

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: P596649

Luminaire Tested: **MSA-SA2D-827-U-T4W-HSS**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596649
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-15)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA2D-827-U-T4W-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) 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: 7475 lumens
Efficiency: N/A
Efficacy: 57.9 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

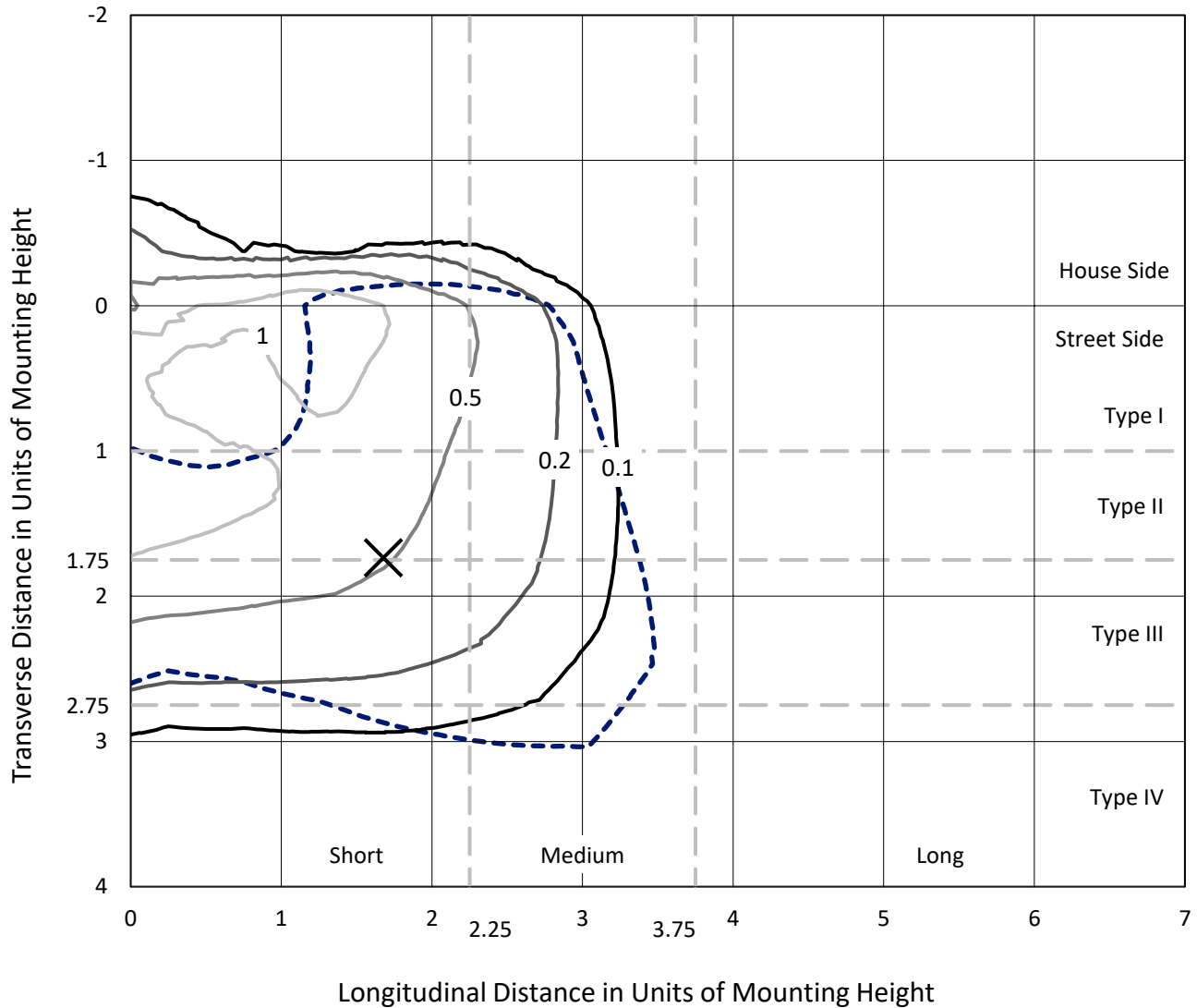
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P596649
 CATALOG NUMBER: MSA-SA2D-827-U-T4W-HSS

Iso-Footcandle Lines of Horizontal Illumination

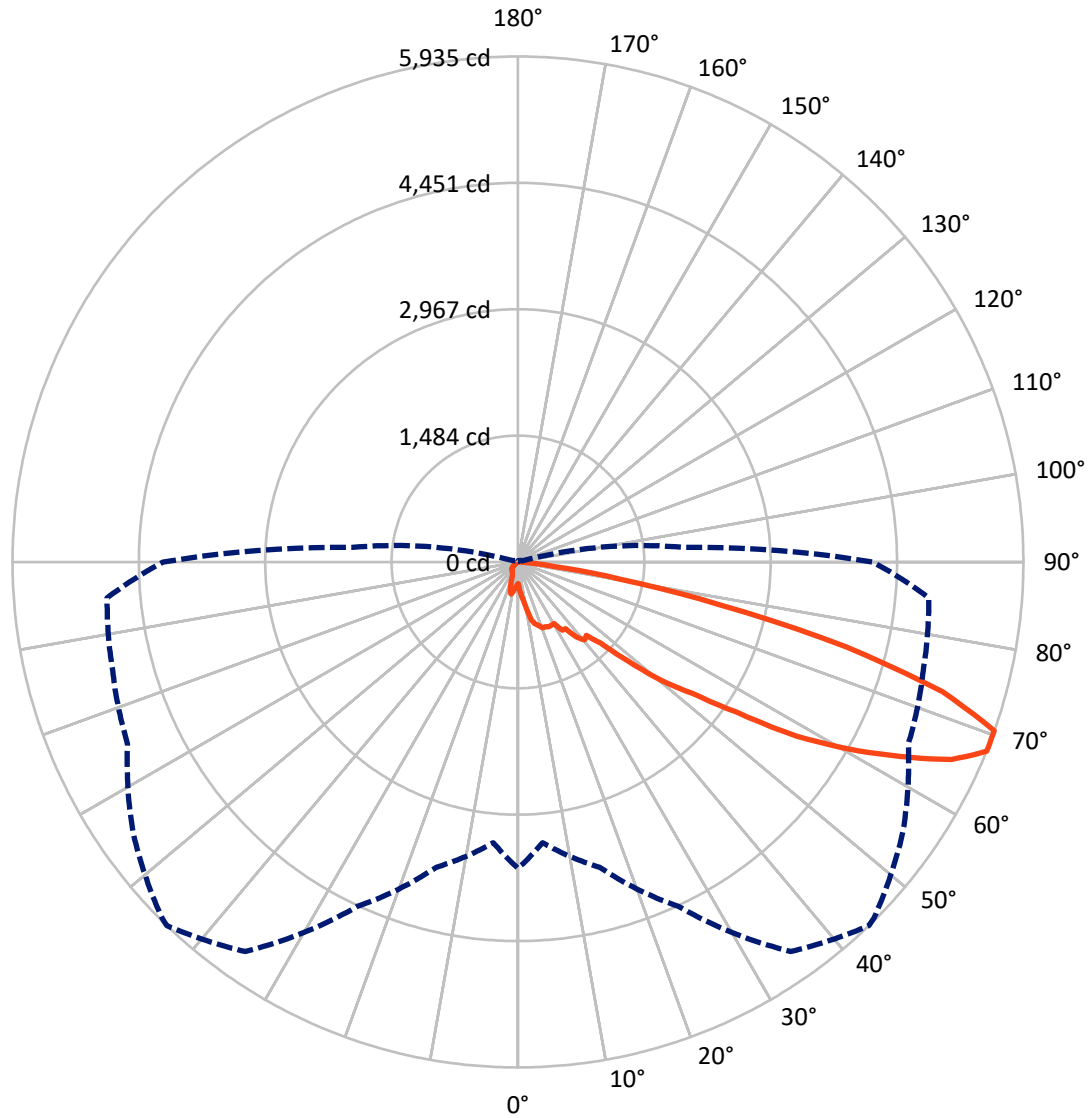
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.7 fc
 Type IV - Short - N/A

REPORT NUMBER: P596649
CATALOG NUMBER: MSA-SA2D-827-U-T4W-HSS

Luminous Intensity Polar Plot



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

REPORT NUMBER: P596649
 CATALOG NUMBER: MSA-SA2D-827-U-T4W-HSS

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	759.3	0.0	759.3
	% Fixture	10.2	0.0	10.2
Street Side	Lumens	6715.7	0.0	6715.7
	% Fixture	89.8	0.0	89.8
Total	Lumens	7475.0	0.0	7475.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	37.3	0.5
10°-20°	156.3	2.1
20°-30°	276.8	3.7
30°-40°	450.0	6.0
40°-50°	900.5	12.0
50°-60°	1847.3	24.7
60°-70°	2537.7	33.9
70°-80°	1192.7	16.0
80°-90°	76.4	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°	7475.0	100.0
0°-180°	7475.0	100.0

Coefficient of Utilization

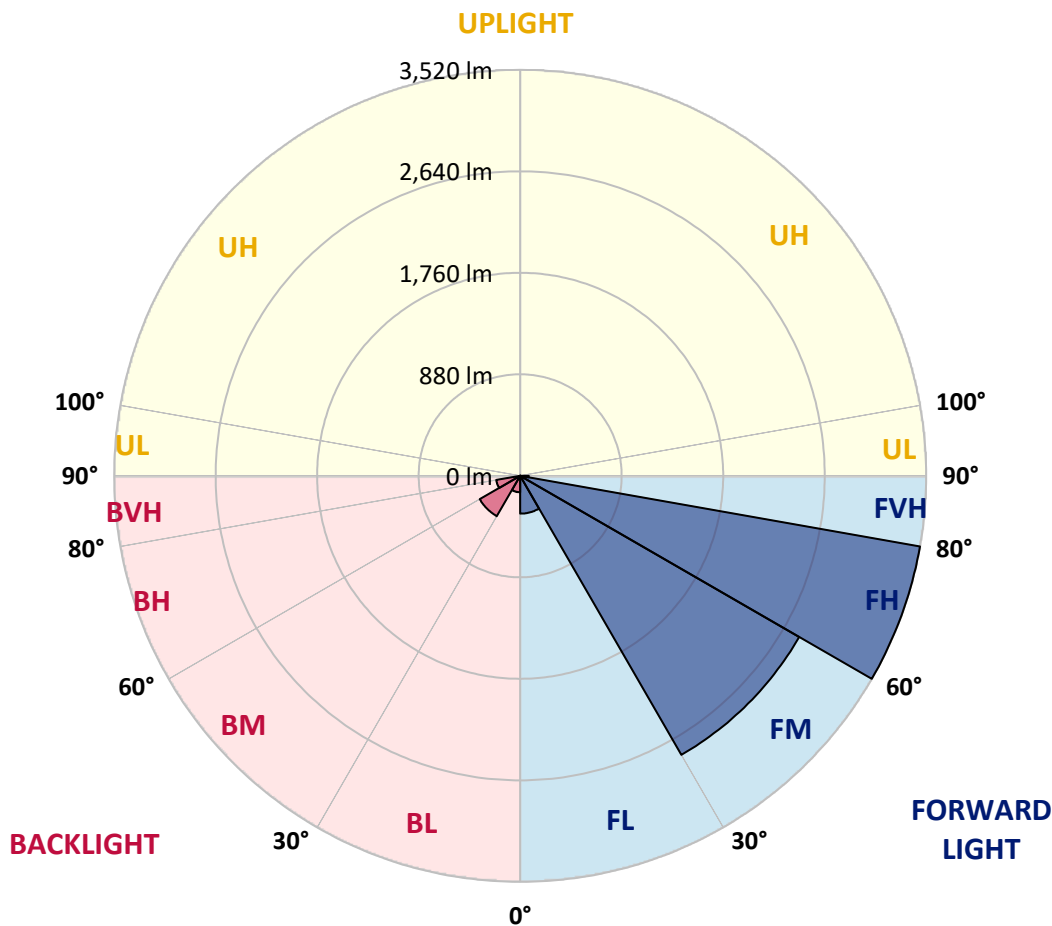


REPORT NUMBER: P596649
 CATALOG NUMBER: MSA-SA2D-827-U-T4W-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	327.9	4.4			
FM (30°-60°)	2793.3	37.4			
FH (60°-80°)	3519.7	47.1			G2/5000
FVH (80°-90°)	74.8	1.0			G1/100
BL (0°-30°)	142.6	1.9	B1/500		
BM (30°-60°)	404.5	5.4	B1/1000		
BH (60°-80°)	210.7	2.8	B1/500		G1/500
BVH (80°-90°)	1.6	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: P596649

CATALOG NUMBER: MSA-SA2D-827-U-T4W-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	251.8	251.8	251.8	251.8	251.8	251.8	251.8	251.8	251.8	251.8	251.8
2.5°	320.3	310.0	295.1	298.4	300.1	304.6	305.0	299.2	282.8	278.2	298.4
5°	448.9	423.7	419.2	409.7	390.8	380.5	378.0	388.3	375.1	371.0	376.3
7.5°	573.4	551.9	528.4	515.6	476.1	451.8	450.5	454.6	457.1	442.7	450.1
10°	656.2	632.7	627.8	597.7	563.5	557.7	555.2	539.6	526.8	516.1	480.2
12.5°	731.2	730.8	739.9	696.6	691.2	697.0	695.0	638.9	626.1	581.2	570.9
15°	831.0	855.7	816.5	780.3	734.1	753.9	748.5	712.7	704.0	673.5	629.4
17.5°	934.4	941.0	875.5	819.8	807.9	781.9	787.3	774.5	730.8	755.1	711.4
20°	936.9	951.3	881.3	789.3	826.0	824.8	825.2	812.8	755.1	812.0	772.0
22.5°	971.5	936.1	871.0	812.4	819.0	825.2	831.8	816.5	804.2	818.2	825.6
25°	957.5	943.5	880.8	842.1	835.9	840.9	842.5	861.9	854.1	887.9	869.3
27.5°	993.8	973.6	861.5	868.5	846.6	840.9	831.0	895.7	918.8	892.0	941.4
30°	1056.0	1053.1	894.9	905.2	888.3	837.6	863.9	948.4	977.3	960.8	1021.0
32.5°	1153.3	1163.2	992.6	925.8	934.4	957.1	947.2	948.4	1021.4	1058.1	1105.9
35°	1291.4	1286.0	1087.8	1004.1	958.8	962.5	976.5	1043.7	1138.1	1135.6	1186.3
37.5°	1562.6	1504.1	1256.4	1084.1	1097.7	1116.2	1105.9	1196.2	1205.2	1208.5	1329.7
40°	1962.4	1884.5	1522.2	1252.6	1121.6	1203.6	1198.6	1220.9	1281.5	1304.2	1481.0
42.5°	2489.2	2384.5	1990.0	1562.6	1237.0	1180.5	1211.0	1253.1	1456.7	1521.4	1715.1
45°	3071.2	2859.4	2456.6	2004.5	1526.3	1351.2	1374.2	1452.6	1734.9	1842.1	2056.0
47.5°	3448.4	3262.1	2918.7	2396.1	1828.1	1736.1	1738.2	1755.1	2061.8	2260.4	2547.3
50°	3776.1	3577.8	3259.2	2805.4	2361.8	2187.9	2148.3	2070.4	2478.1	2749.7	3067.9
52.5°	4238.5	4006.9	3599.6	3285.6	2970.6	2560.9	2546.9	2573.3	2969.0	3254.6	3601.7
55°	4655.7	4374.1	3985.5	3787.6	3664.8	3109.1	3121.1	3165.2	3599.2	3750.5	4076.5
57.5°	4839.9	4534.9	4335.0	4246.0	4180.4	3858.1	3817.7	3791.3	4096.3	4154.0	4574.1
60°	4960.7	4670.5	4579.8	4600.4	4799.1	4457.0	4420.3	4267.0	4507.7	4555.1	5020.0
62.5°	4884.4	4619.8	4639.2	4811.1	5252.1	5027.1	4921.1	4664.7	4844.0	4882.4	5340.3
65°	4404.2	4128.5	4377.4	4793.3	5597.5	5592.2	5543.1	5032.0	5030.4	5079.4	5365.1
67.5°	3597.6	3308.2	3710.9	4461.1	5583.1	5934.7	5911.6	5519.2	5057.1	4926.1	4841.6
70°	2501.2	2250.1	2706.8	3684.1	5085.6	5932.2	5895.1	5846.5	4845.3	4240.2	3753.8
72.5°	1299.6	1161.5	1586.9	2538.7	4053.9	5212.1	5334.5	5254.6	4137.1	3080.7	2210.6
75°	441.5	396.1	654.6	1347.4	2694.9	3980.1	4123.5	4042.3	2809.9	1652.9	874.3
77.5°	171.1	159.1	234.5	547.0	1352.0	2425.3	2581.1	2498.3	1507.0	605.5	205.7
80°	97.3	94.0	129.4	246.5	596.0	1206.5	1316.1	1193.7	543.3	204.0	53.6
82.5°	41.2	42.5	72.1	133.1	299.7	425.8	474.8	433.2	227.5	139.7	19.8
85°	9.1	11.1	34.2	74.2	125.7	121.6	127.4	141.4	139.7	102.6	8.7
87.5°	0.0	0.0	10.7	20.2	30.1	19.8	15.7	27.6	42.9	41.2	3.7
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: P596649

CATALOG NUMBER: MSA-SA2D-827-U-T4W-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	251.8	251.8	251.8	251.8	251.8	251.8	251.8	251.8	251.8	251.8	251.8
2.5°	302.1	298.0	272.0	270.4	272.0	267.5	267.1	257.6	258.4	279.9	281.5
5°	376.3	355.7	333.5	326.5	319.9	305.0	313.3	313.3	313.3	326.9	331.0
7.5°	443.5	415.9	384.6	358.2	332.6	314.1	326.9	335.9	341.3	359.0	367.3
10°	474.0	446.8	418.8	381.3	361.5	354.5	339.6	331.8	341.3	337.6	342.1
12.5°	539.1	514.4	466.2	427.4	412.6	388.7	345.0	314.5	294.3	291.0	290.2
15°	602.6	587.4	522.7	470.7	419.2	364.0	289.4	249.0	227.5	223.8	224.2
17.5°	683.0	661.2	565.9	491.3	403.9	304.6	223.4	188.8	187.1	196.2	197.0
20°	736.6	700.7	587.8	474.4	353.7	230.4	174.8	166.5	179.7	196.2	194.6
22.5°	787.7	748.9	616.6	459.6	274.1	174.8	160.8	161.6	172.7	190.4	195.0
25°	821.5	807.5	652.1	425.0	209.0	151.3	153.7	159.9	169.4	186.3	186.3
27.5°	923.3	857.8	648.0	357.8	160.8	141.0	146.7	154.6	159.5	179.7	181.8
30°	985.1	963.7	669.4	289.4	141.0	127.8	138.9	145.9	149.2	172.3	173.1
32.5°	1061.0	1013.6	695.4	213.5	131.1	127.0	124.5	129.8	139.3	159.5	160.8
35°	1153.3	1139.3	658.3	167.8	127.8	118.7	113.8	116.6	122.8	136.4	139.3
37.5°	1341.7	1258.4	636.0	143.9	127.8	115.8	110.5	103.0	103.9	113.4	118.7
40°	1500.4	1474.8	573.8	139.7	122.0	111.7	98.5	89.4	83.3	86.1	88.2
42.5°	1791.8	1673.5	493.4	137.7	116.6	101.0	83.7	74.2	64.7	65.5	68.8
45°	2145.4	1890.3	421.7	135.6	112.9	90.3	70.5	59.4	49.5	49.9	53.2
47.5°	2617.8	2206.4	334.7	129.4	106.3	80.4	56.9	45.3	39.6	40.8	43.7
50°	3154.5	2483.9	264.6	119.9	98.5	70.9	46.2	36.7	34.6	35.9	39.2
52.5°	3633.9	2688.3	218.5	111.3	87.4	57.7	38.7	32.6	31.7	32.6	35.0
55°	4060.1	2807.0	182.6	101.4	75.0	46.6	35.0	30.1	29.7	29.3	30.9
57.5°	4459.9	2841.2	142.6	85.7	61.0	40.4	32.6	28.0	27.2	26.0	27.2
60°	4751.3	2782.7	104.7	68.8	49.9	36.7	30.5	25.1	23.9	21.8	22.7
62.5°	4891.9	2622.3	79.1	55.2	42.5	33.4	27.2	21.8	20.2	17.7	18.1
65°	4758.3	2358.1	62.2	46.6	36.3	28.0	23.1	18.5	16.5	14.0	14.0
67.5°	4166.8	1956.2	52.8	40.4	30.5	23.9	19.0	16.9	13.6	11.5	11.1
70°	3058.4	1407.2	45.3	35.4	26.4	20.6	16.1	15.3	13.2	11.1	10.3
72.5°	1726.2	796.3	38.7	31.3	22.3	17.3	13.6	14.0	12.8	10.3	9.5
75°	658.7	268.3	32.2	26.0	18.1	13.2	11.5	11.5	11.5	8.7	7.4
77.5°	163.2	68.4	25.6	21.0	14.4	8.7	9.5	9.9	9.9	7.4	5.4
80°	44.9	23.1	15.3	15.3	10.3	4.9	6.6	6.6	5.4	2.5	0.0
82.5°	16.5	8.7	5.4	6.6	4.5	1.6	2.5	1.6	1.2	0.0	0.0
85°	7.0	4.5	3.3	3.7	2.1	0.0	0.4	0.8	0.0	0.0	0.0
87.5°	2.9	2.1	1.6	1.6	0.8	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)