

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: P368575

Luminaire Tested: **MSA-SA4C-830-U-T4FT-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368575
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-13)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA4C-830-U-T4FT-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV FORWARD THROW OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14318 lumens
Efficiency: N/A
Efficacy: 63.6 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G3

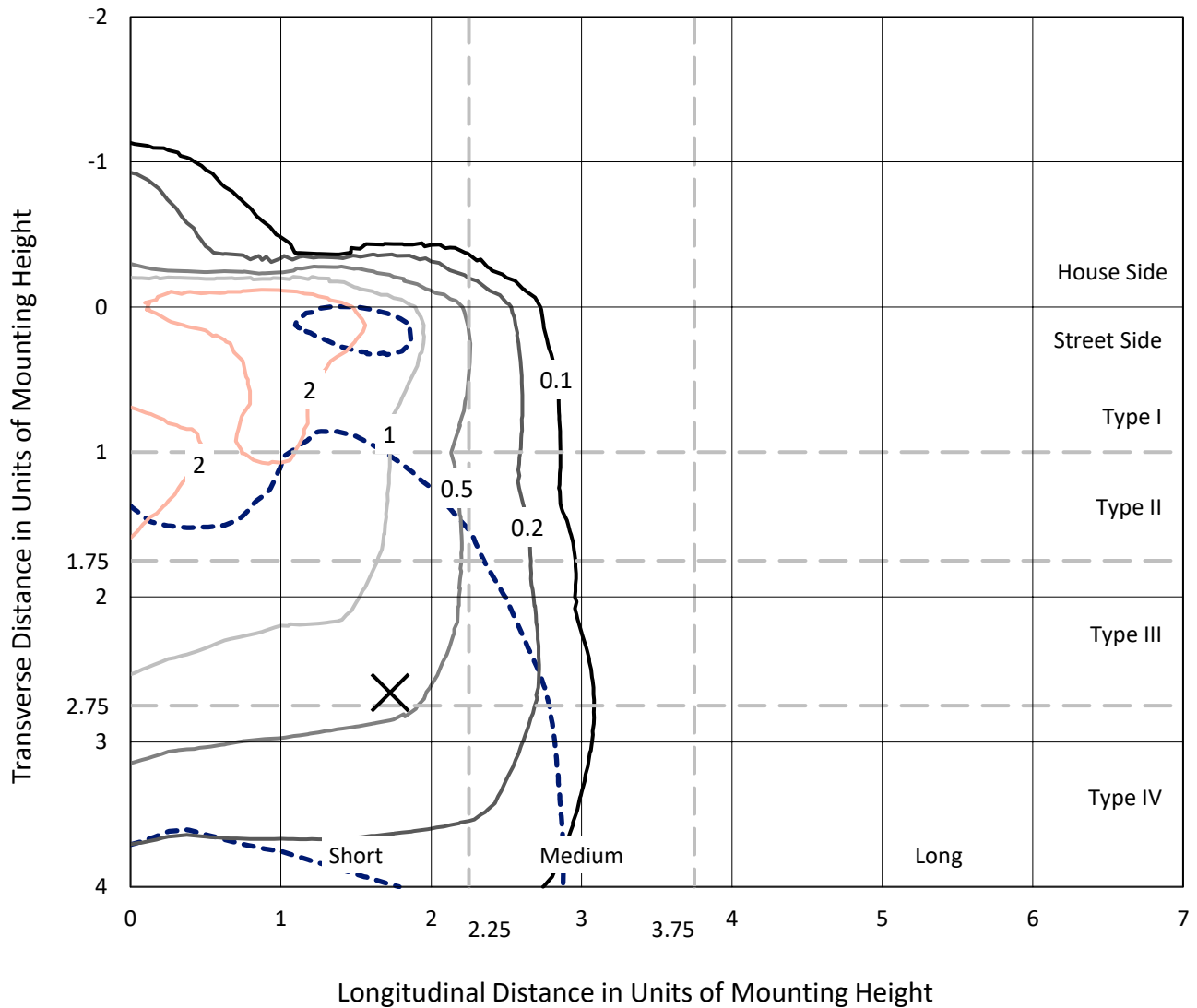
Input Watts (W): 225
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

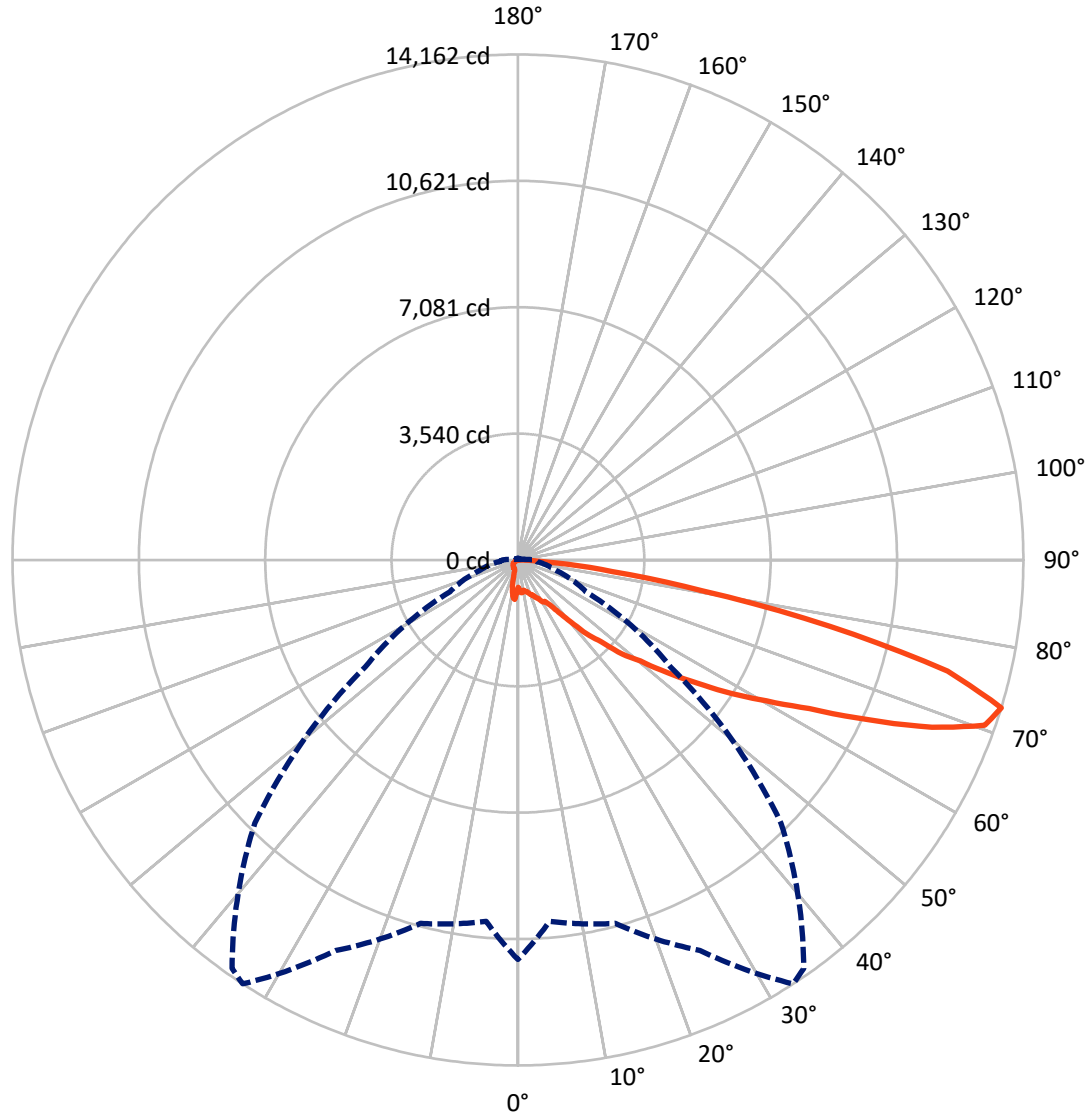
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.6 fc
 Type IV - Short - N/A

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CATALOG NUMBER: MSA-SA4C-830-U-T4FT-HSS

Luminous Intensity Polar Plot



— Vertical Plane Through 33-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1323.9	0.0	1323.9
	% Fixture	9.2	0.0	9.2
Street Side	Lumens	12994.1	0.0	12994.1
	% Fixture	90.8	0.0	90.8
Total	Lumens	14318.0	0.0	14318.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	98.6	0.7
10°-20°	293.7	2.1
20°-30°	498.1	3.5
30°-40°	911.6	6.4
40°-50°	1924.0	13.4
50°-60°	3219.0	22.5
60°-70°	4308.8	30.1
70°-80°	2814.6	19.7
80°-90°	249.5	1.7
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°	14318.0	100.0
0°-180°	14318.0	100.0

Coefficient of Utilization

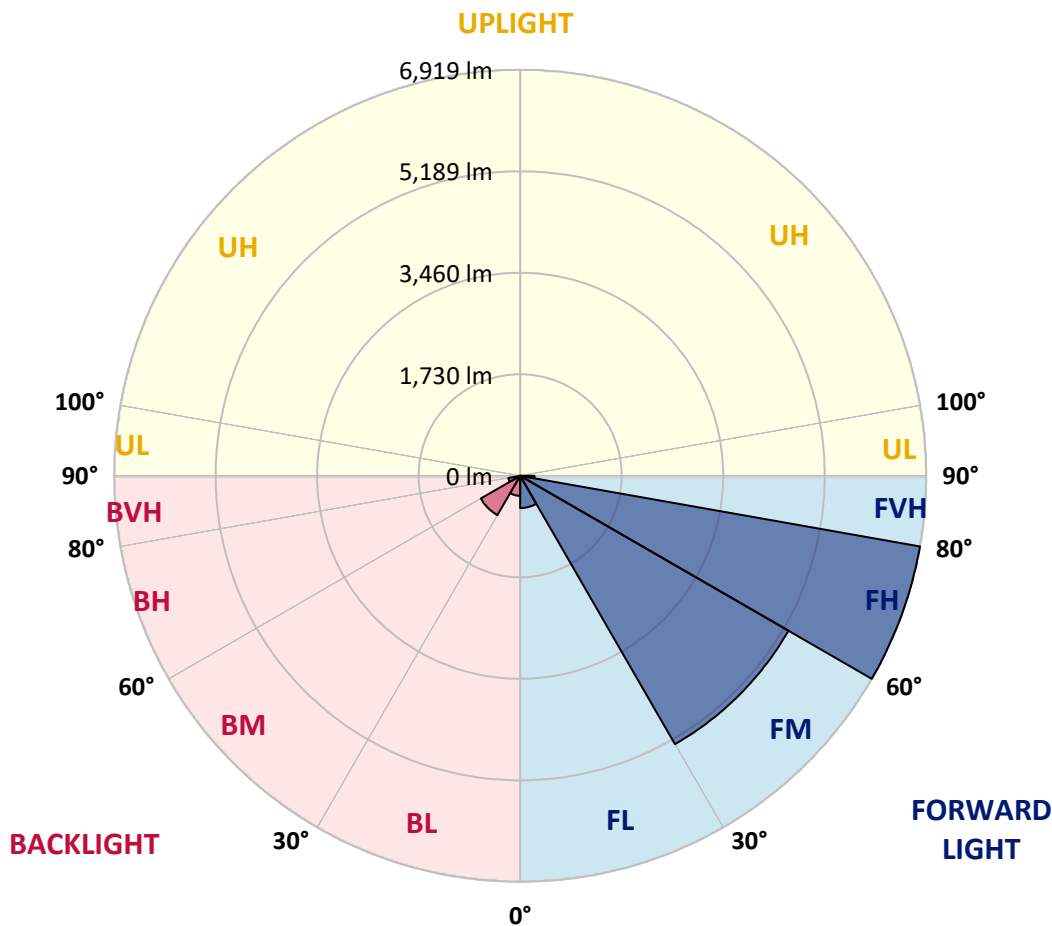


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	549.6	3.8			
FM (30°-60°)	5280.7	36.9			
FH (60°-80°)	6919.1	48.3			G3/7500
FVH (80°-90°)	244.7	1.7			G3/500
BL (0°-30°)	340.8	2.4	B1/500		
BM (30°-60°)	774.0	5.4	B1/1000		
BH (60°-80°)	204.3	1.4	B1/500		G1/500
BVH (80°-90°)	4.8	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





REPORT NUMBER: P368575

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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	33°	35°	45°	55°	65°	75°	85°
0°	761.6	761.6	761.6	761.6	761.6	761.6	761.6	761.6	761.6	761.6	761.6
2.5°	907.8	872.8	822.0	825.1	833.9	841.0	860.1	852.2	837.1	836.3	907.8
5°	961.9	922.9	919.7	924.5	922.1	934.8	918.9	970.6	1014.3	1066.8	1151.1
7.5°	935.6	917.4	894.3	918.2	917.4	911.0	921.3	1026.3	1132.0	1198.8	1337.9
10°	860.1	839.5	856.9	864.9	859.3	887.2	956.3	1042.2	1168.6	1308.5	1376.0
12.5°	838.7	851.4	857.7	857.7	911.0	925.3	1031.0	1112.1	1262.4	1372.9	1569.2
15°	922.1	946.8	903.1	893.5	910.2	918.2	1035.8	1133.6	1326.0	1527.9	1692.4
17.5°	1054.9	1053.3	985.7	948.4	974.6	993.7	1058.9	1173.3	1286.2	1649.5	1888.0
20°	1146.3	1147.9	1026.3	948.4	1035.0	1046.1	1118.5	1209.9	1298.9	1710.7	2016.0
22.5°	1264.0	1221.8	1087.5	1012.0	1070.8	1081.1	1160.6	1232.9	1364.1	1703.6	2179.7
25°	1360.1	1333.1	1163.8	1111.3	1163.8	1149.5	1221.8	1330.7	1434.1	1817.2	2275.9
27.5°	1509.6	1463.5	1217.8	1227.4	1224.2	1234.5	1251.2	1418.2	1557.3	1822.8	2498.5
30°	1648.7	1621.7	1338.7	1338.7	1369.7	1349.8	1361.7	1563.6	1676.5	1951.6	2748.9
32.5°	1792.6	1794.2	1481.0	1405.5	1380.8	1462.7	1543.0	1634.4	1820.4	2172.6	3132.1
35°	2173.4	2141.6	1753.6	1565.2	1545.4	1540.6	1669.4	1916.6	2075.6	2460.3	3648.0
37.5°	2940.5	2830.0	2340.3	1927.7	1853.0	1827.6	1973.8	2227.4	2385.6	2883.2	4500.9
40°	3727.5	3524.8	2981.0	2516.0	2273.5	2163.8	2333.9	2549.4	2830.8	3350.7	5290.3
42.5°	4418.3	4167.9	3463.5	3150.3	2834.8	2787.1	2627.3	2977.8	3466.7	4031.1	6063.8
45°	5091.6	4598.7	3892.8	3644.8	3261.6	3288.7	3234.6	3538.3	4127.3	4776.8	6749.8
47.5°	5555.0	5112.3	4419.1	4097.1	3943.7	3785.5	4214.8	4530.4	4715.6	5250.6	7342.8
50°	6054.3	5605.9	4871.4	4646.4	4444.5	4604.3	5161.5	5203.7	5188.6	5692.6	7746.7
52.5°	6698.9	6170.3	5390.5	5136.1	5250.6	5409.6	6052.7	6060.6	5609.1	6064.6	8037.6
55°	7295.2	6709.3	6082.1	5842.0	6081.3	6215.6	6928.7	6667.2	5853.9	6317.4	8180.7
57.5°	8135.4	7457.3	7001.8	6578.9	7063.8	6935.0	7699.0	7310.3	6129.0	6485.1	8128.2
60°	9197.4	8399.3	7943.0	7495.5	8015.4	8102.8	8451.0	7631.4	6235.5	6540.0	7812.7
62.5°	10277.8	9474.9	8874.7	8571.0	9160.9	9448.6	9147.4	7791.2	6107.5	6432.6	7098.0
65°	11618.0	10590.2	9889.0	9711.0	10804.0	11226.9	9970.9	7830.1	5860.3	5842.0	5706.9
67.5°	12536.2	11535.4	10892.3	11190.4	12510.7	12544.9	10710.2	7842.1	5028.0	4574.1	3745.8
70°	12754.0	11682.4	11394.7	12272.3	13872.5	13442.4	10948.7	7237.9	3729.1	2714.7	1712.3
72.5°	11195.9	10164.1	10538.5	12068.0	14161.8	13964.7	10421.6	5222.0	2099.4	1085.9	525.5
75°	6867.5	6243.4	7905.7	10231.7	12431.3	12304.1	8130.6	2698.0	845.8	434.0	196.3
77.5°	2986.6	2773.5	4125.7	6788.8	8932.7	8819.1	4764.1	993.7	437.2	305.3	99.4
80°	988.1	958.7	1562.8	3214.7	5232.3	5132.1	2007.2	413.4	311.6	244.8	55.6
82.5°	234.5	232.9	545.3	1479.4	2665.4	2582.0	616.1	228.1	225.8	193.2	29.4
85°	58.8	60.4	151.0	604.9	1082.7	954.7	160.6	113.7	159.0	131.2	15.1
87.5°	0.0	0.0	39.0	86.6	163.8	102.5	17.5	30.2	44.5	46.9	7.9
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°	761.6	761.6	761.6	761.6	761.6	761.6	761.6	761.6	761.6	761.6	761.6
2.5°	923.7	915.0	843.4	860.9	887.9	885.6	903.1	889.5	877.6	936.4	930.9
5°	1174.9	1127.2	1105.0	1136.0	1119.3	1080.3	1112.9	1107.3	1097.8	1117.7	1132.8
7.5°	1363.3	1319.6	1299.7	1234.5	1139.9	1065.2	1077.1	1049.3	1023.1	1054.1	1085.9
10°	1425.3	1401.5	1399.1	1271.9	1182.9	1074.8	946.8	836.3	806.9	767.9	785.4
12.5°	1593.9	1608.2	1518.3	1369.7	1198.0	990.5	763.1	606.5	542.9	501.6	504.0
15°	1732.2	1782.3	1651.9	1384.8	1054.1	755.2	508.0	367.3	327.5	317.2	314.0
17.5°	1938.1	1986.6	1693.2	1277.5	849.8	511.9	326.7	286.2	288.6	295.7	294.1
20°	2090.7	2083.5	1657.4	1087.5	626.4	335.5	273.5	267.9	280.6	301.3	296.5
22.5°	2237.8	2188.5	1635.2	911.8	405.4	269.5	263.9	263.1	275.0	294.9	300.5
25°	2342.7	2350.6	1597.8	713.9	294.9	250.4	255.2	262.3	274.3	295.7	292.5
27.5°	2643.2	2420.6	1442.0	518.3	248.8	240.1	252.0	266.3	270.3	297.3	298.1
30°	2837.9	2684.5	1340.3	349.0	229.7	221.8	245.6	264.7	269.5	304.5	306.8
32.5°	3177.4	2798.2	1222.6	259.2	213.8	216.2	231.3	256.8	279.0	316.4	318.0
35°	3599.5	3163.1	1009.6	232.9	208.3	204.3	211.5	240.9	277.4	318.0	325.9
37.5°	4403.2	3381.7	800.5	225.8	208.3	201.1	208.3	225.8	272.7	333.9	350.6
40°	4941.3	3826.8	577.1	224.2	204.3	197.9	200.3	217.8	259.2	324.3	349.0
42.5°	5604.3	4014.4	425.3	220.2	200.3	190.8	192.4	214.6	245.6	304.5	322.7
45°	6147.3	4151.2	334.7	218.6	190.8	187.6	190.8	212.2	232.9	261.5	278.2
47.5°	6559.8	4310.2	268.7	208.3	188.4	187.6	183.6	198.7	211.5	218.6	229.7
50°	6861.9	4274.4	222.6	192.4	180.5	185.2	178.1	180.5	183.6	179.7	192.4
52.5°	7047.1	4145.6	185.2	173.3	170.9	174.9	166.1	159.0	153.4	150.2	158.2
55°	7114.7	3887.3	157.4	148.7	154.2	155.8	148.7	135.9	126.4	121.6	128.0
57.5°	6986.7	3493.8	136.7	123.2	135.9	135.9	126.4	112.9	101.8	93.8	100.2
60°	6662.4	3058.9	121.6	102.5	116.1	116.9	105.7	91.4	82.7	74.7	78.7
62.5°	6058.2	2585.1	106.5	89.0	100.2	101.0	87.4	73.9	67.6	58.8	62.0
65°	4849.9	1977.0	90.6	78.7	86.6	84.3	72.3	62.8	54.9	46.9	48.5
67.5°	3148.0	1220.2	78.7	71.5	73.1	70.7	61.2	54.9	46.1	39.7	40.5
70°	1409.4	525.5	69.2	64.4	63.6	59.6	51.7	50.9	45.3	39.7	39.7
72.5°	434.8	197.9	59.6	58.0	54.9	50.1	45.3	48.5	44.5	38.2	37.4
75°	171.7	90.6	49.3	49.3	47.7	41.3	40.5	43.7	41.3	35.0	33.4
77.5°	89.8	57.2	40.5	42.1	41.3	31.8	36.6	39.7	38.2	29.4	24.6
80°	53.3	35.0	30.2	34.2	33.4	22.3	27.8	25.4	18.3	8.7	2.4
82.5°	29.4	15.9	13.5	19.9	19.9	7.9	14.3	12.7	7.2	0.0	0.0
85°	14.3	11.1	10.3	11.1	7.9	2.4	7.2	7.2	4.0	0.0	0.0
87.5°	7.2	6.4	4.8	4.0	3.2	0.0	2.4	3.2	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)