	72.8	60.3	53.7	55.9
62.5°	5229.0	1852.4	175.8	140.5	125.8	103.7	80.9	57.4	45.6	39.7	40.5
65°	4591.9	1380.8	153.0	124.3	111.8	89.7	64.7	44.1	34.6	29.4	28.7
67.5°	3658.4	935.7	130.2	107.4	99.3	75.8	51.5	34.6	27.2	23.5	22.1
70°	2150.3	471.6	108.1	92.7	85.3	63.3	40.5	28.0	25.0	22.1	20.6
72.5°	709.2	203.8	84.6	76.5	70.6	50.8	31.6	25.7	24.3	21.3	19.9
75°	247.2	117.7	62.5	58.9	55.9	38.3	26.5	23.5	23.5	20.6	18.4
77.5°	161.8	91.2	46.3	42.7	41.9	28.0	22.8	22.1	20.6	16.9	14.0
80°	134.6	51.5	32.4	30.2	29.4	17.7	18.4	16.2	12.5	7.4	2.9
82.5°	124.3	30.9	16.9	18.4	16.9	6.6	10.3	8.8	6.6	2.9	0.0
85°	72.8	14.0	9.6	9.6	7.4	1.5	5.1	5.1	2.9	0.7	0.0
87.5°	8.1	6.6	5.1	5.1	3.7	0.0	2.2	1.5	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)