

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: P367507

Luminaire Tested: **MSA-SA2C-830-U-SL3-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367507
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-19)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA2C-830-U-SL3-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) 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: 8050 lumens
Efficiency: N/A
Efficacy: 71.2 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G2

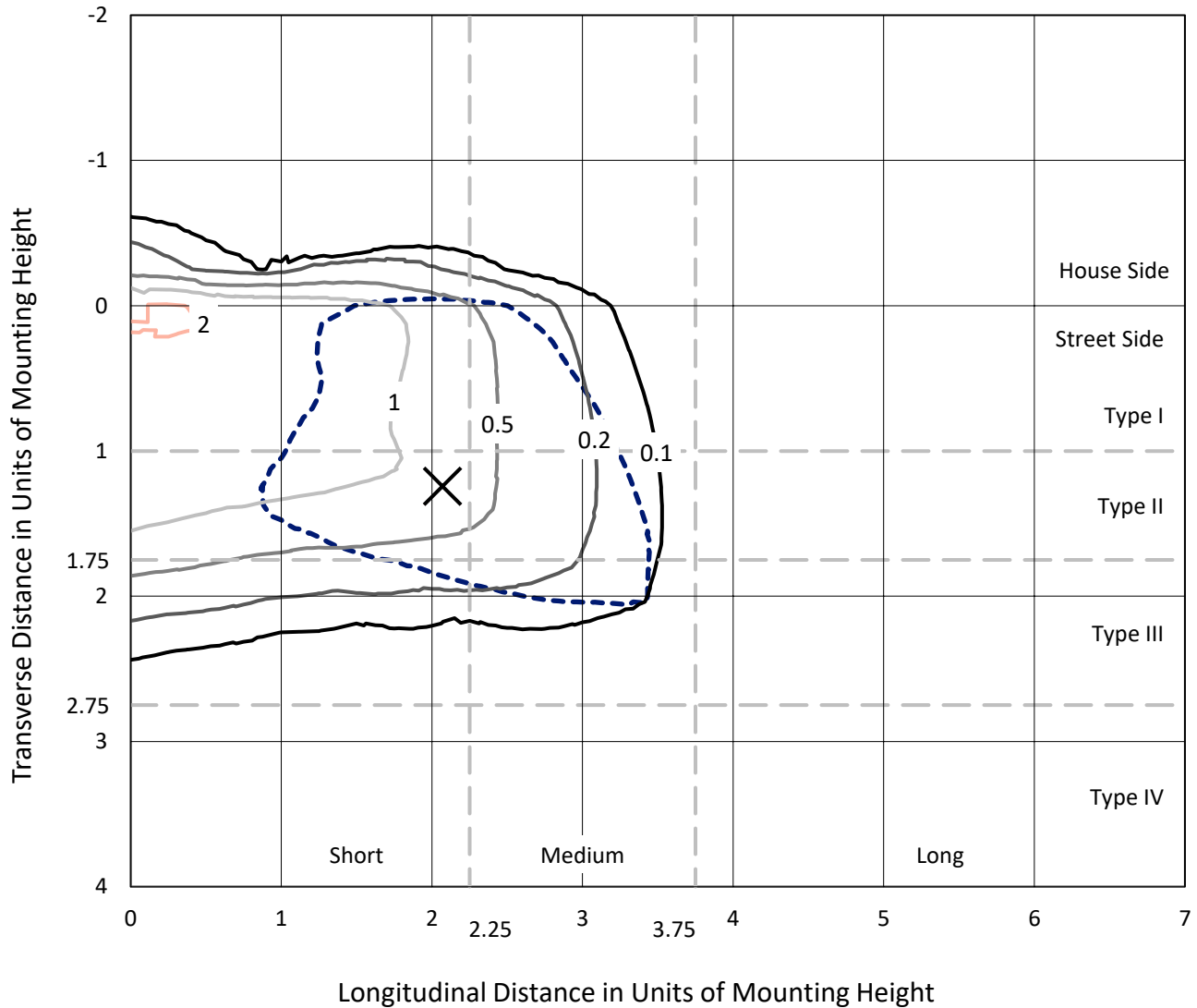
Input Watts (W): 113
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

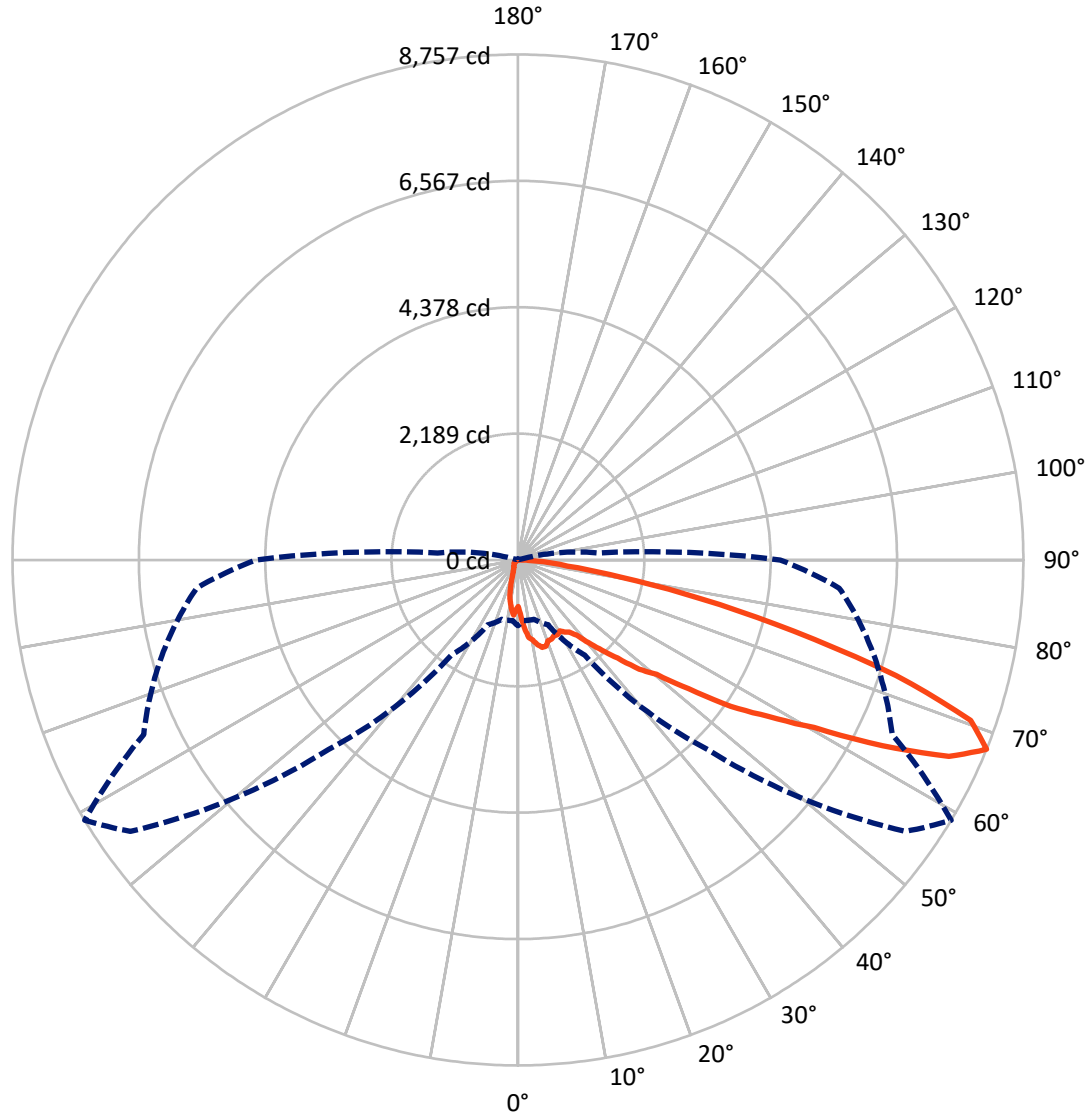
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.3 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	684.6	0.0	684.6
	% Fixture	8.5	0.0	8.5
Street Side	Lumens	7365.4	0.0	7365.4
	% Fixture	91.5	0.0	91.5
Total	Lumens	8050.0	0.0	8050.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	97.9	1.2
10°-20°	275.7	3.4
20°-30°	410.2	5.1
30°-40°	632.8	7.9
40°-50°	1129.3	14.0
50°-60°	2009.6	25.0
60°-70°	2340.5	29.1
70°-80°	1040.9	12.9
80°-90°	113.0	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°	8050.0	100.0
0°-180°	8050.0	100.0

Coefficient of Utilization



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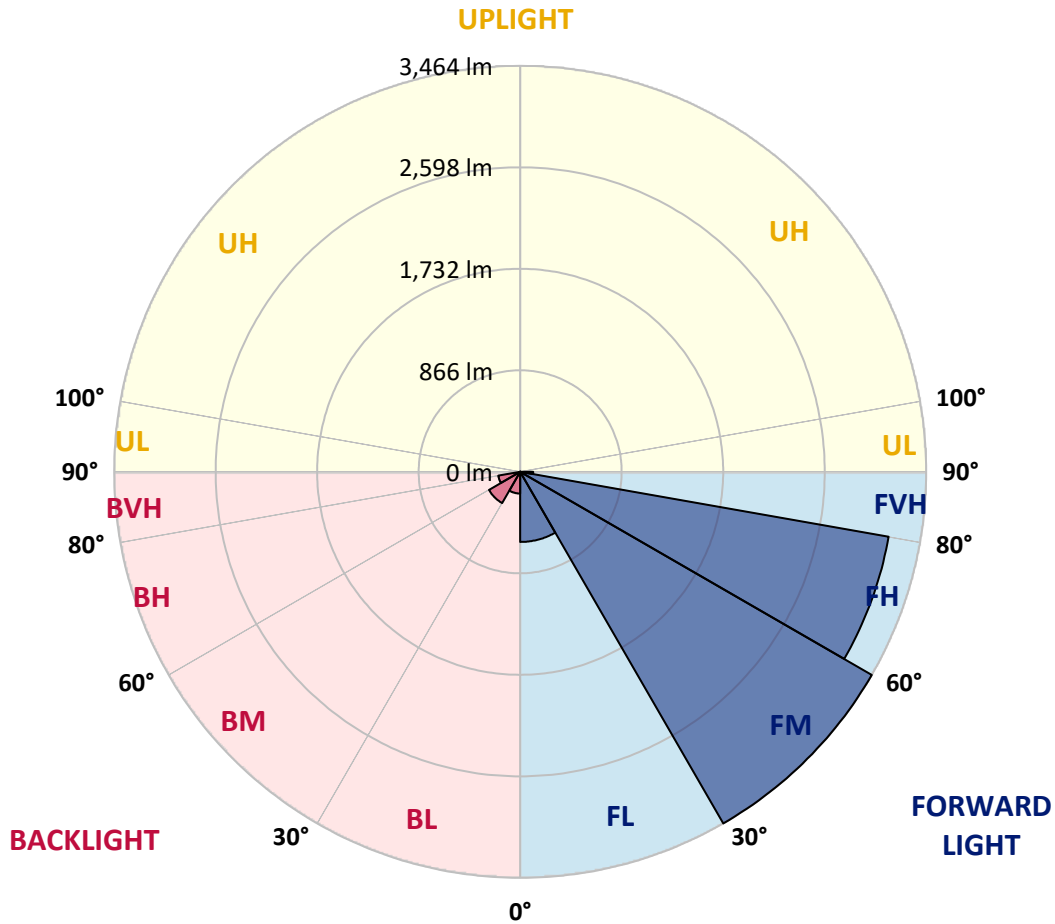
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	598.7	7.4			
FM (30°-60°)	3463.9	43.0			
FH (60°-80°)	3191.8	39.6			G2/5000
FVH (80°-90°)	111.0	1.4			G2/225
BL (0°-30°)	185.1	2.3	B1/500		
BM (30°-60°)	307.8	3.8	B1/1000		
BH (60°-80°)	189.6	2.4	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°	59°	65°	75°	85°
0°	805.4	805.4	805.4	805.4	805.4	805.4	805.4	805.4	805.4	805.4	805.4
2.5°	1050.0	1010.5	954.2	970.9	986.0	1000.3	976.6	963.2	956.6	898.8	971.3
5°	1289.3	1239.9	1214.3	1207.7	1191.4	1155.2	1215.5	1188.6	1197.5	1209.0	1232.6
7.5°	1362.2	1339.8	1302.7	1316.6	1254.6	1249.3	1332.9	1356.1	1386.7	1365.9	1394.4
10°	1324.7	1286.0	1303.5	1298.6	1296.2	1350.8	1409.5	1410.7	1456.4	1478.4	1381.8
12.5°	1250.5	1255.0	1317.8	1312.9	1394.4	1503.7	1517.1	1502.8	1577.4	1539.1	1524.4
15°	1299.9	1336.5	1301.9	1313.7	1342.7	1479.2	1526.9	1570.9	1641.4	1664.3	1565.2
17.5°	1359.4	1363.0	1299.9	1285.2	1358.1	1421.7	1534.2	1570.5	1577.4	1777.6	1656.9
20°	1327.2	1358.5	1283.1	1190.6	1303.9	1390.3	1504.5	1493.1	1539.5	1811.0	1677.7
22.5°	1412.8	1367.9	1271.3	1201.6	1239.9	1318.6	1415.2	1489.8	1559.5	1731.1	1704.6
25°	1420.9	1404.6	1318.6	1256.6	1250.1	1270.1	1404.6	1452.7	1561.9	1802.8	1681.8
27.5°	1512.6	1493.9	1317.8	1323.9	1262.8	1201.2	1353.2	1466.2	1606.4	1759.2	1730.3
30°	1630.8	1632.5	1405.4	1424.6	1337.4	1238.3	1395.2	1426.2	1636.5	1828.9	1766.2
32.5°	1750.7	1800.0	1578.7	1477.2	1449.9	1378.9	1343.1	1486.1	1603.5	1947.9	1855.8
35°	1932.9	1966.3	1721.3	1630.4	1523.2	1442.5	1484.9	1536.3	1722.1	2105.7	1973.6
37.5°	2241.4	2181.1	1977.3	1819.1	1793.5	1674.4	1695.6	1649.6	1843.2	2291.6	2206.8
40°	2415.1	2360.4	2148.5	2071.5	1907.6	1925.9	1859.1	1886.0	2018.9	2485.2	2419.1
42.5°	2596.0	2543.9	2358.0	2303.4	2147.3	2071.5	2041.3	2137.9	2288.3	2807.6	2723.6
45°	2777.8	2645.4	2566.7	2594.0	2523.9	2373.9	2338.8	2424.8	2582.6	3203.8	3044.8
47.5°	2931.1	2819.4	2760.3	2747.7	2720.4	2928.6	2786.0	2823.9	2893.6	3554.3	3445.1
50°	3207.4	3097.4	3004.9	2979.2	3112.1	3407.6	3187.5	3114.1	3253.5	3977.8	3908.9
52.5°	3606.5	3466.3	3319.1	3319.5	3570.2	3732.4	3836.8	3708.0	3734.1	4443.7	4413.1
55°	3927.3	3749.2	3627.3	3723.5	4097.2	4188.1	4586.4	4473.5	4439.6	4875.8	4838.3
57.5°	3971.3	3757.7	3699.8	3868.6	4380.1	4960.6	5389.0	5106.9	5055.1	5237.3	5311.9
60°	3560.4	3333.8	3377.4	3648.9	4472.2	5431.3	6125.9	5895.6	5566.7	5660.8	5712.2
62.5°	2655.5	2474.6	2596.9	2956.4	4117.2	5746.8	6979.0	7085.8	6160.1	5978.8	5967.8
65°	1722.9	1609.6	1689.9	1984.6	3115.7	5711.0	7741.2	8204.3	6627.7	6238.0	6048.0
67.5°	1139.7	1053.7	1065.1	1239.5	2014.8	4644.7	8196.9	8756.6	7153.5	6385.1	5587.9
70°	849.4	781.8	785.9	880.4	1195.9	3063.2	7561.5	8320.9	7345.5	5875.2	4510.2
72.5°	612.6	567.4	605.3	710.5	953.0	1619.8	5636.0	6852.7	6405.1	4634.1	3038.7
75°	424.3	394.6	456.5	594.3	869.8	1005.6	3724.3	4932.8	4489.4	2907.4	1373.6
77.5°	235.2	226.2	315.5	484.2	789.5	824.2	2281.4	3241.3	2490.1	1042.2	326.9
80°	102.7	99.5	152.9	363.6	663.6	744.7	1284.4	1797.1	979.5	185.9	105.6
82.5°	44.0	42.4	65.2	218.9	482.2	622.8	792.0	864.9	337.1	57.5	59.9
85°	7.7	8.6	26.1	115.4	293.5	316.3	573.5	512.0	169.6	27.3	42.8
87.5°	0.0	0.0	4.1	22.4	55.0	90.5	248.6	179.3	32.2	9.0	7.3
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°	805.4	805.4	805.4	805.4	805.4	805.4	805.4	805.4	805.4	805.4	805.4
2.5°	981.5	958.7	871.9	860.9	849.0	831.5	825.0	787.5	782.6	830.7	830.7
5°	1221.6	1140.1	1057.3	992.1	933.8	853.1	830.3	806.7	787.5	782.6	797.7
7.5°	1348.4	1248.9	1118.9	953.0	818.5	701.5	652.6	618.3	580.0	591.4	597.5
10°	1341.4	1235.9	1070.0	856.8	707.6	578.4	454.1	381.5	341.2	321.2	318.7
12.5°	1409.5	1310.0	1036.9	780.2	589.8	411.3	285.7	234.0	204.2	204.6	202.2
15°	1449.0	1340.6	998.6	683.1	415.3	264.5	198.1	186.7	182.6	187.1	184.6
17.5°	1518.7	1372.8	911.8	538.4	285.7	199.7	182.2	177.7	183.0	192.4	189.9
20°	1513.4	1317.0	788.3	379.5	211.1	179.8	172.4	165.5	176.5	186.3	184.6
22.5°	1508.5	1262.4	672.1	280.0	176.5	163.9	157.7	154.9	160.6	172.0	174.5
25°	1465.3	1235.5	554.3	210.3	159.8	148.8	145.9	143.5	145.5	154.9	154.5
27.5°	1518.3	1167.4	428.0	176.5	148.0	134.9	132.5	128.4	124.3	132.5	133.7
30°	1507.3	1176.8	335.5	155.3	136.1	118.6	119.4	110.9	103.5	110.9	110.9
32.5°	1547.3	1108.3	268.6	141.0	124.3	111.7	101.5	92.5	87.2	91.7	92.5
35°	1605.6	1111.1	210.3	132.1	114.1	99.5	87.2	78.3	73.4	75.4	76.6
37.5°	1800.8	1091.6	175.7	125.1	110.5	92.1	79.5	67.7	64.4	66.8	68.1
40°	1928.0	1143.7	154.9	121.5	101.1	84.8	68.1	59.5	56.7	57.9	59.9
42.5°	2167.6	1172.7	144.7	117.4	92.5	72.6	58.3	53.4	49.3	51.0	52.6
45°	2424.0	1222.0	137.0	112.9	86.0	63.6	51.4	47.3	42.0	42.4	44.0
47.5°	2739.1	1339.4	128.0	105.2	77.0	57.9	45.7	39.5	34.6	34.2	36.3
50°	3162.2	1496.3	119.8	95.4	71.3	53.0	39.9	32.2	28.1	26.9	28.5
52.5°	3613.8	1699.3	111.3	88.5	64.4	46.5	34.2	26.1	22.4	21.6	22.8
55°	4061.4	1894.1	103.1	84.0	57.1	39.9	28.9	21.6	18.3	17.5	18.3
57.5°	4571.3	2104.9	92.5	75.0	50.1	34.6	24.0	17.9	15.1	14.3	14.7
60°	4955.3	2179.1	83.6	65.2	43.6	30.6	20.4	14.3	12.2	11.4	11.8
62.5°	5137.5	2058.0	75.0	56.7	38.3	26.5	17.1	11.8	10.2	9.4	9.4
65°	5090.2	1789.8	66.4	48.5	33.0	22.0	13.5	10.2	9.0	7.7	7.3
67.5°	4544.0	1400.5	56.7	40.8	27.7	17.9	11.4	9.8	8.2	7.3	6.1
70°	3603.6	1014.1	46.1	33.8	23.2	14.7	9.0	9.0	7.7	7.3	5.7
72.5°	2362.1	638.3	37.5	27.3	19.2	11.4	6.9	8.2	7.3	7.3	5.3
75°	1023.5	228.3	30.2	22.0	15.9	7.7	6.1	7.3	7.7	7.3	6.1
77.5°	239.7	70.9	23.6	17.5	13.0	5.3	6.1	7.3	7.7	6.9	5.3
80°	90.1	30.2	15.5	11.4	10.2	3.3	5.3	4.5	4.1	2.9	0.8
82.5°	54.6	12.6	8.2	5.7	4.9	0.8	2.4	1.6	0.8	0.8	0.0
85°	38.7	6.1	4.5	4.1	2.4	0.0	0.4	0.0	0.0	0.4	0.0
87.5°	5.3	1.6	2.0	2.0	1.6	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)