

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: P368177

Luminaire Tested: **MSA-SA3D-830-U-T3-HSS**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P368177  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-11)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA3D-830-U-T3-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 11681 lumens  
Efficiency: N/A  
Efficacy: 60.8 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B1 - U0 - G2

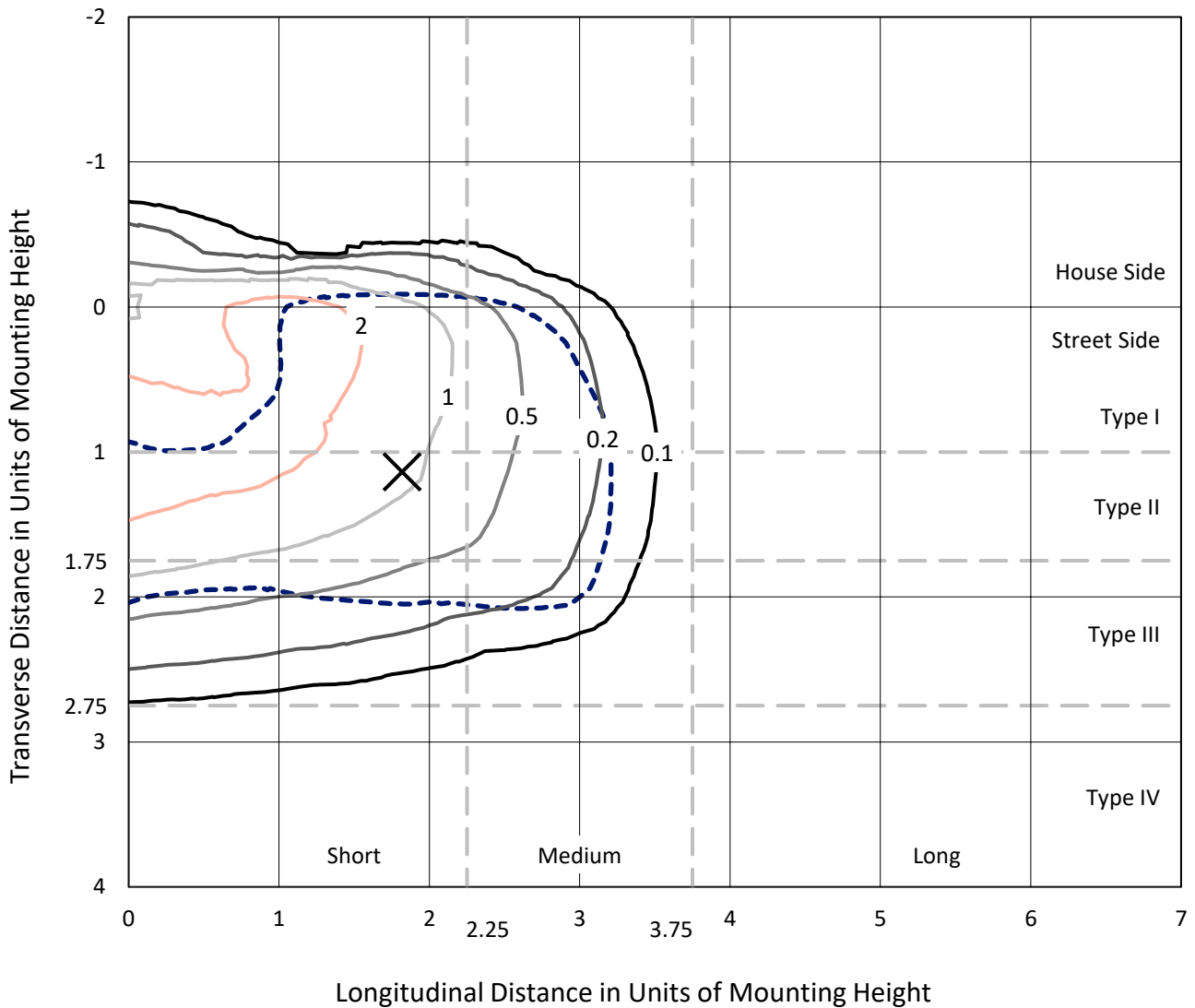
Input Watts (W): 192  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

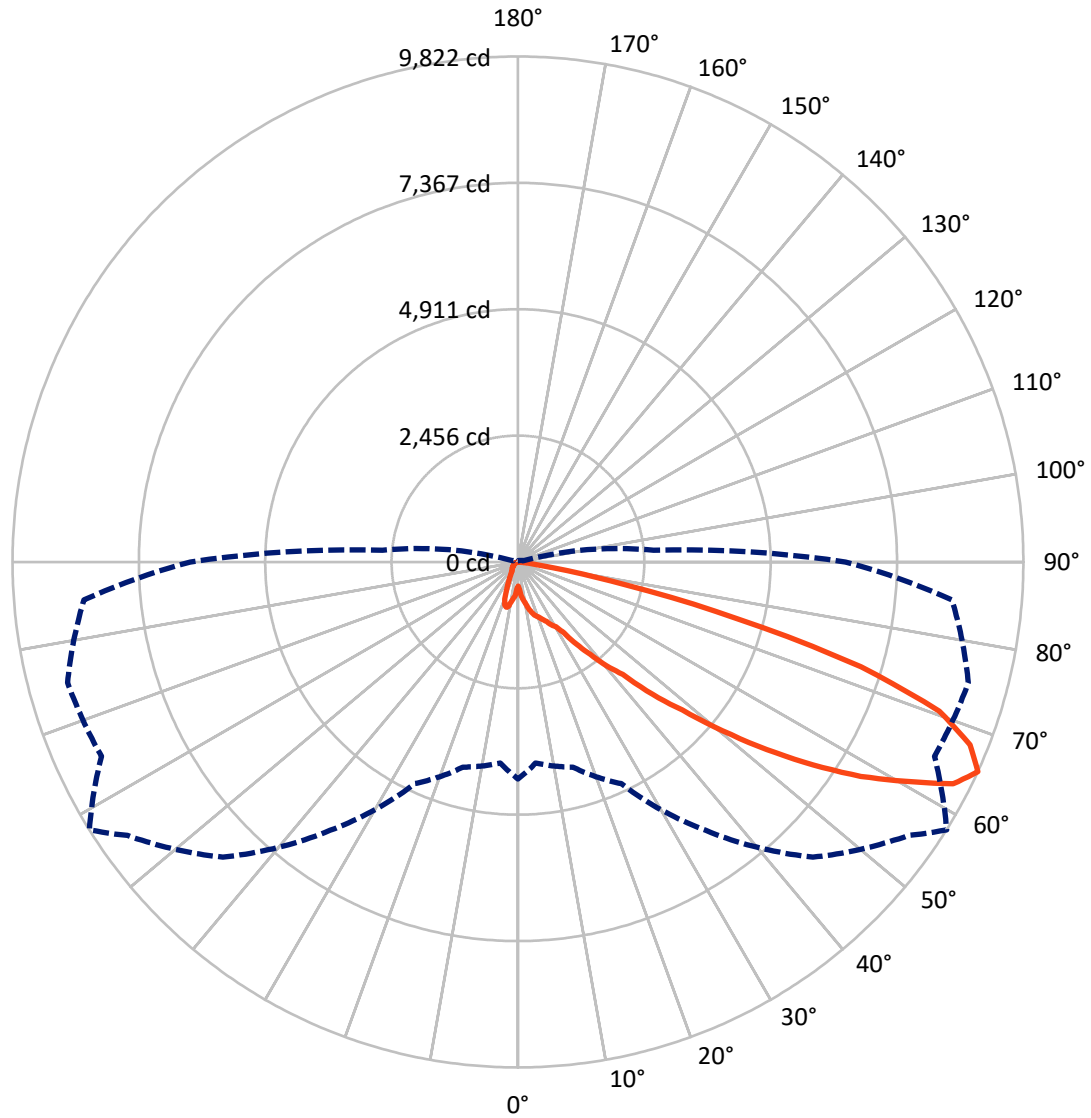
✕ Max cd  
 - - - 1/2 Max cd



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 58-Deg Lateral    - - - Horizontal Cone Through 65-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1152.6	0.0	1152.6
	% Fixture	9.9	0.0	9.9
<b>Street Side</b>	Lumens	10528.4	0.0	10528.4
	% Fixture	90.1	0.0	90.1
<b>Total</b>	Lumens	11681.0	0.0	11681.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	65.7	0.6
10°-20°	239.8	2.1
20°-30°	464.1	4.0
30°-40°	926.0	7.9
40°-50°	1893.1	16.2
50°-60°	3357.7	28.7
60°-70°	3540.0	30.3
70°-80°	1147.7	9.8
80°-90°	46.9	0.4
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°	11681.0	100.0
0°-180°	11681.0	100.0

**Coefficient of Utilization**



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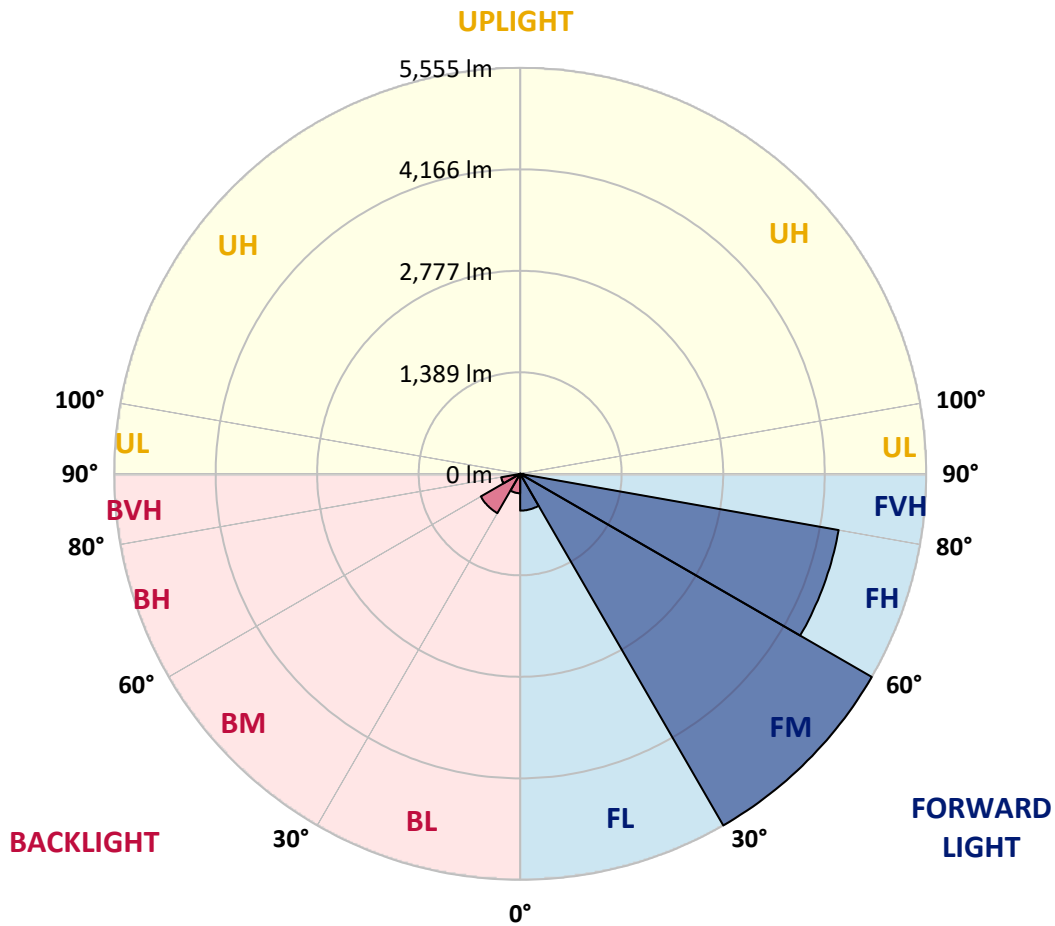
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	503.9	4.3			
FM (30°-60°)	5554.9	47.6			
FH (60°-80°)	4424.6	37.9			G2/5000
FVH (80°-90°)	44.9	0.4			G1/100
BL (0°-30°)	265.7	2.3	B1/500		
BM (30°-60°)	621.9	5.3	B1/1000		
BH (60°-80°)	263.1	2.3	B1/500		G1/500
BVH (80°-90°)	2.0	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°	58°	65°	75°	85°
0°	467.6	467.6	467.6	467.6	467.6	467.6	467.6	467.6	467.6	467.6	467.6
2.5°	570.9	553.8	526.8	531.4	536.7	547.2	538.6	530.7	522.2	511.0	553.8
5°	689.2	661.0	658.3	652.4	647.8	647.2	657.7	654.4	659.0	680.0	701.7
7.5°	732.7	720.8	698.5	707.7	693.2	682.0	728.7	743.8	772.8	782.6	839.2
10°	728.0	710.9	720.2	724.8	734.6	775.4	805.0	821.4	846.4	900.4	889.2
12.5°	749.1	764.2	774.1	774.7	825.4	900.4	921.4	935.2	979.9	1001.0	1056.2
15°	819.5	844.5	828.7	835.3	851.7	943.1	992.4	1022.7	1085.8	1154.2	1168.0
17.5°	920.1	935.9	903.0	879.3	924.7	974.7	1064.1	1095.7	1135.8	1295.6	1325.2
20°	1047.0	1074.0	1003.0	908.9	968.8	1027.9	1125.3	1140.4	1183.2	1391.6	1438.3
22.5°	1343.6	1303.5	1195.0	1048.3	1030.6	1056.9	1149.6	1208.8	1281.2	1445.6	1554.1
25°	1636.3	1622.5	1462.7	1298.9	1180.5	1121.3	1244.3	1277.2	1395.6	1573.8	1633.7
27.5°	1961.9	1989.5	1722.5	1623.1	1391.0	1197.6	1303.5	1385.7	1525.8	1620.5	1764.5
30°	2391.3	2347.3	2034.2	1934.9	1669.8	1407.4	1456.8	1462.0	1667.9	1774.4	1911.2
32.5°	2728.0	2756.3	2363.0	2210.5	1998.7	1730.3	1571.8	1640.2	1787.6	2025.0	2154.6
35°	3092.4	3089.8	2706.3	2501.1	2224.3	1994.1	1913.2	1963.2	2148.0	2417.0	2451.2
37.5°	3637.0	3590.3	3137.8	2837.2	2601.8	2405.1	2343.3	2276.9	2467.6	2724.1	2852.3
40°	4150.6	3989.5	3571.2	3214.7	2913.5	2833.3	2609.7	2650.4	2707.0	3045.7	3400.2
42.5°	4669.5	4569.5	4010.5	3711.9	3341.7	3150.9	3004.9	2985.9	3254.8	3656.0	4022.4
45°	5354.2	5048.3	4601.1	4338.7	3909.9	3718.5	3600.8	3671.2	3913.2	4499.2	4743.2
47.5°	5929.0	5647.5	5263.4	4864.8	4415.0	4630.0	4409.1	4297.9	4630.0	5235.8	5560.0
50°	6422.9	6109.2	5720.5	5425.2	5352.2	5558.7	5111.5	5152.2	5368.0	6079.6	6262.4
52.5°	6782.0	6451.8	6112.5	5969.7	6269.0	6372.9	6148.6	6058.5	6254.5	6799.1	6887.9
55°	7052.3	6714.2	6449.2	6645.8	7224.6	7190.4	7269.3	6961.5	7149.0	7549.5	7507.4
57.5°	7068.7	6668.2	6513.0	6829.3	7623.8	8153.2	8384.1	7860.6	7967.1	8136.1	8041.4
60°	6551.8	6153.2	6140.7	6589.9	7739.5	8402.5	8907.6	8652.4	8509.7	8635.3	8455.8
62.5°	5521.9	5243.0	5373.2	5869.8	7308.8	8265.0	9186.4	9493.6	8937.8	8966.1	8710.9
65°	4216.4	3923.7	4127.6	4753.0	6367.0	8111.1	9265.4	9822.4	8929.9	9060.2	8466.3
67.5°	2792.5	2622.8	2853.7	3542.9	5062.1	7160.1	9224.6	9477.1	8646.5	8692.5	7558.0
70°	1441.6	1400.2	1587.0	2130.9	3403.5	5500.8	8824.1	8685.9	8071.0	7488.3	5829.7
72.5°	461.7	463.7	643.2	973.4	1834.9	3348.9	6782.6	6972.0	6458.4	5477.8	3559.3
75°	204.5	201.2	269.0	408.4	764.9	1501.5	4213.7	4418.3	4021.0	3013.5	1496.2
77.5°	147.3	142.7	172.3	238.7	378.8	509.0	1975.7	2132.2	1823.1	1044.4	342.6
80°	103.9	103.3	125.0	167.7	236.8	226.2	624.1	699.8	560.3	253.2	100.6
82.5°	58.5	60.5	86.8	118.4	144.0	113.1	175.6	193.4	188.8	134.8	44.1
85°	28.3	31.6	56.6	85.5	75.6	44.1	62.5	67.7	78.9	78.3	22.4
87.5°	0.0	0.0	23.0	38.8	20.4	6.6	19.1	21.7	21.0	25.0	5.3
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°	467.6	467.6	467.6	467.6	467.6	467.6	467.6	467.6	467.6	467.6	467.6
2.5°	562.3	558.4	508.4	512.3	523.5	518.9	522.9	513.6	503.1	545.9	545.2
5°	710.9	681.4	665.6	651.1	653.7	624.1	641.2	649.1	647.8	672.1	678.7
7.5°	841.2	801.7	770.1	739.9	693.8	652.4	678.1	694.5	705.7	747.8	764.2
10°	902.3	870.1	857.6	798.4	765.5	739.9	709.0	686.6	695.8	684.6	695.8
12.5°	1036.5	1014.8	966.8	906.9	867.5	814.9	699.8	603.7	544.6	545.2	541.3
15°	1158.8	1157.5	1085.8	986.5	872.1	722.1	542.6	421.6	365.7	349.9	344.6
17.5°	1318.6	1298.9	1168.0	1021.4	815.5	559.0	369.6	288.7	283.5	292.7	288.7
20°	1420.6	1391.6	1208.8	970.7	672.1	378.2	278.9	255.8	271.6	284.8	281.5
22.5°	1522.5	1479.1	1239.7	908.9	478.1	276.9	251.9	247.9	257.8	274.3	276.9
25°	1578.4	1569.9	1300.2	793.2	327.5	242.7	242.7	241.4	244.7	256.5	254.5
27.5°	1740.9	1625.1	1254.8	618.9	253.2	223.0	226.2	224.9	213.1	224.9	225.6
30°	1842.2	1788.9	1258.1	440.6	223.0	197.3	205.9	195.3	177.6	187.4	185.5
32.5°	2046.0	1913.2	1248.3	297.3	203.2	188.1	174.9	159.8	146.7	150.6	147.3
35°	2283.5	2182.2	1114.8	238.7	189.4	166.4	145.3	130.2	116.4	119.7	119.0
37.5°	2755.7	2434.1	1004.3	215.1	180.2	152.6	128.2	107.2	100.0	101.9	103.9
40°	3193.0	2854.3	798.4	204.5	164.4	136.1	105.9	90.8	86.2	87.5	89.4
42.5°	3846.8	3188.4	603.1	194.0	148.6	115.1	88.1	78.3	73.7	76.3	77.6
45°	4479.4	3472.5	450.5	184.8	135.5	99.3	74.3	67.7	62.5	64.5	67.1
47.5°	5111.5	3788.2	336.1	170.3	121.0	85.5	63.8	59.2	55.9	56.6	59.8
50°	5677.1	3935.5	264.4	152.6	109.2	74.3	57.9	53.3	52.0	52.6	55.2
52.5°	6092.7	3936.9	223.0	136.8	98.0	65.8	54.6	49.3	48.7	50.0	52.6
55°	6468.3	3831.6	193.4	123.0	88.1	59.8	52.0	47.4	47.4	48.7	51.3
57.5°	6717.5	3638.3	167.7	108.5	79.6	56.6	50.0	45.4	44.7	44.1	46.0
60°	6839.2	3374.5	142.1	95.4	71.7	54.6	48.7	40.1	39.5	38.1	39.5
62.5°	6762.2	3044.4	119.0	82.2	63.8	52.0	42.7	34.9	33.5	30.9	32.9
65°	6368.9	2643.2	100.6	70.4	55.2	44.1	36.2	29.6	26.3	23.0	22.4
67.5°	5564.6	2147.3	84.2	60.5	47.4	36.2	29.6	26.3	20.4	17.8	17.1
70°	4170.3	1466.0	69.7	52.0	39.5	30.9	25.0	23.7	19.1	17.1	15.8
72.5°	2446.6	791.2	58.5	45.4	33.5	25.6	20.4	21.7	19.1	15.8	14.5
75°	977.3	263.1	46.7	36.2	27.0	18.4	17.1	17.8	17.1	14.5	11.8
77.5°	223.0	82.9	36.2	28.3	21.0	11.8	13.8	15.1	15.1	11.8	8.5
80°	69.7	32.9	21.0	17.8	15.1	6.6	9.9	10.5	7.2	3.3	0.0
82.5°	22.4	9.2	7.2	7.2	6.6	1.3	2.0	1.3	0.0	0.0	0.0
85°	8.5	5.9	4.6	4.6	2.6	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	3.3	2.6	2.0	2.6	1.3	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)