

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: P367529

Luminaire Tested: **MSA-SA2D-727-U-SL3-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367529
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-SA2D-727-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: 9263 lumens
Efficiency: N/A
Efficacy: 71.8 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G2

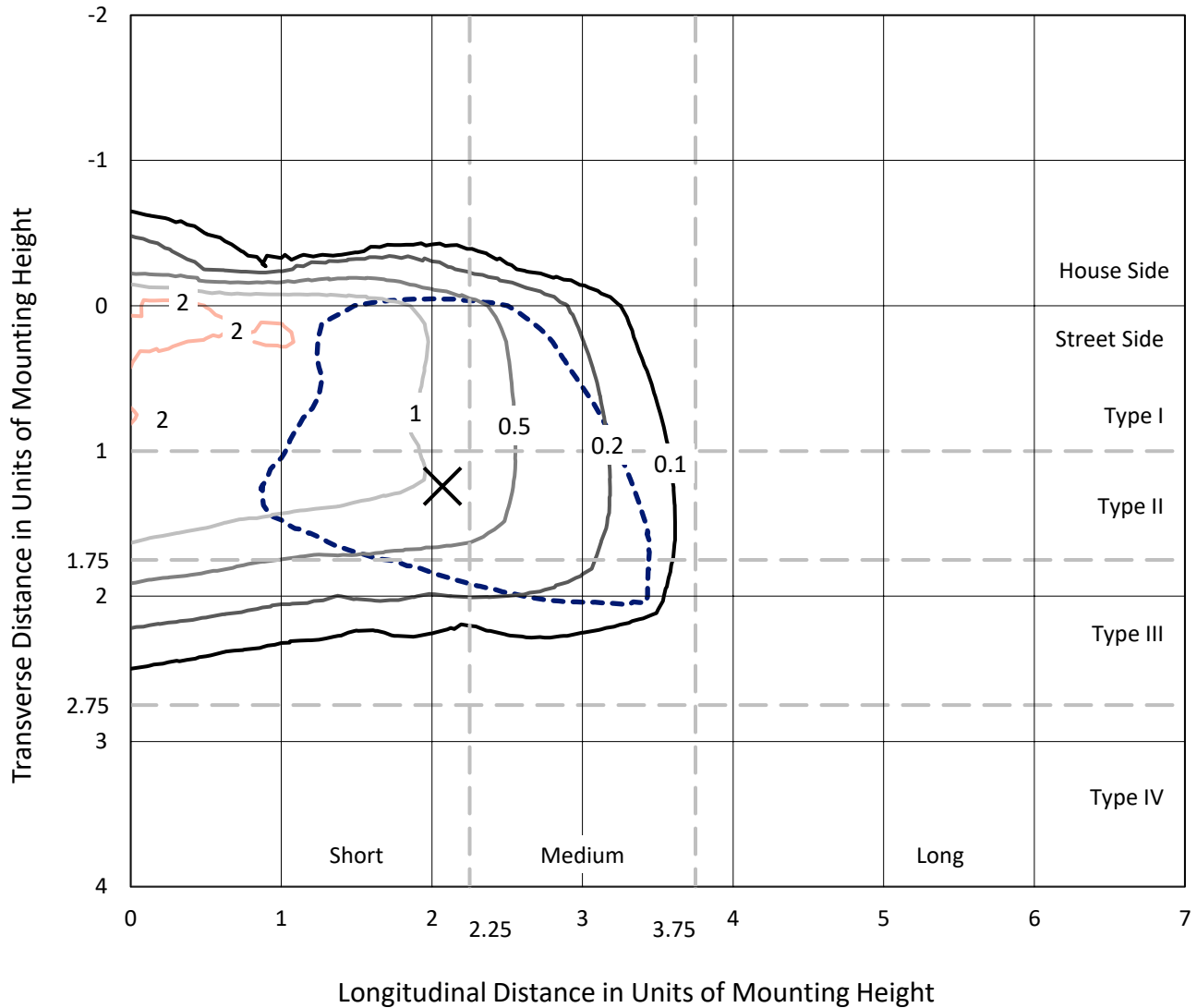
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

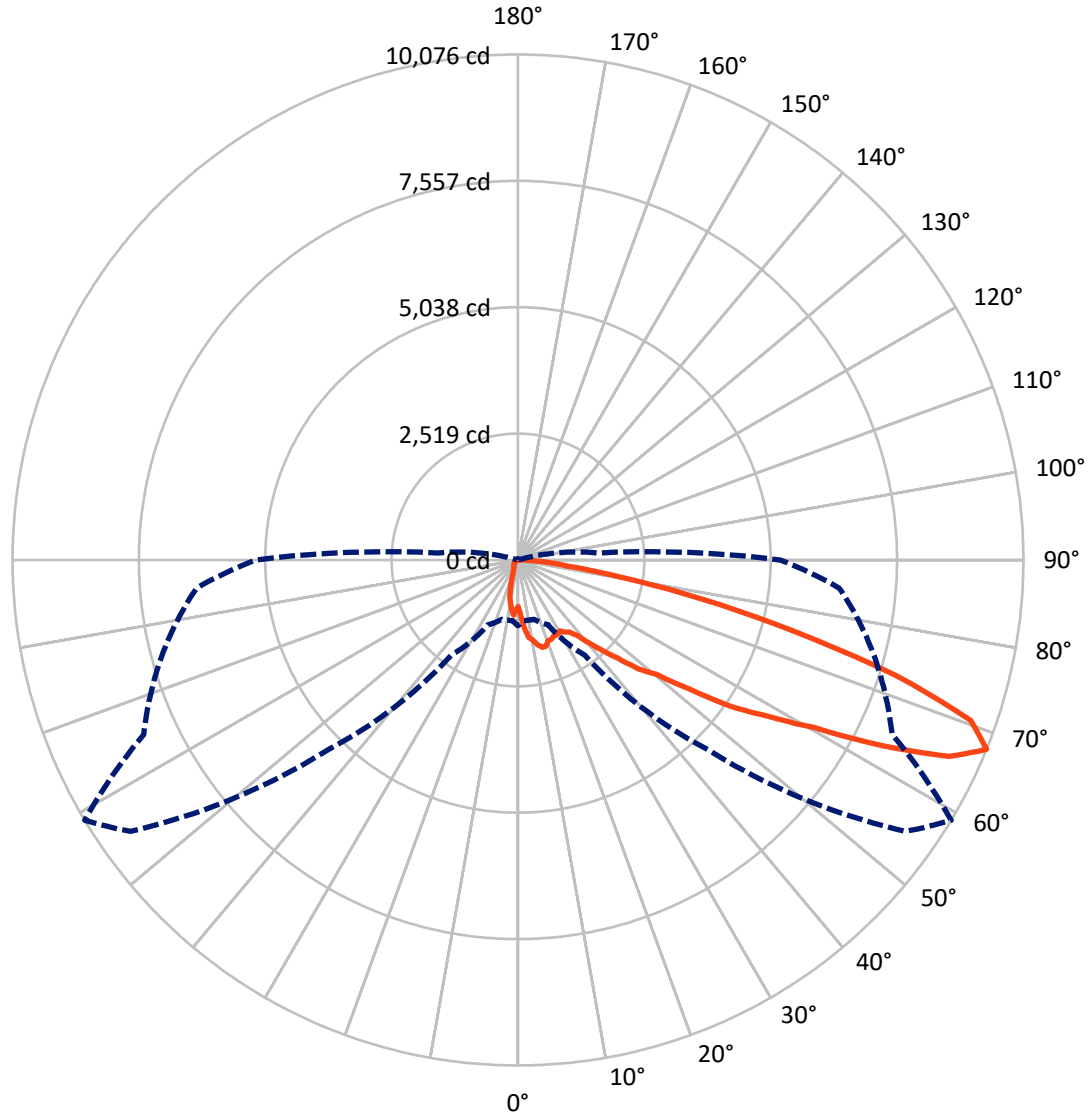
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.7 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	787.8	0.0	787.8
	% Fixture	8.5	0.0	8.5
Street Side	Lumens	8475.2	0.0	8475.2
	% Fixture	91.5	0.0	91.5
Total	Lumens	9263.0	0.0	9263.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	112.7	1.2
10°-20°	317.3	3.4
20°-30°	472.0	5.1
30°-40°	728.1	7.9
40°-50°	1299.5	14.0
50°-60°	2312.5	25.0
60°-70°	2693.2	29.1
70°-80°	1197.7	12.9
80°-90°	130.1	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°	9263.0	100.0
0°-180°	9263.0	100.0

Coefficient of Utilization



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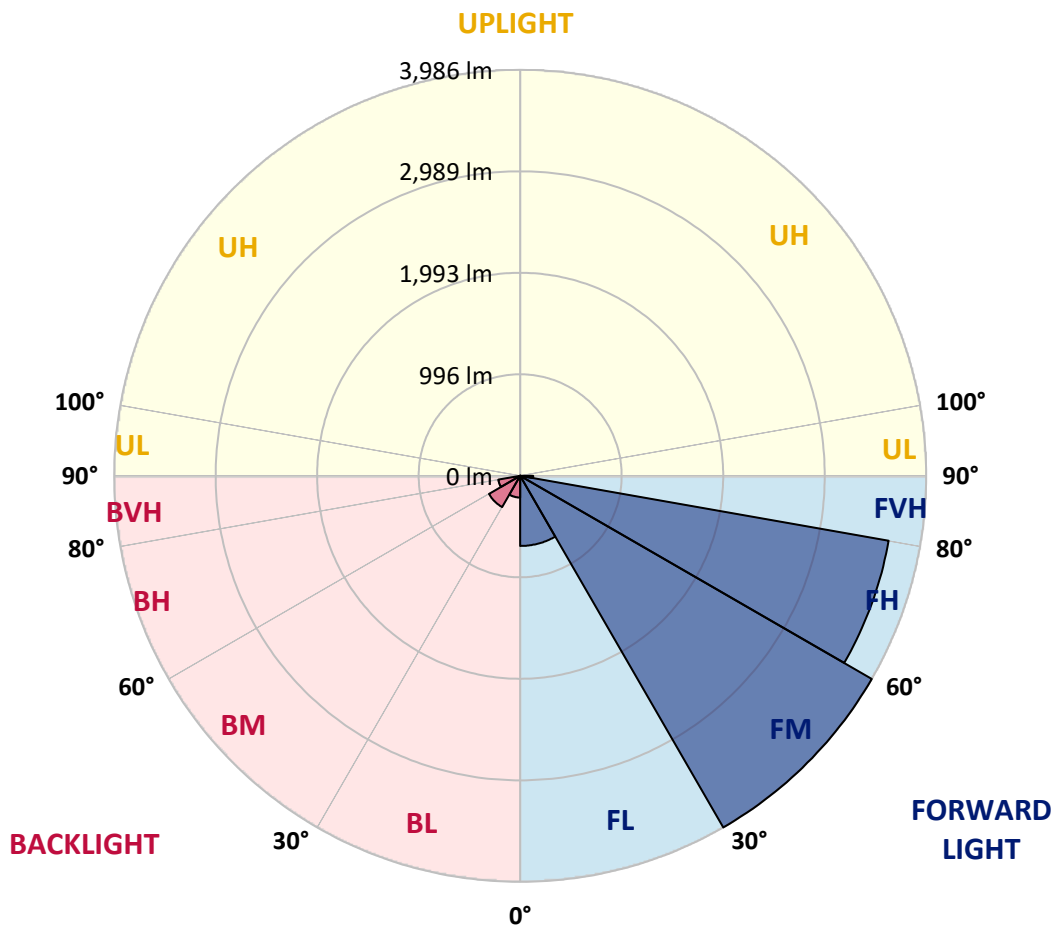
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	688.9	7.4			
FM (30°-60°)	3985.9	43.0			
FH (60°-80°)	3672.7	39.6			G2/5000
FVH (80°-90°)	127.8	1.4			G2/225
BL (0°-30°)	213.0	2.3	B1/500		
BM (30°-60°)	354.2	3.8	B1/1000		
BH (60°-80°)	218.2	2.4	B1/500		G1/500
BVH (80°-90°)	2.3	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-G2

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	926.8	926.8	926.8	926.8	926.8	926.8	926.8	926.8	926.8	926.8	926.8
2.5°	1208.2	1162.7	1098.0	1117.2	1134.6	1151.0	1123.8	1108.3	1100.8	1034.2	1117.7
5°	1483.5	1426.8	1397.2	1389.7	1371.0	1329.2	1398.6	1367.7	1378.0	1391.1	1418.3
7.5°	1567.5	1541.7	1499.0	1514.9	1443.7	1437.6	1533.7	1560.4	1595.6	1571.7	1604.5
10°	1524.3	1479.8	1499.9	1494.3	1491.5	1554.3	1621.9	1623.3	1675.8	1701.2	1590.0
12.5°	1439.0	1444.1	1516.4	1510.7	1604.5	1730.2	1745.7	1729.3	1815.1	1771.0	1754.2
15°	1495.7	1537.9	1498.1	1511.7	1545.0	1702.1	1757.0	1807.6	1888.8	1915.0	1801.1
17.5°	1564.2	1568.4	1495.7	1478.8	1562.8	1636.0	1765.4	1807.2	1815.1	2045.4	1906.6
20°	1527.1	1563.3	1476.5	1370.0	1500.4	1599.8	1731.2	1718.0	1771.5	2083.9	1930.5
22.5°	1625.6	1574.0	1462.9	1382.7	1426.8	1517.3	1628.5	1714.3	1794.5	1991.9	1961.5
25°	1635.0	1616.3	1517.3	1446.0	1438.5	1461.5	1616.3	1671.6	1797.3	2074.5	1935.2
27.5°	1740.6	1719.0	1516.4	1523.4	1453.0	1382.2	1557.2	1687.1	1848.4	2024.3	1991.0
30°	1876.6	1878.4	1617.2	1639.2	1538.9	1424.9	1605.5	1641.1	1883.1	2104.5	2032.3
32.5°	2014.5	2071.2	1816.5	1699.7	1668.3	1586.7	1545.4	1710.1	1845.1	2241.5	2135.5
35°	2224.1	2262.6	1980.7	1876.1	1752.7	1659.9	1708.7	1767.8	1981.6	2423.0	2271.0
37.5°	2579.2	2509.8	2275.2	2093.3	2063.7	1926.8	1951.1	1898.1	2120.9	2636.9	2539.3
40°	2779.0	2716.1	2472.2	2383.6	2195.0	2216.1	2139.2	2170.2	2323.1	2859.6	2783.7
42.5°	2987.2	2927.2	2713.3	2650.5	2470.8	2383.6	2348.9	2460.0	2633.1	3230.6	3134.0
45°	3196.4	3044.0	2953.4	2984.9	2904.2	2731.6	2691.3	2790.2	2971.7	3686.5	3503.6
47.5°	3372.8	3244.2	3176.2	3161.7	3130.3	3369.9	3205.8	3249.4	3329.6	4089.9	3964.2
50°	3690.8	3564.1	3457.7	3428.1	3581.0	3921.0	3667.8	3583.3	3743.8	4577.2	4497.9
52.5°	4149.9	3988.6	3819.3	3819.7	4108.2	4294.9	4414.9	4266.7	4296.7	5113.3	5078.1
55°	4519.1	4314.1	4173.9	4284.5	4714.6	4819.2	5277.5	5147.5	5108.6	5610.5	5567.3
57.5°	4569.7	4323.9	4257.3	4451.5	5040.1	5708.0	6201.0	5876.4	5816.8	6026.5	6112.3
60°	4096.9	3836.2	3886.3	4198.7	5146.1	6249.8	7049.0	6784.0	6405.5	6513.8	6572.9
62.5°	3055.7	2847.4	2988.2	3401.8	4737.6	6612.8	8030.6	8153.5	7088.4	6879.7	6867.0
65°	1982.6	1852.2	1944.6	2283.7	3585.2	6571.5	8907.7	9440.5	7626.3	7178.0	6959.4
67.5°	1311.4	1212.4	1225.6	1426.3	2318.4	5344.5	9432.1	10076.1	8231.4	7347.3	6429.9
70°	977.4	899.6	904.3	1013.1	1376.1	3524.7	8700.9	9574.7	8452.3	6760.5	5189.8
72.5°	704.9	652.9	696.5	817.5	1096.6	1863.9	6485.2	7885.2	7370.3	5332.3	3496.6
75°	488.3	454.0	525.3	683.8	1000.9	1157.1	4285.5	5676.1	5165.8	3345.6	1580.6
77.5°	270.6	260.3	363.0	557.2	908.5	948.4	2625.1	3729.7	2865.3	1199.3	376.2
80°	118.2	114.4	175.9	418.4	763.6	856.9	1477.9	2067.9	1127.1	213.9	121.5
82.5°	50.7	48.8	75.0	251.9	554.9	716.7	911.3	995.3	387.9	66.1	68.9
85°	8.9	9.8	30.0	132.7	337.7	364.0	659.9	589.1	195.1	31.4	49.2
87.5°	0.0	0.0	4.7	25.8	63.3	104.1	286.1	206.4	37.1	10.3	8.4
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°	926.8	926.8	926.8	926.8	926.8	926.8	926.8	926.8	926.8	926.8	926.8
2.5°	1129.4	1103.1	1003.2	990.6	977.0	956.8	949.3	906.2	900.5	955.9	955.9
5°	1405.7	1311.9	1216.7	1141.6	1074.5	981.7	955.4	928.2	906.2	900.5	917.9
7.5°	1551.5	1437.1	1287.5	1096.6	941.8	807.2	750.9	711.5	667.4	680.6	687.6
10°	1543.6	1422.1	1231.2	985.9	814.2	665.5	522.5	439.0	392.6	369.6	366.8
12.5°	1621.9	1507.4	1193.2	897.7	678.7	473.2	328.8	269.2	235.0	235.5	232.6
15°	1667.4	1542.6	1149.1	786.1	477.9	304.4	227.9	214.8	210.1	215.3	212.5
17.5°	1747.6	1579.7	1049.2	619.6	328.8	229.8	209.7	204.5	210.6	221.4	218.6
20°	1741.5	1515.4	907.1	436.7	243.0	206.8	198.4	190.4	203.1	214.3	212.5
22.5°	1735.9	1452.6	773.4	322.2	203.1	188.5	181.5	178.2	184.8	197.9	200.7
25°	1686.1	1421.6	637.9	242.0	183.9	171.2	167.9	165.1	167.4	178.2	177.8
27.5°	1747.1	1343.3	492.5	203.1	170.3	155.2	152.4	147.7	143.1	152.4	153.8
30°	1734.5	1354.1	386.0	178.7	156.7	136.5	137.4	127.6	119.1	127.6	127.6
32.5°	1780.4	1275.3	309.1	162.3	143.1	128.5	116.8	106.5	100.4	105.5	106.5
35°	1847.5	1278.6	242.0	152.0	131.3	114.4	100.4	90.1	84.4	86.8	88.2
37.5°	2072.2	1256.0	202.1	144.0	127.1	106.0	91.5	77.9	74.1	76.9	78.3
40°	2218.5	1316.1	178.2	139.8	116.3	97.6	78.3	68.5	65.2	66.6	68.9
42.5°	2494.3	1349.4	166.5	135.1	106.5	83.5	67.1	61.4	56.8	58.6	60.5
45°	2789.3	1406.1	157.6	129.9	99.0	73.2	59.1	54.4	48.3	48.8	50.7
47.5°	3151.8	1541.2	147.3	121.0	88.6	66.6	52.5	45.5	39.9	39.4	41.7
50°	3638.7	1721.8	137.9	109.8	82.1	61.0	46.0	37.1	32.4	31.0	32.8
52.5°	4158.4	1955.4	128.0	101.8	74.1	53.5	39.4	30.0	25.8	24.9	26.3
55°	4673.4	2179.6	118.7	96.6	65.7	46.0	33.3	24.9	21.1	20.2	21.1
57.5°	5260.1	2422.0	106.5	86.3	57.7	39.9	27.7	20.6	17.4	16.4	16.9
60°	5701.9	2507.4	96.2	75.0	50.2	35.2	23.5	16.4	14.1	13.1	13.6
62.5°	5911.6	2368.1	86.3	65.2	44.1	30.5	19.7	13.6	11.7	10.8	10.8
65°	5857.2	2059.5	76.5	55.8	38.0	25.3	15.5	11.7	10.3	8.9	8.4
67.5°	5228.7	1611.6	65.2	46.9	31.9	20.6	13.1	11.3	9.4	8.4	7.0
70°	4146.6	1166.9	53.0	38.9	26.7	16.9	10.3	10.3	8.9	8.4	6.6
72.5°	2718.0	734.5	43.2	31.4	22.0	13.1	8.0	9.4	8.4	8.4	6.1
75°	1177.7	262.7	34.7	25.3	18.3	8.9	7.0	8.4	8.9	8.4	7.0
77.5°	275.8	81.6	27.2	20.2	15.0	6.1	7.0	8.4	8.9	8.0	6.1
80°	103.7	34.7	17.8	13.1	11.7	3.8	6.1	5.2	4.7	3.3	0.9
82.5°	62.8	14.5	9.4	6.6	5.6	0.9	2.8	1.9	0.9	0.9	0.0
85°	44.6	7.0	5.2	4.7	2.8	0.0	0.5	0.0	0.0	0.5	0.0
87.5°	6.1	1.9	2.3	2.3	1.9	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)