

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: P368599

Luminaire Tested: **MSA-SA4D-727-U-T4W-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368599
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-15)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA4D-727-U-T4W-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS
EACH AND TYPE IV WIDE OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 16587 lumens
Efficiency: N/A
Efficacy: 64.0 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G4

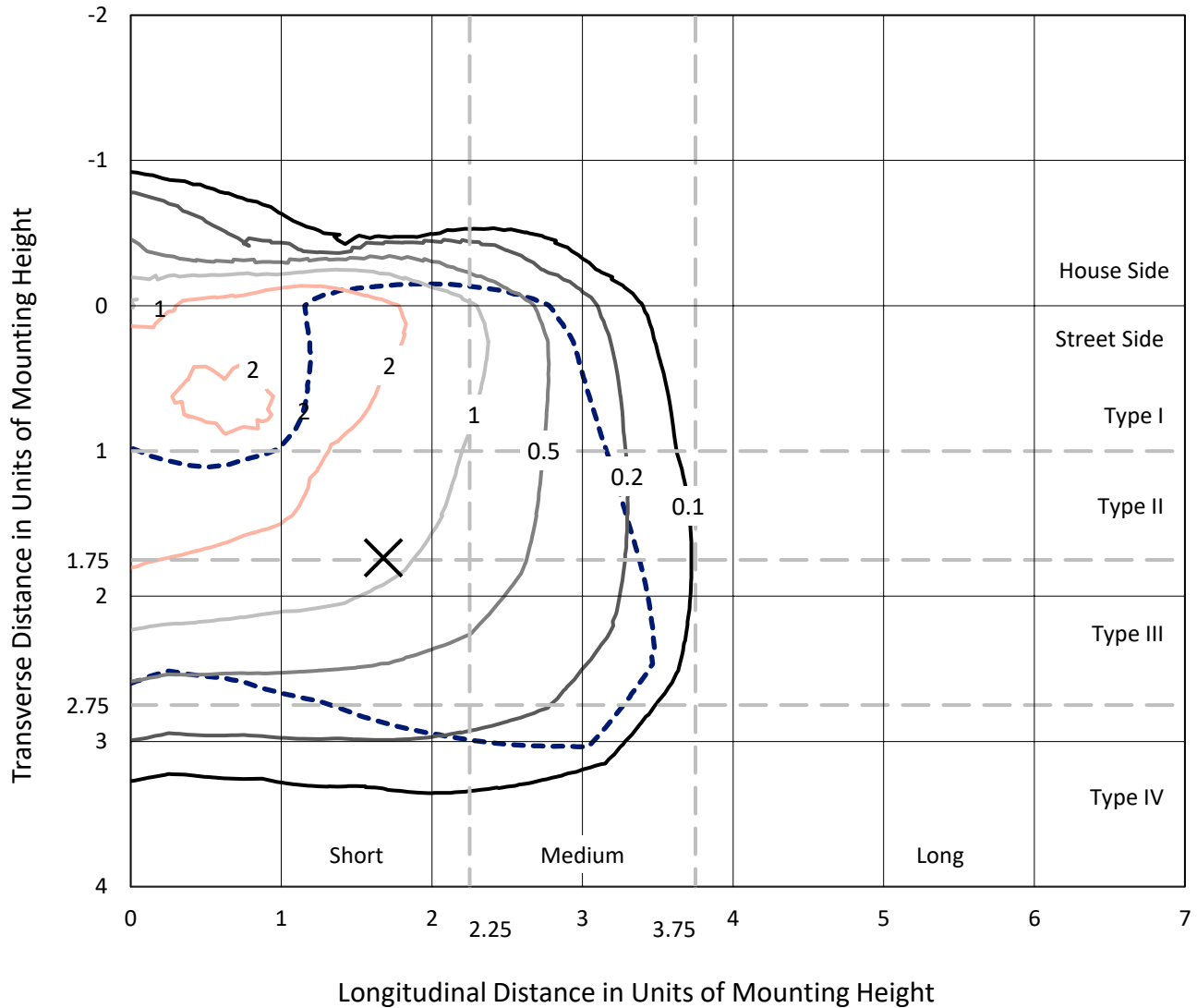
Input Watts (W): 259
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

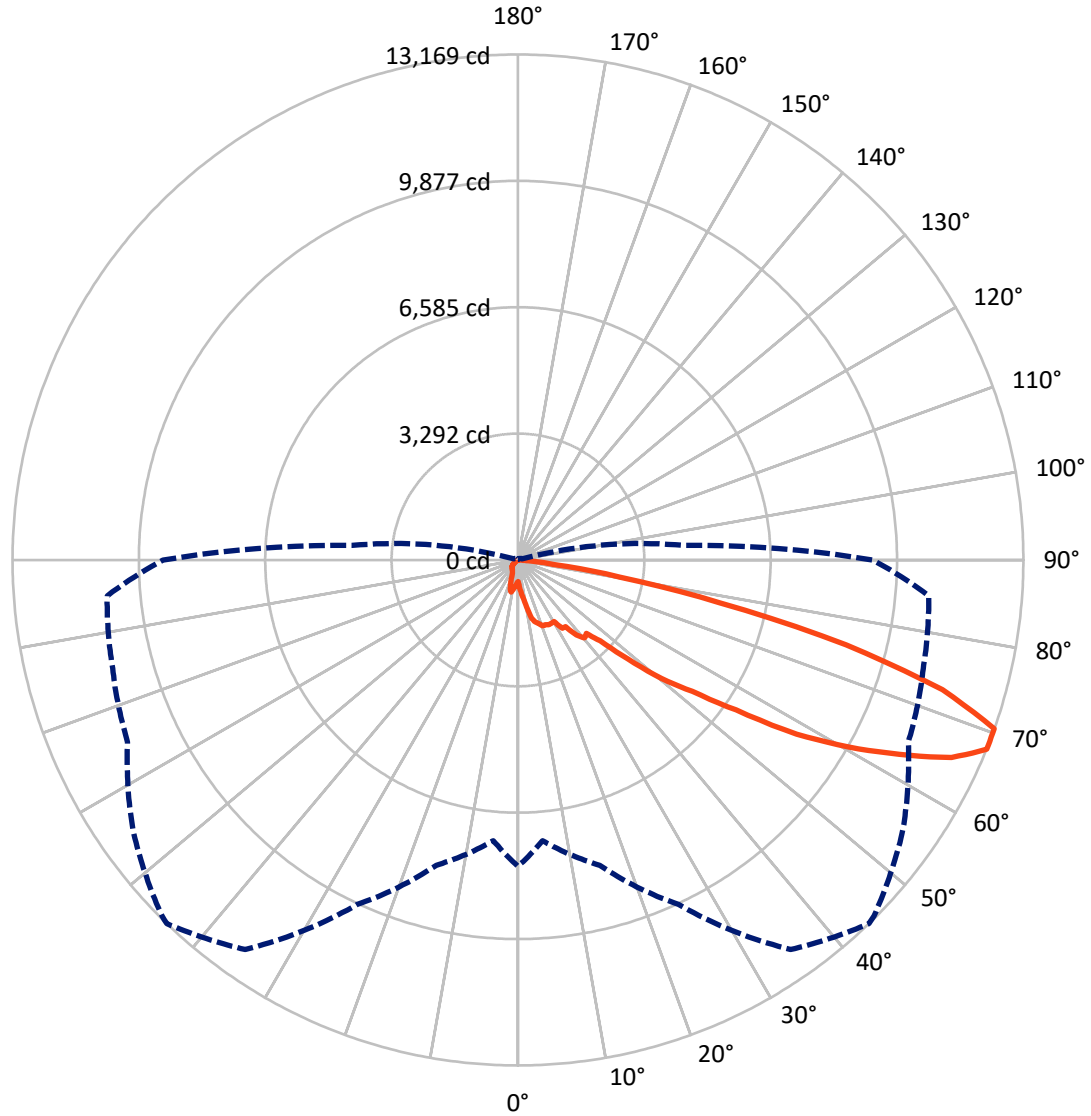
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.9 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 44-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1684.9	0.0	1684.9
	% Fixture	10.2	0.0	10.2
Street Side	Lumens	14902.1	0.0	14902.1
	% Fixture	89.8	0.0	89.8
Total	Lumens	16587.0	0.0	16587.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	82.8	0.5
10°-20°	346.8	2.1
20°-30°	614.3	3.7
30°-40°	998.5	6.0
40°-50°	1998.1	12.0
50°-60°	4099.2	24.7
60°-70°	5631.1	33.9
70°-80°	2646.7	16.0
80°-90°	169.5	1.0
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°	16587.0	100.0
0°-180°	16587.0	100.0

Coefficient of Utilization

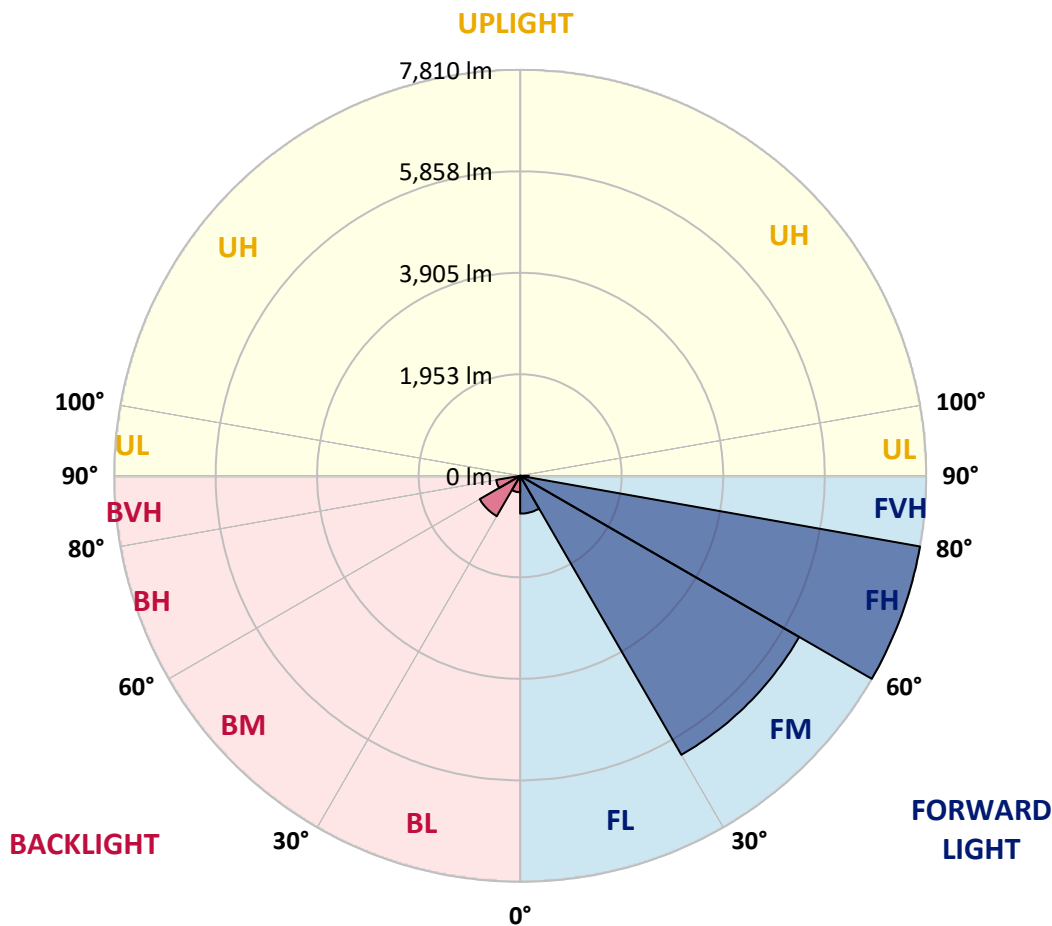


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	727.5	4.4			
FM (30°-60°)	6198.3	37.4			
FH (60°-80°)	7810.2	47.1			G4/12000
FVH (80°-90°)	166.1	1.0			G2/225
BL (0°-30°)	316.4	1.9	B1/500		
BM (30°-60°)	897.5	5.4	B1/1000		
BH (60°-80°)	467.6	2.8	B1/500		G1/500
BVH (80°-90°)	3.5	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-G4
 Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	558.8	558.8	558.8	558.8	558.8	558.8	558.8	558.8	558.8	558.8	558.8
2.5°	710.7	687.8	654.9	662.2	665.9	675.9	676.8	664.0	627.4	617.4	662.2
5°	996.0	940.3	930.2	909.2	867.1	844.2	838.7	861.6	832.3	823.2	835.1
7.5°	1272.3	1224.7	1172.6	1144.2	1056.4	1002.5	999.7	1008.9	1014.3	982.3	998.8
10°	1456.1	1404.0	1393.0	1326.2	1250.3	1237.5	1232.0	1197.3	1168.9	1145.1	1065.6
12.5°	1622.6	1621.7	1641.8	1545.8	1533.9	1546.7	1542.1	1417.7	1389.3	1289.7	1266.8
15°	1843.9	1898.8	1811.9	1731.4	1629.0	1672.9	1661.0	1581.4	1562.2	1494.5	1396.7
17.5°	2073.5	2088.1	1942.7	1819.2	1792.7	1735.1	1747.0	1718.6	1621.7	1675.6	1578.7
20°	2079.0	2111.0	1955.5	1751.5	1833.0	1830.2	1831.1	1803.7	1675.6	1801.9	1713.1
22.5°	2155.8	2077.2	1932.6	1802.8	1817.4	1831.1	1845.8	1811.9	1784.5	1815.6	1832.0
25°	2124.7	2093.6	1954.6	1868.6	1854.9	1865.9	1869.5	1912.5	1895.1	1970.1	1929.0
27.5°	2205.2	2160.4	1911.6	1927.2	1878.7	1865.9	1843.9	1987.5	2038.7	1979.3	2089.1
30°	2343.3	2336.9	1985.7	2008.6	1971.1	1858.6	1917.1	2104.6	2168.6	2132.0	2265.6
32.5°	2559.2	2581.1	2202.5	2054.3	2073.5	2123.8	2101.9	2104.6	2266.5	2347.9	2454.0
35°	2865.6	2853.7	2413.8	2228.1	2127.5	2135.7	2166.8	2315.9	2525.3	2519.8	2632.4
37.5°	3467.4	3337.5	2787.8	2405.5	2435.7	2476.9	2454.0	2654.3	2674.4	2681.7	2950.6
40°	4354.6	4181.8	3377.8	2779.6	2488.8	2670.8	2659.8	2709.2	2843.6	2893.9	3286.3
42.5°	5523.5	5291.2	4415.9	3467.4	2744.9	2619.5	2687.2	2780.5	3232.4	3376.0	3805.8
45°	6815.0	6344.9	5451.3	4447.9	3386.9	2998.2	3049.4	3223.2	3849.7	4087.6	4562.3
47.5°	7651.9	7238.5	6476.6	5316.8	4056.5	3852.5	3857.1	3894.6	4575.1	5015.9	5652.5
50°	8379.1	7939.1	7232.1	6225.1	5240.9	4854.9	4767.1	4594.3	5498.9	6101.6	6807.7
52.5°	9405.3	8891.3	7987.6	7290.6	6591.9	5682.7	5651.6	5710.1	6588.2	7222.0	7992.2
55°	10330.9	9706.2	8843.7	8404.7	8132.1	6899.2	6925.7	7023.6	7986.7	8322.4	9045.8
57.5°	10739.8	10062.9	9619.3	9421.8	9276.3	8561.1	8471.5	8412.9	9089.8	9217.8	10149.8
60°	11007.8	10363.9	10162.6	10208.4	10649.2	9890.1	9808.7	9468.4	10002.6	10107.8	11139.5
62.5°	10838.6	10251.4	10294.3	10675.7	11654.4	11155.0	10920.0	10351.0	10748.9	10834.0	11850.2
65°	9773.0	9161.1	9713.5	10636.4	12420.9	12409.0	12300.2	11166.0	11162.3	11271.2	11905.0
67.5°	7983.0	7340.9	8234.6	9899.2	12388.9	13169.1	13117.9	12247.1	11221.8	10930.9	10743.4
70°	5550.1	4993.1	6006.5	8175.1	11284.9	13163.6	13081.3	12973.3	10751.7	9409.0	8329.7
72.5°	2883.9	2577.5	3521.4	5633.3	8995.5	11565.7	11837.3	11659.9	9180.3	6836.1	4905.2
75°	979.6	879.0	1452.5	2990.0	5980.0	8831.8	9150.1	8969.9	6235.1	3667.7	1940.0
77.5°	379.6	353.1	520.4	1213.7	3000.0	5381.8	5727.5	5543.7	3343.9	1343.6	456.4
80°	215.9	208.5	287.2	547.0	1322.6	2677.2	2920.5	2648.8	1205.5	452.7	118.9
82.5°	91.5	94.2	160.1	295.4	664.9	944.8	1053.7	961.3	504.9	310.1	43.9
85°	20.1	24.7	75.9	164.6	279.0	269.8	282.6	313.7	310.1	227.7	19.2
87.5°	0.0	0.0	23.8	44.8	66.8	43.9	34.8	61.3	95.1	91.5	8.2
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°	558.8	558.8	558.8	558.8	558.8	558.8	558.8	558.8	558.8	558.8	558.8
2.5°	670.4	661.3	603.7	600.0	603.7	593.6	592.7	571.7	573.5	621.0	624.7
5°	835.1	789.3	739.9	724.4	709.8	676.8	695.1	695.1	695.1	725.3	734.5
7.5°	984.2	922.9	853.4	794.8	738.1	697.0	725.3	745.4	757.3	796.7	814.9
10°	1051.8	991.5	929.3	846.0	802.1	786.6	753.7	736.3	757.3	749.1	759.2
12.5°	1196.4	1141.5	1034.5	948.5	915.6	862.5	765.6	697.9	653.1	645.7	643.9
15°	1337.2	1303.4	1159.8	1044.5	930.2	807.6	642.1	552.4	504.9	496.7	497.6
17.5°	1515.6	1467.1	1255.8	1090.3	896.4	675.9	495.7	418.9	415.2	435.4	437.2
20°	1634.5	1554.9	1304.3	1052.8	784.8	511.3	387.8	369.5	398.8	435.4	431.7
22.5°	1747.9	1661.9	1368.3	1019.8	608.2	387.8	356.7	358.5	383.2	422.6	432.6
25°	1822.9	1791.8	1447.0	943.0	463.7	335.7	341.2	354.9	375.9	413.4	413.4
27.5°	2048.8	1903.4	1437.8	793.9	356.7	312.8	325.6	343.0	354.0	398.8	403.4
30°	2186.0	2138.4	1485.4	642.1	312.8	283.5	308.2	323.8	331.1	382.3	384.2
32.5°	2354.3	2249.1	1543.0	473.8	290.9	281.7	276.2	288.1	309.2	354.0	356.7
35°	2559.2	2528.1	1460.7	372.3	283.5	263.4	252.4	258.8	272.6	302.7	309.2
37.5°	2977.2	2792.4	1411.3	319.2	283.5	257.0	245.1	228.7	230.5	251.5	263.4
40°	3329.3	3272.6	1273.2	310.1	270.7	247.9	218.6	198.5	184.8	191.2	195.7
42.5°	3976.0	3713.5	1094.8	305.5	258.8	224.1	185.7	164.6	143.6	145.4	152.7
45°	4760.7	4194.6	935.7	300.9	250.6	200.3	156.4	131.7	109.8	110.7	118.0
47.5°	5808.9	4896.1	742.7	287.2	236.0	178.4	126.2	100.6	87.8	90.5	97.0
50°	6999.8	5511.7	587.2	266.2	218.6	157.3	102.4	81.4	76.8	79.6	86.9
52.5°	8063.5	5965.3	484.8	247.0	193.9	128.1	86.0	72.3	70.4	72.3	77.7
55°	9009.3	6228.7	405.2	225.0	166.5	103.4	77.7	66.8	65.9	64.9	68.6
57.5°	9896.5	6304.7	316.5	190.2	135.4	89.6	72.3	62.2	60.4	57.6	60.4
60°	10543.1	6174.8	232.3	152.7	110.7	81.4	67.7	55.8	53.0	48.5	50.3
62.5°	10855.0	5819.0	175.6	122.6	94.2	74.1	60.4	48.5	44.8	39.3	40.2
65°	10558.7	5232.7	138.1	103.4	80.5	62.2	51.2	41.2	36.6	31.1	31.1
67.5°	9246.2	4340.9	117.1	89.6	67.7	53.0	42.1	37.5	30.2	25.6	24.7
70°	6786.7	3122.6	100.6	78.7	58.5	45.7	35.7	33.8	29.3	24.7	22.9
72.5°	3830.5	1767.1	86.0	69.5	49.4	38.4	30.2	31.1	28.4	22.9	21.0
75°	1461.6	595.4	71.3	57.6	40.2	29.3	25.6	25.6	25.6	19.2	16.5
77.5°	362.2	151.8	56.7	46.6	32.0	19.2	21.0	22.0	22.0	16.5	11.9
80°	99.7	51.2	33.8	33.8	22.9	11.0	14.6	14.6	11.9	5.5	0.0
82.5°	36.6	19.2	11.9	14.6	10.1	3.7	5.5	3.7	2.7	0.0	0.0
85°	15.5	10.1	7.3	8.2	4.6	0.0	0.9	1.8	0.0	0.0	0.0
87.5°	6.4	4.6	3.7	3.7	1.8	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)