

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: P596989

Luminaire Tested: **MSA-SA2D-835-U-SL4-HSS**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596989
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-SA2D-835-U-SL4-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) 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: 9196 lumens
Efficiency: N/A
Efficacy: 71.3 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

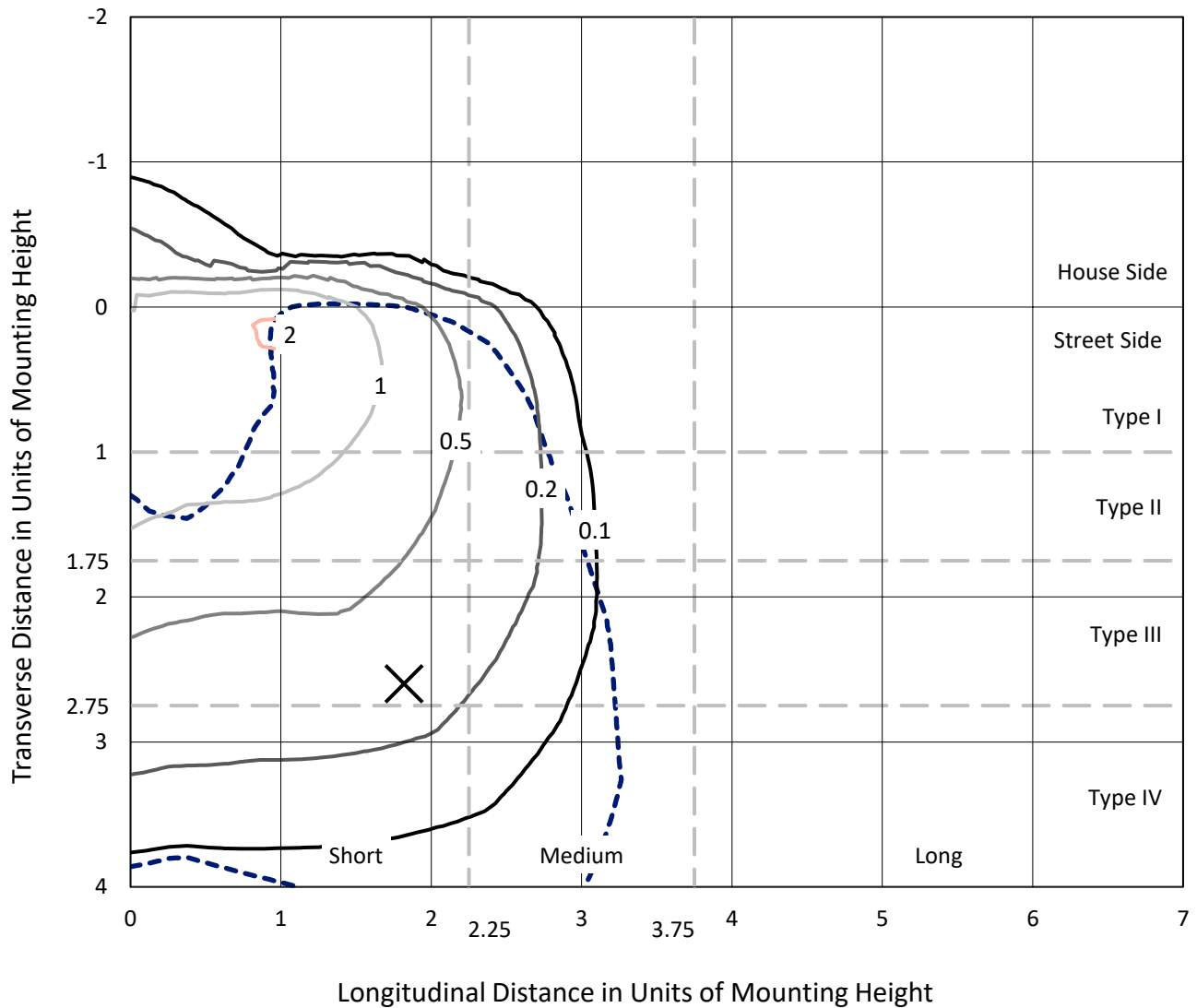
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P596989
 CATALOG NUMBER: MSA-SA2D-835-U-SL4-HSS

Iso-Footcandle Lines of Horizontal Illumination

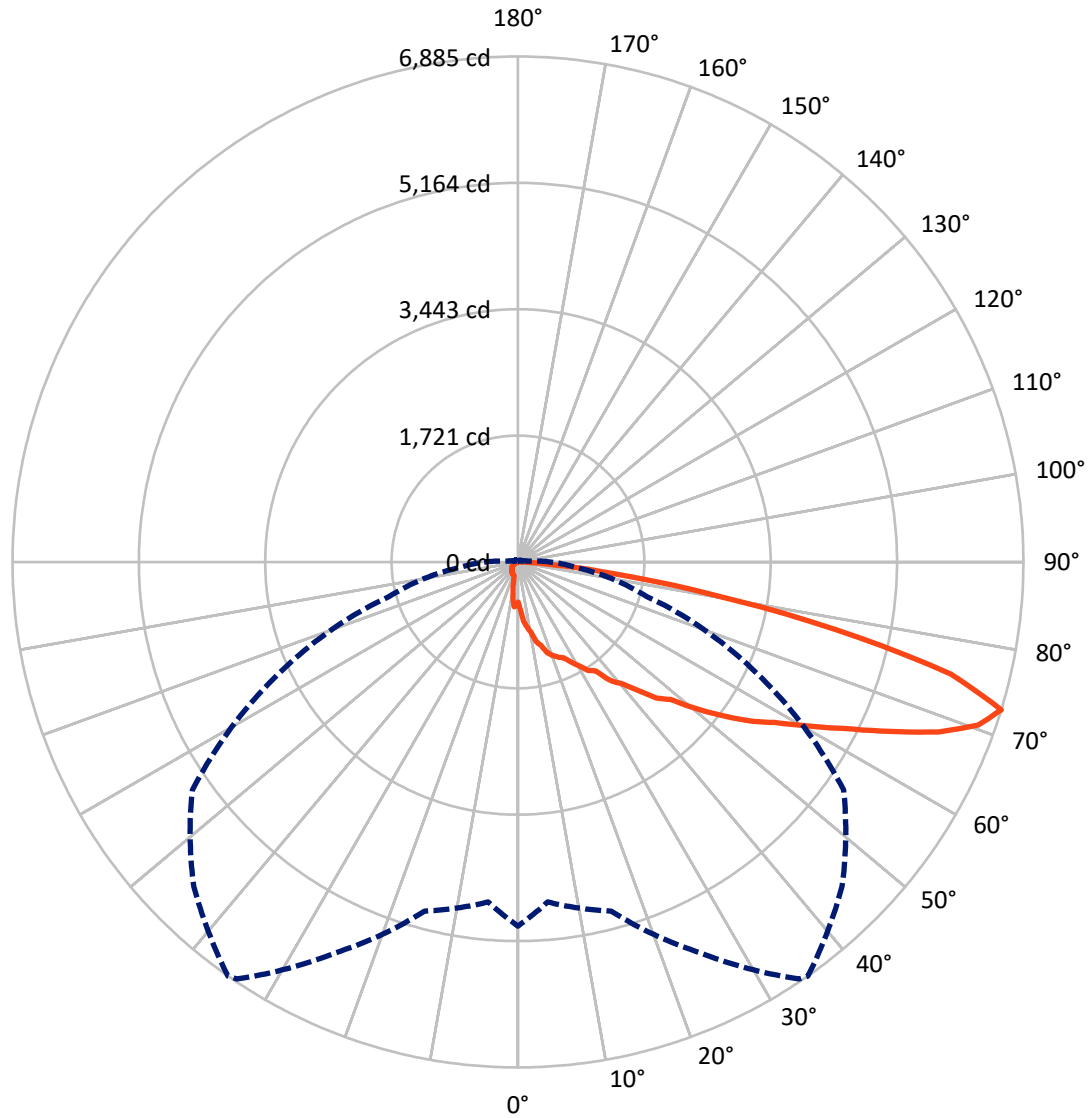
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.1 fc
 Type IV - Short - N/A

REPORT NUMBER: P596989
CATALOG NUMBER: MSA-SA2D-835-U-SL4-HSS

Luminous Intensity Polar Plot



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

REPORT NUMBER: P596989
 CATALOG NUMBER: MSA-SA2D-835-U-SL4-HSS

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	717.3	0.0	717.3
	% Fixture	7.8	0.0	7.8
Street Side	Lumens	8478.7	0.0	8478.7
	% Fixture	92.2	0.0	92.2
Total	Lumens	9196.0	0.0	9196.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	69.9	0.8
10°-20°	235.3	2.6
20°-30°	428.6	4.7
30°-40°	739.3	8.0
40°-50°	1314.1	14.3
50°-60°	1961.0	21.3
60°-70°	2505.4	27.2
70°-80°	1743.1	19.0
80°-90°	199.4	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°	9196.0	100.0
0°-180°	9196.0	100.0

Coefficient of Utilization

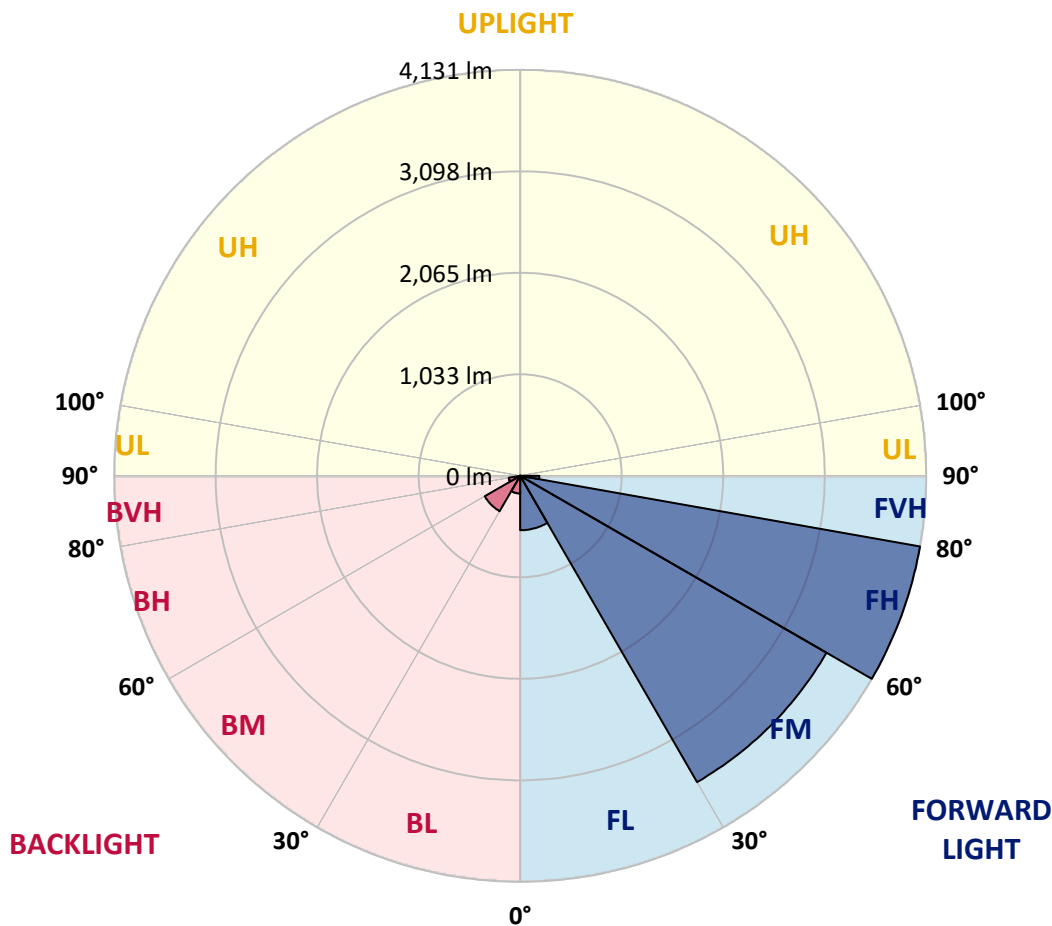


REPORT NUMBER: P596989
 CATALOG NUMBER: MSA-SA2D-835-U-SL4-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	553.4	6.0			
FM (30°-60°)	3598.4	39.1			
FH (60°-80°)	4130.9	44.9			G2/5000
FVH (80°-90°)	196.0	2.1			G2/225
BL (0°-30°)	180.4	2.0	B1/500		
BM (30°-60°)	415.9	4.5	B1/1000		
BH (60°-80°)	117.6	1.3	B1/500		G1/500
BVH (80°-90°)	3.4	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 IV Short





REPORT NUMBER: P596989

CATALOG NUMBER: MSA-SA2D-835-U-SL4-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	34°	35°	45°	55°	65°	75°	85°
0°	547.8	547.8	547.8	547.8	547.8	547.8	547.8	547.8	547.8	547.8	547.8
2.5°	697.1	669.8	625.5	628.7	648.6	652.7	658.8	643.0	629.2	604.7	652.3
5°	893.1	853.8	828.9	821.0	809.5	810.4	782.2	792.4	789.6	807.6	829.3
7.5°	1003.6	981.9	950.5	941.7	899.1	894.5	859.8	906.5	911.2	904.7	940.3
10°	1047.5	1018.9	1022.6	989.7	968.5	974.0	979.6	983.3	989.3	995.3	951.8
12.5°	1073.4	1078.5	1128.9	1094.7	1115.9	1115.9	1153.4	1113.6	1115.0	1071.6	1079.0
15°	1189.9	1218.1	1195.5	1195.0	1171.9	1177.9	1221.3	1189.9	1206.1	1193.2	1143.2
17.5°	1336.0	1341.5	1298.6	1279.6	1300.4	1300.9	1282.4	1281.0	1224.6	1319.8	1259.3
20°	1382.7	1414.1	1353.1	1279.1	1365.6	1361.4	1360.0	1338.3	1244.5	1376.7	1326.8
22.5°	1509.8	1465.0	1423.4	1374.8	1408.6	1408.6	1403.5	1355.9	1319.4	1371.6	1392.9
25°	1549.6	1555.1	1501.0	1485.3	1486.2	1444.6	1440.9	1420.6	1385.5	1474.7	1432.2
27.5°	1686.4	1684.1	1554.2	1598.1	1542.2	1542.6	1440.5	1486.2	1492.2	1479.8	1527.4
30°	1820.9	1858.4	1662.4	1717.8	1659.1	1641.6	1541.7	1582.4	1593.0	1578.7	1638.8
32.5°	1992.4	2047.4	1857.0	1802.4	1712.8	1762.7	1693.8	1597.6	1650.3	1778.4	1812.1
35°	2174.1	2200.9	1998.0	1921.7	1820.5	1820.0	1817.7	1825.6	1883.8	2028.0	2056.7
37.5°	2500.5	2437.2	2253.6	2078.9	2101.5	2051.1	2016.0	2053.0	2113.6	2351.2	2473.7
40°	2682.6	2636.9	2378.4	2274.9	2162.6	2181.0	2276.3	2272.1	2433.5	2682.2	2865.7
42.5°	2859.7	2816.2	2562.0	2478.3	2334.1	2384.5	2426.1	2478.8	2809.3	3210.6	3311.3
45°	3017.3	2889.7	2710.4	2713.6	2638.7	2644.7	2718.2	2766.8	3244.8	3656.2	3726.9
47.5°	3112.5	3007.6	2835.6	2832.4	2827.8	2799.6	3145.8	3190.2	3591.9	4080.6	4087.0
50°	3246.6	3115.3	2964.6	2967.4	3074.2	3133.8	3547.1	3542.5	3927.1	4434.7	4285.4
52.5°	3413.5	3253.1	3087.1	3210.6	3375.6	3472.7	3808.3	3945.1	4287.2	4657.0	4363.0
55°	3627.1	3426.4	3266.5	3424.6	3784.7	3822.1	4063.9	4352.8	4679.7	4884.0	4388.0
57.5°	3877.6	3638.2	3508.7	3763.4	4122.6	4123.6	4436.1	4787.4	4920.5	4976.5	4359.8
60°	4147.6	3868.4	3738.0	3967.3	4495.2	4533.1	4849.8	5027.3	5165.1	5023.2	4309.4
62.5°	4385.2	4076.9	3975.6	4245.1	4903.9	4993.6	5210.4	5185.0	5341.7	5081.9	4181.3
65°	4668.1	4346.8	4280.3	4678.3	5437.4	5560.8	5615.3	5464.6	5400.8	5036.6	3848.0
67.5°	4948.3	4647.8	4645.9	5158.6	6136.8	6179.3	6122.0	5859.0	5332.0	4637.2	3237.4
70°	5145.7	4823.0	4944.6	5684.7	6772.4	6653.2	6411.9	6045.3	4834.5	3554.0	2114.9
72.5°	4960.3	4649.2	4923.3	5871.9	6851.0	6885.2	6244.0	5415.2	3591.9	1817.7	765.5
75°	3769.4	3579.0	4274.7	5209.5	6082.7	6090.6	5211.8	3819.4	1768.7	493.7	211.7
77.5°	1898.6	1838.0	2705.7	3698.3	4437.9	4425.0	3580.8	2046.1	569.1	164.1	106.8
80°	961.1	912.5	1151.5	1995.2	2635.5	2654.9	2044.7	916.2	287.1	89.2	74.0
82.5°	590.3	560.3	630.1	902.8	1279.1	1310.1	775.7	580.2	178.0	52.7	67.5
85°	114.2	120.2	362.0	452.1	510.8	498.8	229.8	477.5	53.6	31.4	49.0
87.5°	0.0	1.8	83.7	147.5	147.9	131.3	52.2	105.9	7.4	8.8	6.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P596989
 CATALOG NUMBER: MSA-SA2D-835-U-SL4-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	547.8	547.8	547.8	547.8	547.8	547.8	547.8	547.8	547.8	547.8	547.8
2.5°	660.1	653.2	595.4	588.9	590.3	580.6	577.4	557.1	552.0	583.4	588.9
5°	820.1	773.9	720.2	700.8	670.8	619.9	612.5	599.6	585.2	590.8	586.6
7.5°	918.1	856.6	799.3	697.1	612.5	538.6	526.5	504.3	482.2	482.6	497.0
10°	933.8	882.0	803.0	678.6	582.0	489.6	409.1	350.9	324.5	300.9	307.9
12.5°	1024.9	976.8	831.2	673.1	537.6	393.4	288.0	231.1	206.2	197.9	196.9
15°	1097.9	1060.0	879.3	656.0	439.2	276.9	206.2	189.5	184.9	192.8	190.5
17.5°	1206.6	1138.1	874.2	585.2	334.7	210.3	190.0	187.7	193.2	197.9	199.2
20°	1254.2	1155.7	839.5	474.3	250.6	192.8	185.4	180.8	190.9	204.8	202.0
22.5°	1302.2	1185.8	798.8	388.3	201.6	184.5	180.3	176.6	184.5	197.9	201.1
25°	1324.0	1233.8	753.5	303.3	187.2	174.7	172.0	173.4	179.8	191.8	190.5
27.5°	1433.5	1239.4	667.1	239.5	181.2	167.8	167.8	171.0	171.0	187.2	185.8
30°	1502.0	1333.2	596.8	201.6	174.3	158.1	163.6	165.0	162.7	180.3	181.7
32.5°	1622.1	1359.1	528.4	184.9	163.2	156.7	155.8	156.7	158.6	175.7	176.1
35°	1807.1	1486.7	435.0	178.4	157.6	149.8	143.3	148.4	153.0	165.5	167.8
37.5°	2168.6	1617.5	354.6	173.4	154.9	143.3	141.0	140.1	148.4	162.7	167.3
40°	2461.2	1849.1	288.5	169.2	149.3	139.6	133.6	134.1	141.5	152.1	159.0
42.5°	2875.4	2016.5	244.5	162.7	141.5	131.8	124.8	129.0	132.2	143.3	147.9
45°	3221.2	2146.4	215.4	158.6	133.6	124.4	118.8	123.4	120.2	125.7	132.2
47.5°	3496.2	2259.6	193.7	148.4	128.5	120.2	113.3	111.9	106.3	107.7	113.7
50°	3647.4	2240.7	175.7	138.2	122.0	116.0	106.3	96.6	89.2	88.8	92.5
52.5°	3701.0	2139.4	160.9	129.4	114.2	106.8	95.7	82.3	74.9	72.6	75.8
55°	3715.8	1993.8	147.5	119.7	106.8	95.2	83.7	69.3	61.5	57.8	61.0
57.5°	3667.7	1769.6	134.5	110.5	98.0	84.1	71.7	56.9	49.5	44.8	47.6
60°	3548.9	1484.9	123.0	98.9	88.8	74.4	60.6	45.8	37.9	33.7	35.1
62.5°	3285.9	1164.0	110.5	88.3	79.1	65.2	50.9	36.1	28.7	25.0	25.4
65°	2885.6	867.7	96.2	78.1	70.3	56.4	40.7	27.7	21.7	18.5	18.0
67.5°	2298.9	588.0	81.8	67.5	62.4	47.6	32.4	21.7	17.1	14.8	13.9
70°	1351.3	296.3	68.0	58.2	53.6	39.8	25.4	17.6	15.7	13.9	12.9
72.5°	445.6	128.1	53.2	48.1	44.4	31.9	19.9	16.2	15.3	13.4	12.5
75°	155.3	74.0	39.3	37.0	35.1	24.0	16.6	14.8	14.8	12.9	11.6
77.5°	101.7	57.3	29.1	26.8	26.4	17.6	14.3	13.9	12.9	10.6	8.8
80°	84.6	32.4	20.3	19.0	18.5	11.1	11.6	10.2	7.9	4.6	1.8
82.5°	78.1	19.4	10.6	11.6	10.6	4.2	6.5	5.5	4.2	1.8	0.0
85°	45.8	8.8	6.0	6.0	4.6	0.9	3.2	3.2	1.8	0.5	0.0
87.5°	5.1	4.2	3.2	3.2	2.3	0.0	1.4	0.9	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)