

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: P596769

Luminaire Tested: **MSA-SA4B-827-U-SL4-HSS**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596769
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-21)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA4B-827-U-SL4-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11812 lumens
Efficiency: N/A
Efficacy: 69.1 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G3

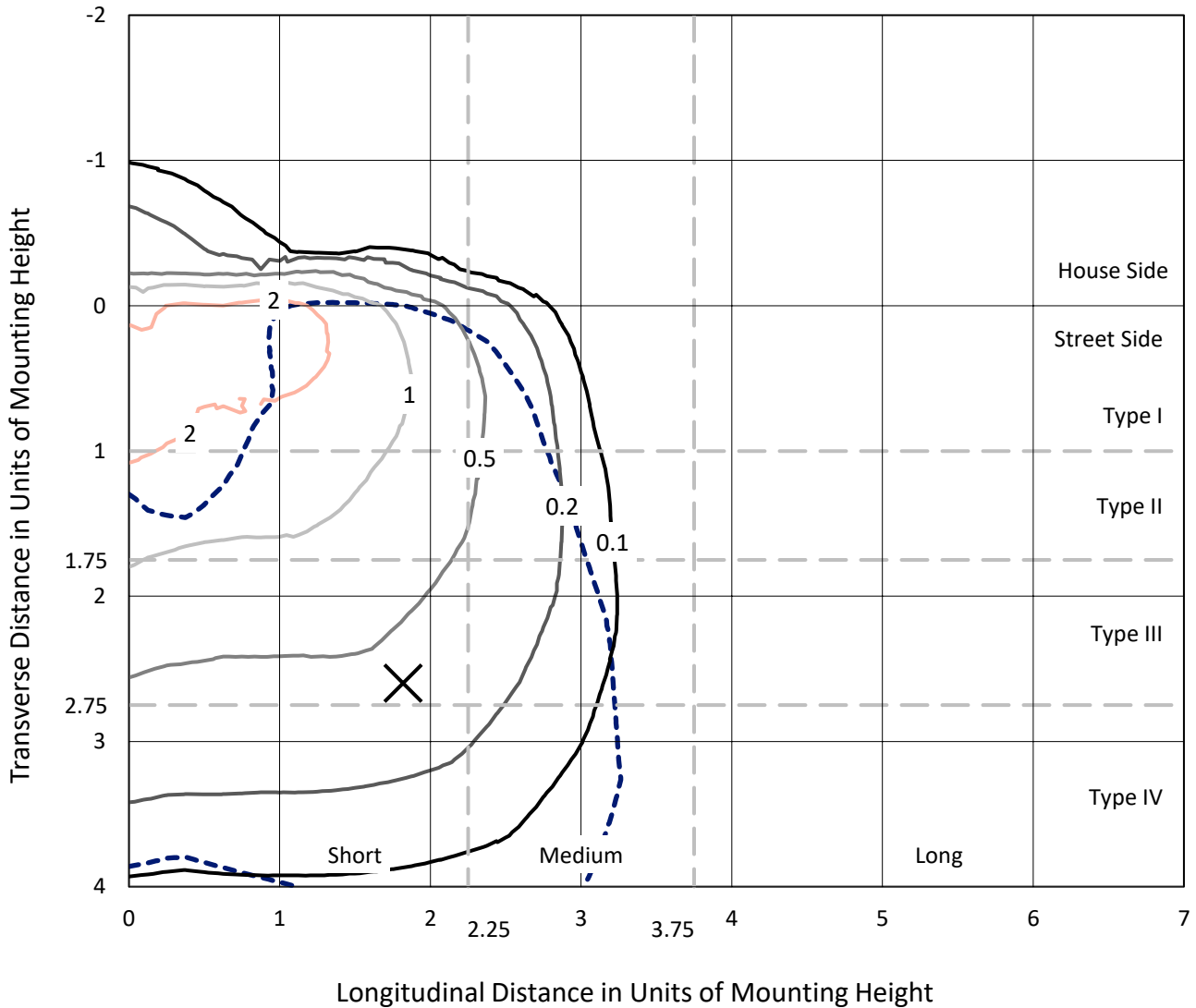
Input Watts (W): 171
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

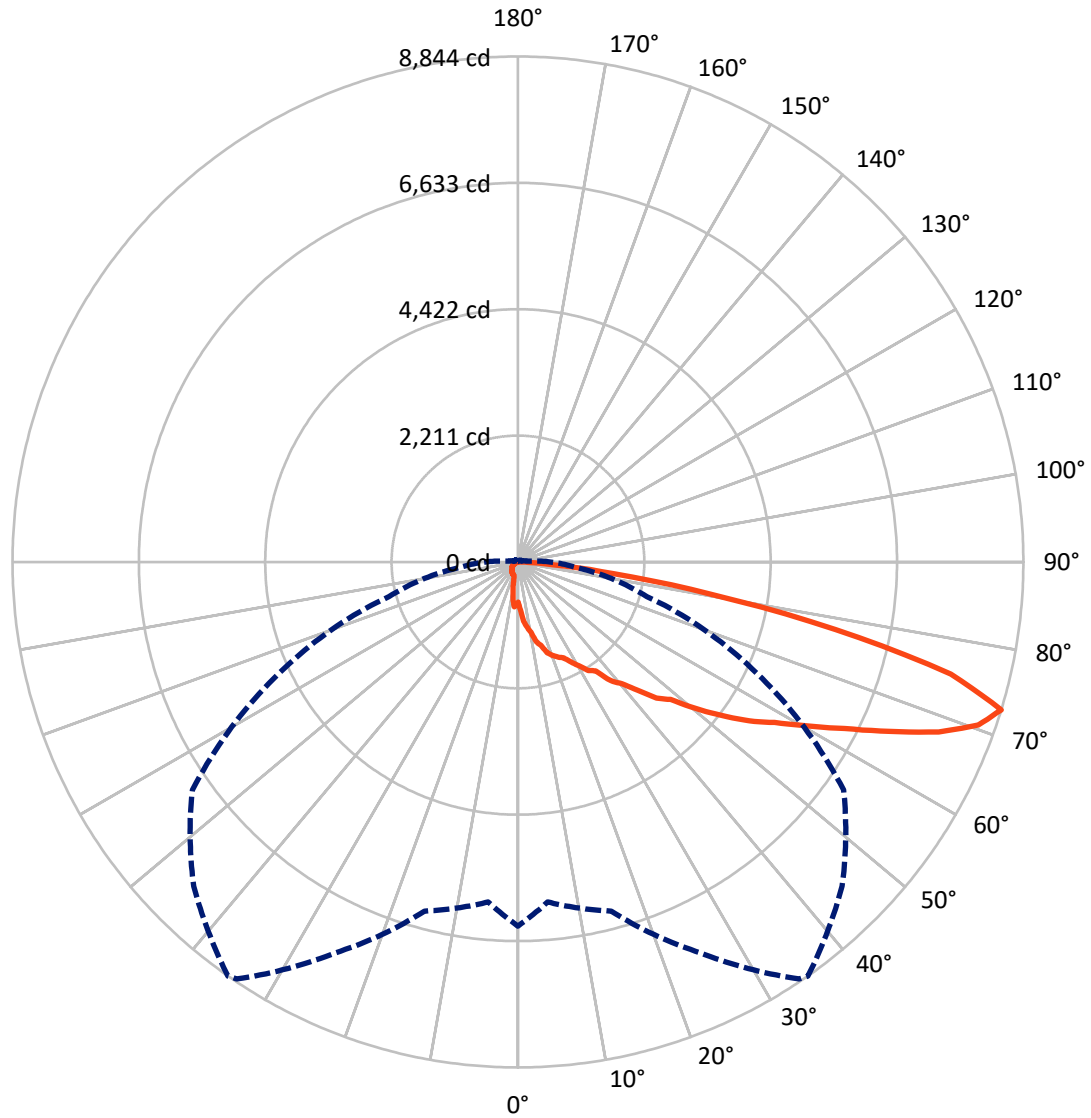
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.7 fc
 Type IV - Short - N/A

REPORT NUMBER: P596769
CATALOG NUMBER: MSA-SA4B-827-U-SL4-HSS

Luminous Intensity Polar Plot



— Vertical Plane Through 35-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	921.3	0.0	921.3
	% Fixture	7.8	0.0	7.8
Street Side	Lumens	10890.7	0.0	10890.7
	% Fixture	92.2	0.0	92.2
Total	Lumens	11812.0	0.0	11812.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.7	0.8
10°-20°	302.3	2.6
20°-30°	550.5	4.7
30°-40°	949.5	8.0
40°-50°	1687.9	14.3
50°-60°	2518.8	21.3
60°-70°	3218.1	27.2
70°-80°	2238.9	19.0
80°-90°	256.1	2.2
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°	11812.0	100.0
0°-180°	11812.0	100.0

Coefficient of Utilization



REPORT NUMBER: P596769

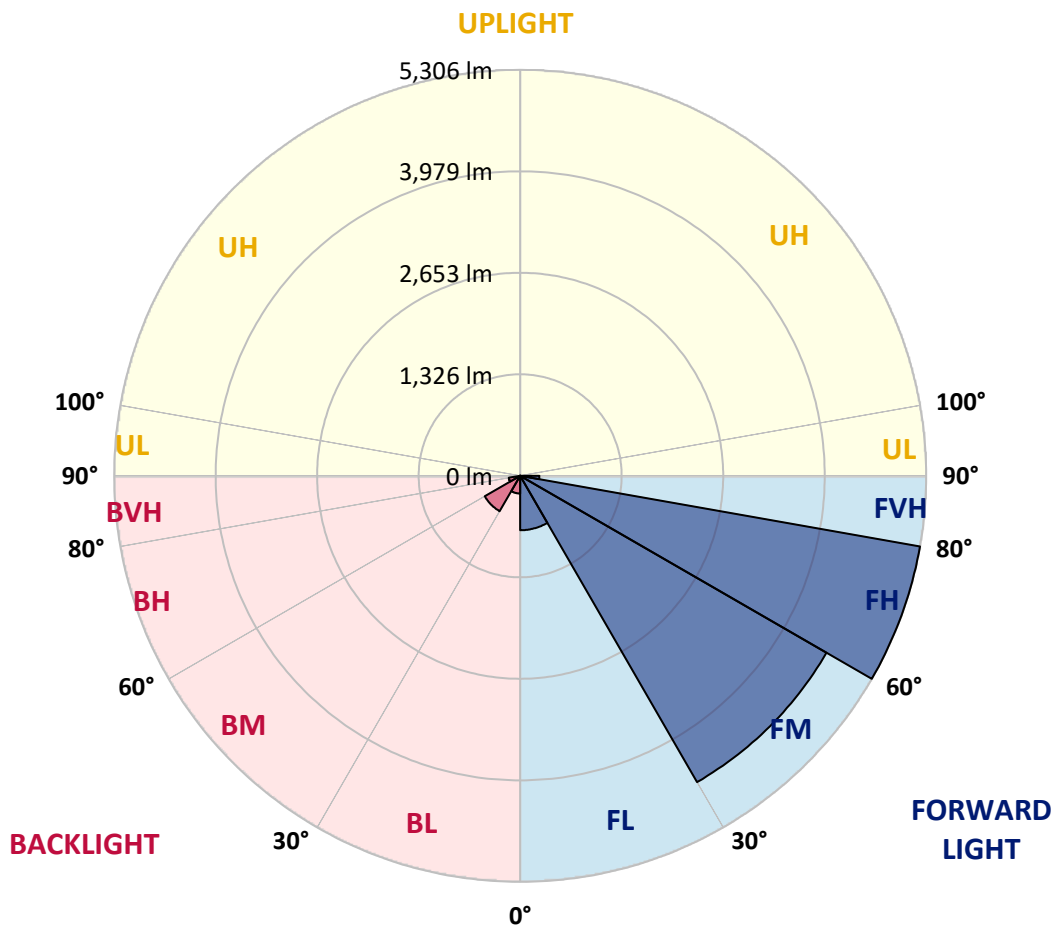
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	710.8	6.0			
FM (30°-60°)	4622.1	39.1			
FH (60°-80°)	5306.0	44.9			G3/7500
FVH (80°-90°)	251.8	2.1			G3/500
BL (0°-30°)	231.7	2.0	B1/500		
BM (30°-60°)	534.2	4.5	B1/1000		
BH (60°-80°)	151.0	1.3	B1/500		G1/500
BVH (80°-90°)	4.3	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-G3

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	34°	35°	45°	55°	65°	75°	85°
0°	703.6	703.6	703.6	703.6	703.6	703.6	703.6	703.6	703.6	703.6	703.6
2.5°	895.4	860.4	803.4	807.6	833.1	838.4	846.1	826.0	808.1	776.7	837.8
5°	1147.2	1096.7	1064.7	1054.6	1039.7	1040.9	1004.7	1017.8	1014.2	1037.3	1065.3
7.5°	1289.1	1261.2	1220.8	1209.5	1154.9	1149.0	1104.4	1164.4	1170.4	1162.0	1207.8
10°	1345.5	1308.7	1313.5	1271.3	1244.0	1251.1	1258.2	1263.0	1270.7	1278.4	1222.6
12.5°	1378.8	1385.3	1450.0	1406.1	1433.4	1433.4	1481.5	1430.4	1432.2	1376.4	1385.9
15°	1528.4	1564.6	1535.5	1534.9	1505.3	1513.0	1568.8	1528.4	1549.2	1532.6	1468.4
17.5°	1716.0	1723.2	1668.0	1643.6	1670.3	1670.9	1647.2	1645.4	1572.9	1695.3	1617.5
20°	1776.0	1816.4	1738.0	1643.0	1754.1	1748.7	1746.9	1719.0	1598.5	1768.3	1704.2
22.5°	1939.3	1881.7	1828.3	1765.9	1809.3	1809.3	1802.7	1741.6	1694.7	1761.8	1789.1
25°	1990.4	1997.5	1928.0	1907.8	1909.0	1855.6	1850.8	1824.7	1779.6	1894.2	1839.6
27.5°	2166.1	2163.2	1996.3	2052.7	1980.9	1981.5	1850.2	1909.0	1916.7	1900.7	1961.9
30°	2338.9	2387.0	2135.3	2206.5	2131.1	2108.5	1980.3	2032.5	2046.2	2027.8	2105.0
32.5°	2559.2	2629.9	2385.2	2315.2	2200.0	2264.1	2175.6	2052.1	2119.8	2284.3	2327.7
35°	2792.6	2827.0	2566.4	2468.4	2338.3	2337.7	2334.8	2344.9	2419.7	2604.9	2641.8
37.5°	3211.8	3130.5	2894.7	2670.3	2699.4	2634.6	2589.5	2637.0	2714.8	3020.0	3177.4
40°	3445.8	3387.0	3055.0	2922.0	2777.7	2801.5	2923.8	2918.5	3125.7	3445.2	3680.9
42.5°	3673.2	3617.4	3290.8	3183.3	2998.0	3062.8	3116.2	3183.9	3608.5	4123.9	4253.3
45°	3875.7	3711.8	3481.4	3485.5	3389.3	3397.1	3491.5	3553.8	4167.8	4696.3	4787.1
47.5°	3998.0	3863.2	3642.3	3638.1	3632.2	3596.0	4040.7	4097.7	4613.7	5241.4	5249.7
50°	4170.2	4001.5	3808.0	3811.5	3948.7	4025.3	4556.1	4550.2	5044.2	5696.2	5504.4
52.5°	4384.5	4178.5	3965.3	4123.9	4335.8	4460.5	4891.6	5067.4	5506.8	5981.8	5604.2
55°	4658.9	4401.2	4195.7	4398.8	4861.3	4909.4	5220.0	5591.1	6010.9	6273.4	5636.2
57.5°	4980.7	4673.1	4506.9	4834.0	5295.4	5296.6	5698.0	6149.3	6320.3	6392.1	5600.0
60°	5327.5	4968.8	4801.4	5095.9	5774.0	5822.7	6229.4	6457.4	6634.4	6452.1	5535.3
62.5°	5632.7	5236.6	5106.6	5452.8	6298.9	6414.1	6692.6	6659.9	6861.2	6527.5	5370.8
65°	5996.1	5583.4	5497.9	6009.1	6984.1	7142.7	7212.7	7019.2	6937.2	6469.3	4942.7
67.5°	6355.9	5969.9	5967.6	6626.1	7882.5	7937.2	7863.5	7525.7	6848.8	5956.3	4158.3
70°	6609.5	6195.0	6351.2	7301.8	8699.0	8545.8	8235.8	7765.0	6209.8	4565.0	2716.6
72.5°	6371.3	5971.7	6323.8	7542.3	8799.9	8843.9	8020.3	6955.6	4613.7	2334.8	983.3
75°	4841.8	4597.1	5490.8	6691.4	7813.1	7823.2	6694.4	4905.9	2271.8	634.2	272.0
77.5°	2438.7	2360.9	3475.4	4750.3	5700.4	5683.7	4599.5	2628.1	731.0	210.8	137.2
80°	1234.5	1172.1	1479.1	2562.8	3385.2	3410.1	2626.3	1176.9	368.7	114.6	95.0
82.5°	758.3	719.7	809.3	1159.7	1643.0	1682.8	996.4	745.2	228.6	67.7	86.7
85°	146.7	154.4	464.9	580.7	656.1	640.7	295.1	613.4	68.9	40.4	62.9
87.5°	0.0	2.4	107.5	189.4	190.0	168.6	67.1	136.0	9.5	11.3	7.7
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°	703.6	703.6	703.6	703.6	703.6	703.6	703.6	703.6	703.6	703.6	703.6
2.5°	847.9	839.0	764.8	756.5	758.3	745.8	741.6	715.5	709.0	749.4	756.5
5°	1053.4	994.0	925.1	900.2	861.6	796.3	786.8	770.1	751.7	758.9	753.5
7.5°	1179.3	1100.3	1026.7	895.4	786.8	691.8	676.3	647.8	619.3	619.9	638.3
10°	1199.5	1132.9	1031.4	871.7	747.6	628.8	525.5	450.7	416.8	386.6	395.5
12.5°	1316.4	1254.7	1067.6	864.6	690.6	505.3	369.9	296.9	264.8	254.1	253.0
15°	1410.2	1361.6	1129.4	842.6	564.1	355.7	264.8	243.5	237.5	247.6	244.6
17.5°	1549.8	1461.9	1122.9	751.7	429.9	270.2	244.0	241.1	248.2	254.1	255.9
20°	1610.9	1484.5	1078.3	609.2	321.8	247.6	238.1	232.2	245.2	263.0	259.5
22.5°	1672.7	1523.1	1026.1	498.8	258.9	236.9	231.6	226.8	236.9	254.1	258.3
25°	1700.6	1584.8	967.9	389.5	240.5	224.5	220.9	222.7	231.0	246.4	244.6
27.5°	1841.3	1591.9	856.8	307.6	232.8	215.5	215.5	219.7	219.7	240.5	238.7
30°	1929.2	1712.5	766.6	258.9	223.9	203.1	210.2	212.0	209.0	231.6	233.4
32.5°	2083.6	1745.7	678.7	237.5	209.6	201.3	200.1	201.3	203.7	225.6	226.2
35°	2321.1	1909.6	558.8	229.2	202.5	192.4	184.1	190.6	196.5	212.6	215.5
37.5°	2785.5	2077.7	455.4	222.7	198.9	184.1	181.1	179.9	190.6	209.0	215.0
40°	3161.3	2375.2	370.5	217.3	191.8	179.3	171.6	172.2	181.7	195.4	204.3
42.5°	3693.4	2590.1	314.1	209.0	181.7	169.2	160.3	165.7	169.8	184.1	190.0
45°	4137.5	2757.0	276.7	203.7	171.6	159.7	152.6	158.5	154.4	161.5	169.8
47.5°	4490.8	2902.4	248.8	190.6	165.1	154.4	145.5	143.7	136.6	138.4	146.1
50°	4685.0	2878.1	225.6	177.5	156.8	149.0	136.6	124.1	114.6	114.0	118.8
52.5°	4753.9	2748.1	206.6	166.3	146.7	137.2	122.9	105.7	96.2	93.2	97.4
55°	4772.9	2561.0	189.4	153.8	137.2	122.3	107.5	89.1	79.0	74.2	78.4
57.5°	4711.1	2273.0	172.8	141.9	125.9	108.1	92.0	73.0	63.5	57.6	61.2
60°	4558.5	1907.2	157.9	127.1	114.0	95.6	77.8	58.8	48.7	43.3	45.1
62.5°	4220.6	1495.2	141.9	113.4	101.5	83.7	65.3	46.3	36.8	32.1	32.7
65°	3706.4	1114.5	123.5	100.4	90.3	72.4	52.3	35.6	27.9	23.8	23.2
67.5°	2952.9	755.3	105.1	86.7	80.2	61.2	41.6	27.9	22.0	19.0	17.8
70°	1735.6	380.6	87.3	74.8	68.9	51.1	32.7	22.6	20.2	17.8	16.6
72.5°	572.4	164.5	68.3	61.8	57.0	41.0	25.5	20.8	19.6	17.2	16.0
75°	199.5	95.0	50.5	47.5	45.1	30.9	21.4	19.0	19.0	16.6	14.8
77.5°	130.6	73.6	37.4	34.4	33.8	22.6	18.4	17.8	16.6	13.7	11.3
80°	108.7	41.6	26.1	24.3	23.8	14.3	14.8	13.1	10.1	5.9	2.4
82.5°	100.4	24.9	13.7	14.8	13.7	5.3	8.3	7.1	5.3	2.4	0.0
85°	58.8	11.3	7.7	7.7	5.9	1.2	4.2	4.2	2.4	0.6	0.0
87.5°	6.5	5.3	4.2	4.2	3.0	0.0	1.8	1.2	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)