

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: P596635

Luminaire Tested: **MSA-SA2D-827-U-SL3-HSS**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596635
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-19)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA2D-827-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: 8142 lumens
Efficiency: N/A
Efficacy: 63.1 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G2

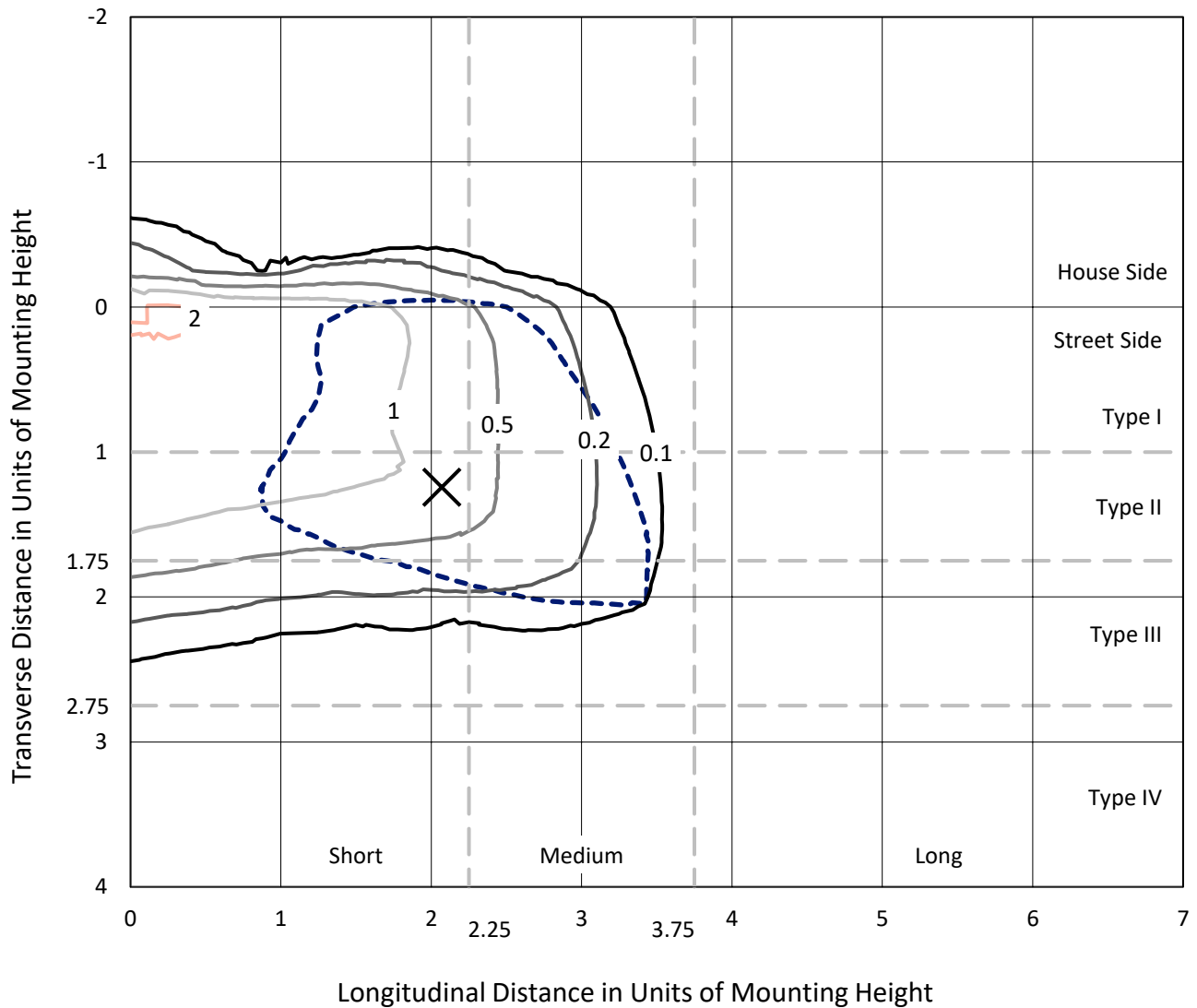
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

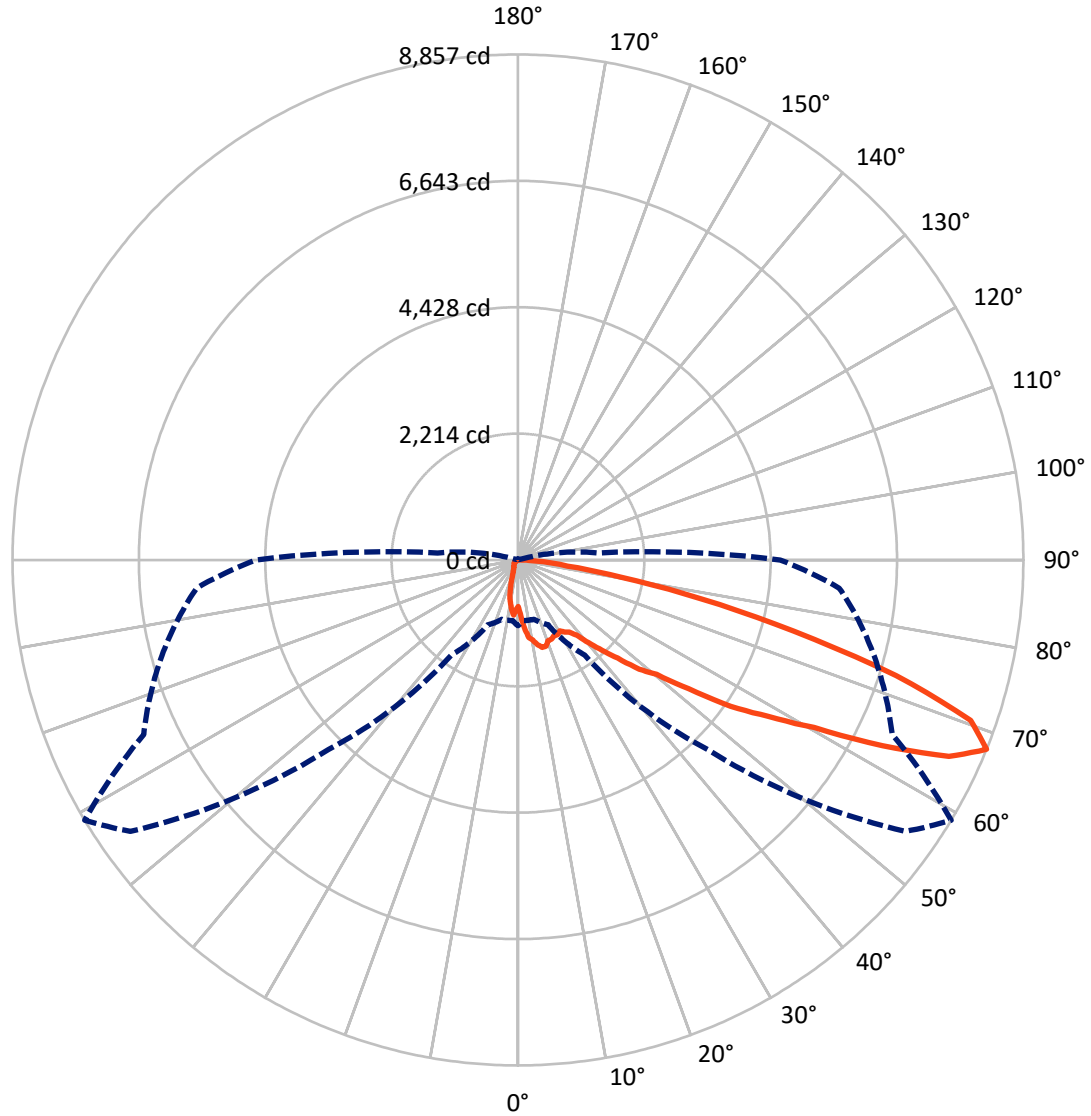
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.3 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	692.4	0.0	692.4
	% Fixture	8.5	0.0	8.5
Street Side	Lumens	7449.6	0.0	7449.6
	% Fixture	91.5	0.0	91.5
Total	Lumens	8142.0	0.0	8142.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	99.0	1.2
10°-20°	278.9	3.4
20°-30°	414.8	5.1
30°-40°	640.0	7.9
40°-50°	1142.2	14.0
50°-60°	2032.6	25.0
60°-70°	2367.3	29.1
70°-80°	1052.8	12.9
80°-90°	114.3	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°	8142.0	100.0
0°-180°	8142.0	100.0

Coefficient of Utilization

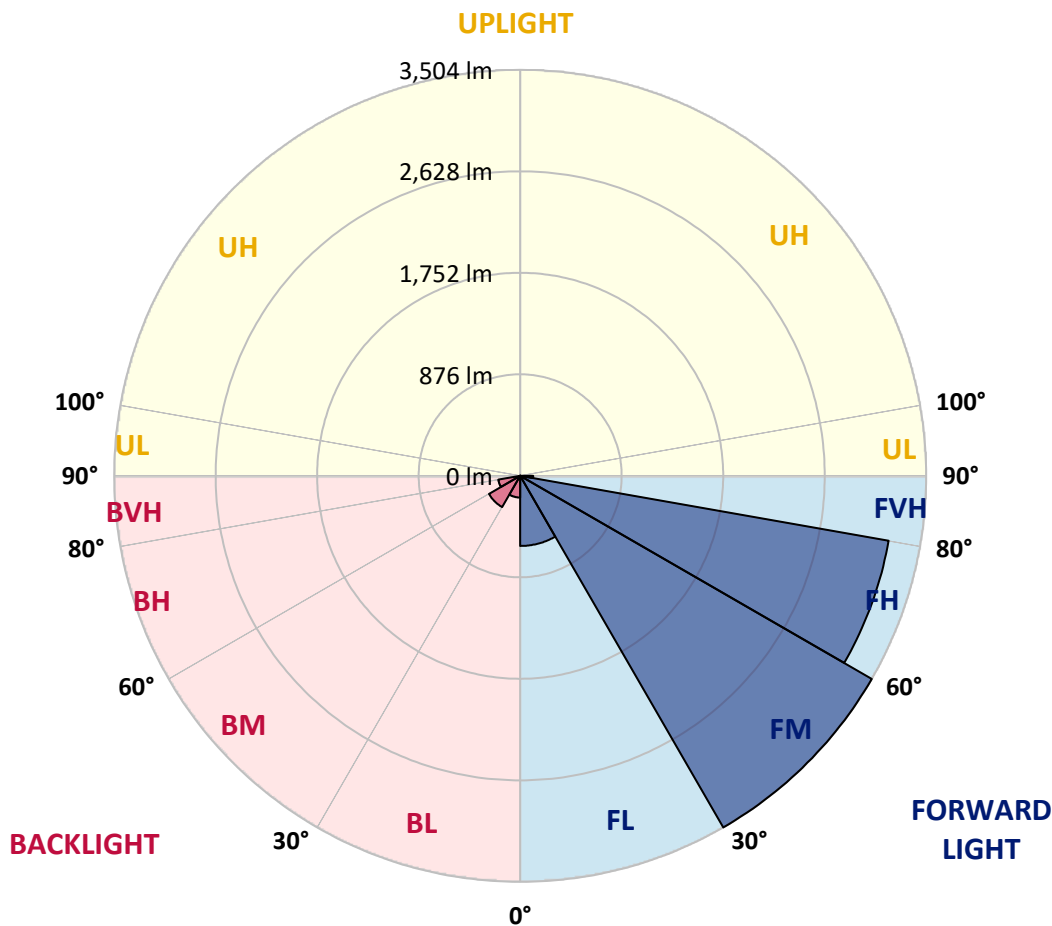


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	605.5	7.4			
FM (30°-60°)	3503.5	43.0			
FH (60°-80°)	3228.2	39.6			G2/5000
FVH (80°-90°)	112.3	1.4			G2/225
BL (0°-30°)	187.3	2.3	B1/500		
BM (30°-60°)	311.3	3.8	B1/1000		
BH (60°-80°)	191.8	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°	814.6	814.6	814.6	814.6	814.6	814.6	814.6	814.6	814.6	814.6	814.6
2.5°	1062.0	1022.0	965.1	982.0	997.3	1011.7	987.8	974.2	967.6	909.0	982.4
5°	1304.0	1254.1	1228.1	1221.5	1205.0	1168.4	1229.4	1202.2	1211.2	1222.8	1246.7
7.5°	1377.8	1355.1	1317.6	1331.6	1268.9	1263.6	1348.1	1371.6	1402.5	1381.5	1410.4
10°	1339.9	1300.7	1318.4	1313.5	1311.0	1366.2	1425.6	1426.8	1473.0	1495.3	1397.6
12.5°	1264.8	1269.4	1332.8	1327.9	1410.4	1520.8	1534.4	1520.0	1595.5	1556.7	1541.9
15°	1314.7	1351.8	1316.8	1328.7	1358.0	1496.1	1544.3	1588.9	1660.2	1683.3	1583.1
17.5°	1374.9	1378.6	1314.7	1299.9	1373.7	1438.0	1551.8	1588.5	1595.5	1797.9	1675.9
20°	1342.3	1374.1	1297.8	1204.2	1318.8	1406.2	1521.7	1510.1	1557.1	1831.7	1696.9
22.5°	1428.9	1383.6	1285.9	1215.4	1254.1	1333.7	1431.4	1506.8	1577.3	1750.9	1724.1
25°	1437.2	1420.7	1333.7	1271.0	1264.4	1284.6	1420.7	1469.3	1579.8	1823.4	1701.0
27.5°	1529.9	1510.9	1332.8	1339.0	1277.2	1214.9	1368.7	1482.9	1624.7	1779.3	1750.1
30°	1649.5	1651.1	1421.5	1440.9	1352.6	1252.5	1411.2	1442.5	1655.2	1849.8	1786.3
32.5°	1770.7	1820.6	1596.7	1494.0	1466.4	1394.7	1358.4	1503.1	1621.8	1970.2	1877.0
35°	1955.0	1988.8	1741.0	1649.1	1540.6	1459.0	1501.9	1553.8	1741.8	2129.8	1996.2
37.5°	2267.0	2206.0	1999.9	1839.9	1814.0	1693.6	1715.0	1668.4	1864.3	2317.7	2232.0
40°	2442.7	2387.4	2173.0	2095.1	1929.4	1947.9	1880.3	1907.5	2041.9	2513.6	2446.8
42.5°	2625.7	2572.9	2384.9	2329.7	2171.8	2095.1	2064.6	2162.3	2314.4	2839.7	2754.7
45°	2809.6	2675.6	2596.0	2623.6	2552.7	2401.0	2365.6	2452.6	2612.1	3240.4	3079.6
47.5°	2964.6	2851.6	2791.9	2779.1	2751.4	2962.1	2817.8	2856.2	2926.7	3594.9	3484.5
50°	3244.1	3132.8	3039.2	3013.2	3147.6	3446.5	3223.9	3149.7	3290.7	4023.3	3953.6
52.5°	3647.7	3505.9	3357.1	3357.5	3611.0	3775.1	3880.6	3750.4	3776.7	4494.5	4463.6
55°	3972.2	3792.0	3668.7	3766.0	4144.1	4236.0	4638.8	4524.6	4490.4	4931.5	4893.6
57.5°	4016.7	3800.7	3742.1	3912.8	4430.2	5017.2	5450.5	5165.3	5112.9	5297.2	5372.6
60°	3601.1	3371.9	3416.0	3690.6	4523.4	5493.4	6195.9	5963.0	5630.3	5725.5	5777.5
62.5°	2685.9	2502.9	2626.5	2990.1	4164.3	5812.5	7058.8	7166.8	6230.5	6047.1	6036.0
65°	1742.6	1628.0	1709.2	2007.3	3151.3	5776.2	7829.7	8298.0	6703.4	6309.3	6117.2
67.5°	1152.7	1065.7	1077.2	1253.7	2037.8	4697.7	8290.6	8856.7	7235.2	6458.1	5651.7
70°	859.2	790.7	794.8	890.5	1209.6	3098.2	7647.9	8416.0	7429.4	5942.4	4561.7
72.5°	619.6	573.9	612.2	718.6	963.9	1638.3	5700.4	6931.0	6478.3	4687.0	3073.4
75°	429.2	399.1	461.7	601.1	879.8	1017.1	3766.9	4989.2	4540.7	2940.7	1389.3
77.5°	237.9	228.8	319.1	489.8	798.6	833.6	2307.4	3278.3	2518.5	1054.2	330.6
80°	103.9	100.6	154.6	367.7	671.2	753.2	1299.0	1817.7	990.7	188.0	106.8
82.5°	44.5	42.9	66.0	221.4	487.7	629.9	801.0	874.8	340.9	58.1	60.6
85°	7.8	8.7	26.4	116.7	296.8	319.9	580.1	517.8	171.5	27.6	43.3
87.5°	0.0	0.0	4.1	22.7	55.7	91.5	251.5	181.4	32.6	9.1	7.4
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°	814.6	814.6	814.6	814.6	814.6	814.6	814.6	814.6	814.6	814.6	814.6
2.5°	992.7	969.6	881.8	870.7	858.7	841.0	834.4	796.5	791.5	840.2	840.2
5°	1235.6	1153.1	1069.4	1003.4	944.5	862.9	839.8	815.9	796.5	791.5	806.8
7.5°	1363.8	1263.2	1131.7	963.9	827.8	709.5	660.0	625.4	586.7	598.2	604.4
10°	1356.8	1250.0	1082.2	866.6	715.7	585.0	459.3	385.9	345.1	324.9	322.4
12.5°	1425.6	1325.0	1048.8	789.1	596.5	416.0	289.0	236.6	206.5	207.0	204.5
15°	1465.6	1355.9	1010.0	691.0	420.1	267.6	200.4	188.8	184.7	189.2	186.8
17.5°	1536.1	1388.5	922.2	544.6	289.0	202.0	184.3	179.7	185.1	194.6	192.1
20°	1530.7	1332.0	797.3	383.8	213.6	181.8	174.4	167.4	178.5	188.4	186.8
22.5°	1525.8	1276.8	679.8	283.2	178.5	165.7	159.5	156.7	162.4	174.0	176.4
25°	1482.1	1249.6	560.7	212.7	161.6	150.5	147.6	145.1	147.2	156.7	156.2
27.5°	1535.7	1180.7	432.9	178.5	149.7	136.5	134.0	129.9	125.7	134.0	135.2
30°	1524.6	1190.2	339.3	157.1	137.7	120.0	120.8	112.1	104.7	112.1	112.1
32.5°	1565.0	1120.9	271.7	142.6	125.7	113.0	102.7	93.6	88.2	92.8	93.6
35°	1623.9	1123.8	212.7	133.6	115.4	100.6	88.2	79.2	74.2	76.3	77.5
37.5°	1821.4	1104.0	177.7	126.6	111.7	93.2	80.4	68.4	65.1	67.6	68.8
40°	1950.0	1156.8	156.7	122.9	102.2	85.8	68.8	60.2	57.3	58.5	60.6
42.5°	2192.4	1186.1	146.4	118.7	93.6	73.4	59.0	54.0	49.9	51.5	53.2
45°	2451.7	1236.0	138.5	114.2	87.0	64.3	51.9	47.8	42.5	42.9	44.5
47.5°	2770.4	1354.7	129.5	106.4	77.9	58.5	46.2	40.0	35.0	34.6	36.7
50°	3198.3	1513.4	121.2	96.5	72.1	53.6	40.4	32.6	28.4	27.2	28.9
52.5°	3655.1	1718.7	112.5	89.5	65.1	47.0	34.6	26.4	22.7	21.8	23.1
55°	4107.8	1915.8	104.3	84.9	57.7	40.4	29.3	21.8	18.6	17.7	18.6
57.5°	4623.5	2128.9	93.6	75.9	50.7	35.0	24.3	18.1	15.3	14.4	14.8
60°	5011.9	2204.0	84.5	66.0	44.1	30.9	20.6	14.4	12.4	11.5	12.0
62.5°	5196.2	2081.5	75.9	57.3	38.8	26.8	17.3	12.0	10.3	9.5	9.5
65°	5148.3	1810.3	67.2	49.1	33.4	22.3	13.6	10.3	9.1	7.8	7.4
67.5°	4595.9	1416.5	57.3	41.2	28.0	18.1	11.5	9.9	8.2	7.4	6.2
70°	3644.8	1025.7	46.6	34.2	23.5	14.8	9.1	9.1	7.8	7.4	5.8
72.5°	2389.1	645.6	37.9	27.6	19.4	11.5	7.0	8.2	7.4	7.4	5.4
75°	1035.2	230.9	30.5	22.3	16.1	7.8	6.2	7.4	7.8	7.4	6.2
77.5°	242.4	71.7	23.9	17.7	13.2	5.4	6.2	7.4	7.8	7.0	5.4
80°	91.1	30.5	15.7	11.5	10.3	3.3	5.4	4.5	4.1	2.9	0.8
82.5°	55.2	12.8	8.2	5.8	4.9	0.8	2.5	1.6	0.8	0.8	0.0
85°	39.2	6.2	4.5	4.1	2.5	0.0	0.4	0.0	0.0	0.4	0.0
87.5°	5.4	1.6	2.1	2.1	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)