

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: P367917

Luminaire Tested: **MSA-SA3B-830-U-T4W-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367917
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-15)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA3B-830-U-T4W-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) 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: 8807 lumens
Efficiency: N/A
Efficacy: 69.9 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

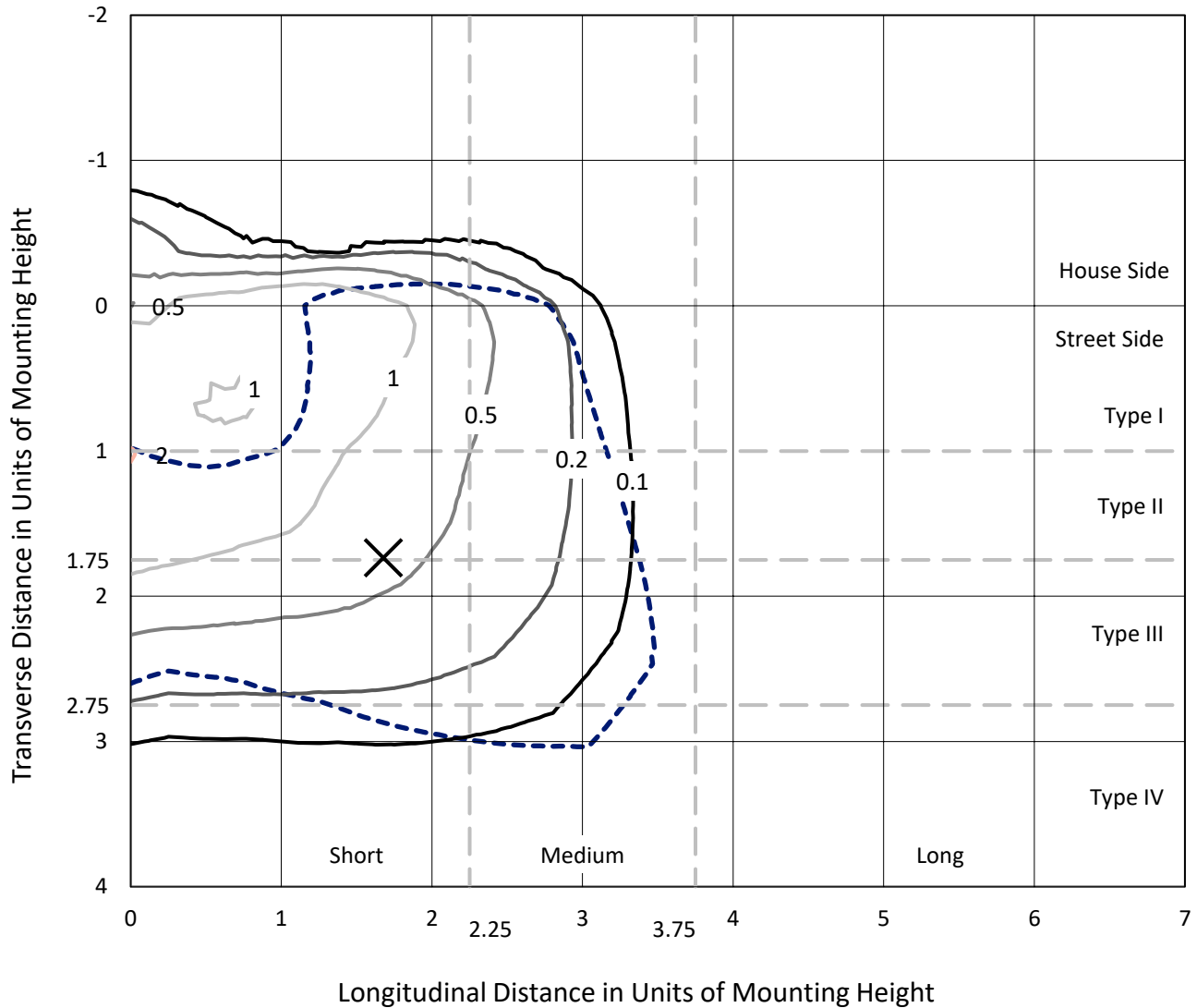
Input Watts (W): 126
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

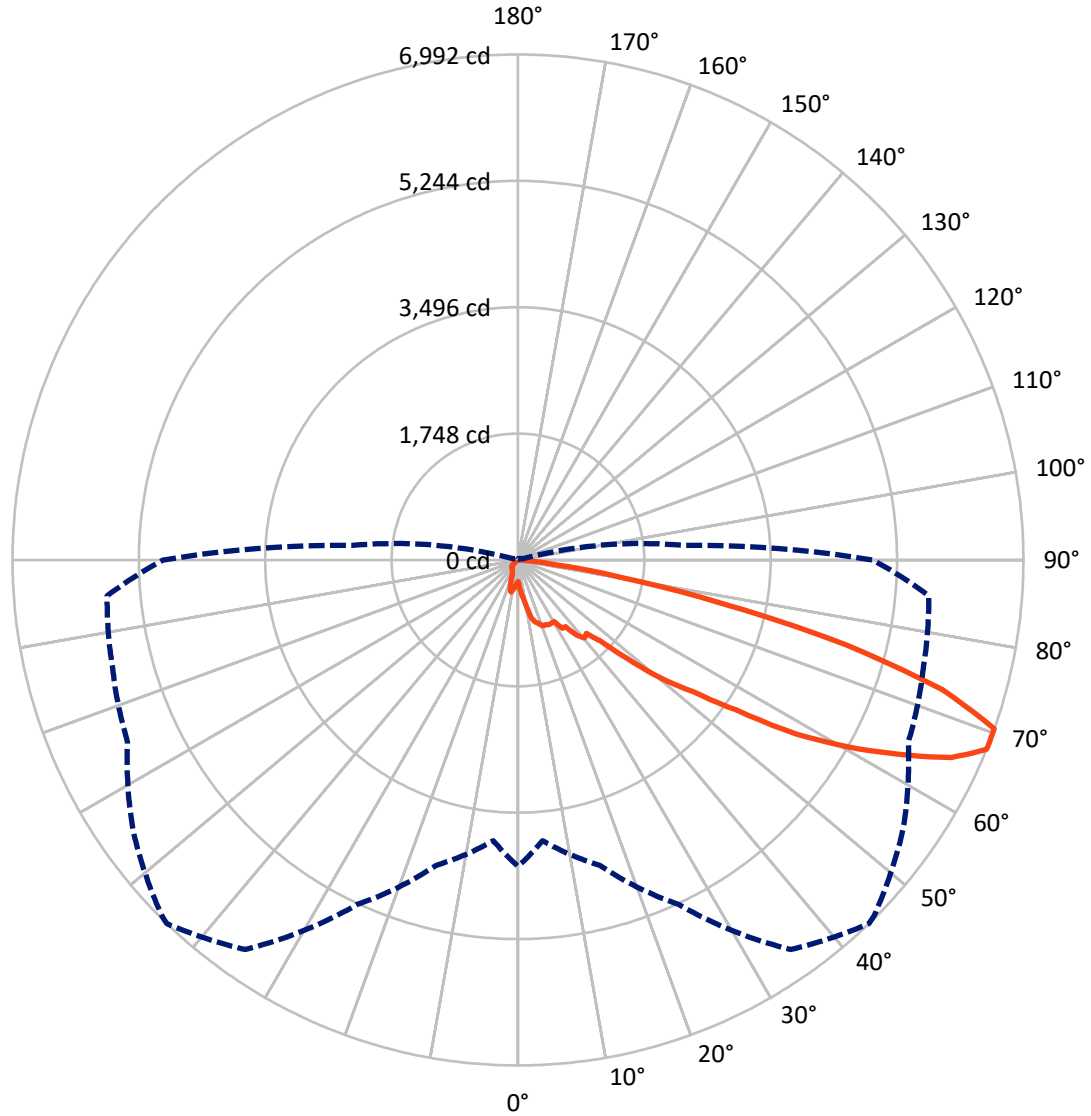
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



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

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	894.6	0.0	894.6
	% Fixture	10.2	0.0	10.2
Street Side	Lumens	7912.4	0.0	7912.4
	% Fixture	89.8	0.0	89.8
Total	Lumens	8807.0	0.0	8807.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	44.0	0.5
10°-20°	184.1	2.1
20°-30°	326.2	3.7
30°-40°	530.2	6.0
40°-50°	1060.9	12.0
50°-60°	2176.5	24.7
60°-70°	2989.9	33.9
70°-80°	1405.3	16.0
80°-90°	90.0	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°	8807.0	100.0
0°-180°	8807.0	100.0

Coefficient of Utilization

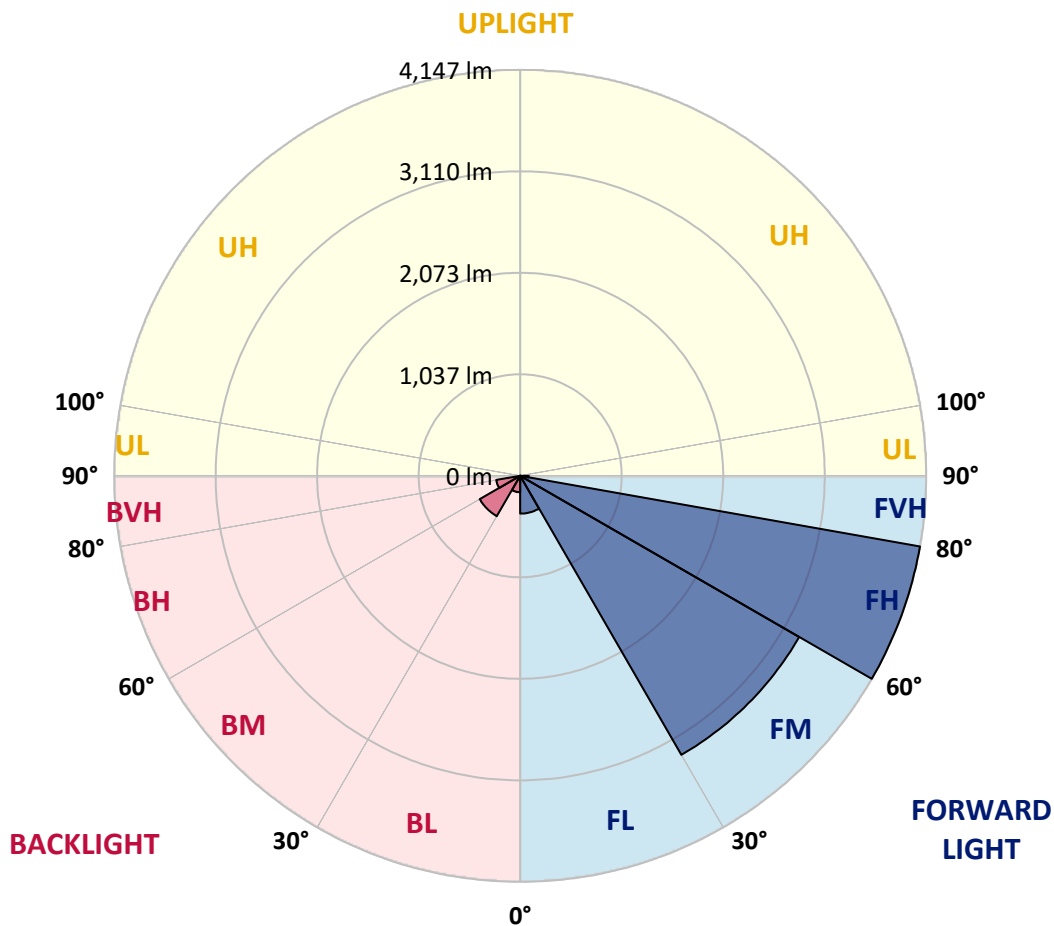


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	386.3	4.4			
FM (30°-60°)	3291.0	37.4			
FH (60°-80°)	4146.9	47.1			G2/5000
FVH (80°-90°)	88.2	1.0			G1/100
BL (0°-30°)	168.0	1.9	B1/500		
BM (30°-60°)	476.6	5.4	B1/1000		
BH (60°-80°)	248.3	2.8	B1/500		G1/500
BVH (80°-90°)	1.8	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





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	296.7	296.7	296.7	296.7	296.7	296.7	296.7	296.7	296.7	296.7	296.7
2.5°	377.3	365.2	347.7	351.6	353.5	358.9	359.4	352.6	333.1	327.8	351.6
5°	528.9	499.2	493.9	482.7	460.4	448.2	445.3	457.5	441.9	437.1	443.4
7.5°	675.5	650.3	622.6	607.5	560.9	532.3	530.8	535.7	538.6	521.6	530.3
10°	773.1	745.5	739.6	704.2	663.9	657.1	654.2	635.7	620.6	608.0	565.8
12.5°	861.5	861.0	871.7	820.7	814.4	821.2	818.8	752.7	737.7	684.8	672.6
15°	979.0	1008.2	962.1	919.3	864.9	888.2	881.9	839.7	829.5	793.5	741.6
17.5°	1100.9	1108.7	1031.5	965.9	951.9	921.3	927.6	912.5	861.0	889.7	838.2
20°	1103.9	1120.9	1038.3	930.0	973.2	971.8	972.2	957.7	889.7	956.7	909.6
22.5°	1144.7	1102.9	1026.2	957.2	965.0	972.2	980.0	962.1	947.5	964.0	972.7
25°	1128.1	1111.6	1037.8	992.2	984.9	990.7	992.6	1015.5	1006.2	1046.1	1024.2
27.5°	1170.9	1147.1	1015.0	1023.2	997.5	990.7	979.0	1055.3	1082.5	1050.9	1109.2
30°	1244.2	1240.8	1054.3	1066.5	1046.6	986.8	1017.9	1117.5	1151.4	1132.0	1202.9
32.5°	1358.8	1370.5	1169.4	1090.7	1100.9	1127.7	1116.0	1117.5	1203.4	1246.6	1303.0
35°	1521.5	1515.2	1281.6	1183.0	1129.6	1134.0	1150.5	1229.6	1340.8	1337.9	1397.7
37.5°	1841.1	1772.1	1480.2	1277.2	1293.3	1315.1	1303.0	1409.3	1420.0	1423.9	1566.7
40°	2312.1	2220.3	1793.5	1475.9	1321.4	1418.1	1412.2	1438.5	1509.9	1536.6	1744.9
42.5°	2932.8	2809.4	2344.7	1841.1	1457.4	1390.9	1426.8	1476.3	1716.2	1792.5	2020.7
45°	3618.5	3368.9	2894.4	2361.7	1798.3	1591.9	1619.1	1711.4	2044.1	2170.3	2422.4
47.5°	4062.9	3843.3	3438.8	2823.0	2153.8	2045.5	2047.9	2067.8	2429.2	2663.2	3001.2
50°	4448.9	4215.3	3839.9	3305.3	2782.7	2577.8	2531.1	2439.4	2919.7	3239.7	3614.6
52.5°	4993.8	4720.9	4241.1	3871.0	3500.0	3017.3	3000.8	3031.8	3498.1	3834.6	4243.5
55°	5485.3	5153.6	4695.6	4462.5	4317.8	3663.2	3677.3	3729.2	4240.6	4418.8	4803.0
57.5°	5702.4	5343.0	5107.5	5002.6	4925.3	4545.6	4498.0	4466.9	4826.3	4894.3	5389.1
60°	5844.7	5502.8	5395.9	5420.2	5654.3	5251.2	5208.0	5027.3	5310.9	5366.8	5914.6
62.5°	5754.8	5443.0	5465.9	5668.4	6188.0	5922.8	5798.0	5496.0	5707.2	5752.4	6291.9
65°	5189.0	4864.2	5157.5	5647.5	6595.0	6588.7	6530.9	5928.7	5926.7	5984.5	6321.1
67.5°	4238.7	3897.7	4372.2	5256.1	6578.0	6992.2	6965.0	6502.7	5958.3	5803.9	5704.3
70°	2946.9	2651.1	3189.2	4340.6	5991.8	6989.3	6945.6	6888.3	5708.7	4995.8	4422.7
72.5°	1531.2	1368.5	1869.7	2991.0	4776.3	6140.9	6285.1	6190.9	4874.4	3629.7	2604.5
75°	520.1	466.7	771.2	1587.6	3175.1	4689.3	4858.3	4762.7	3310.6	1947.4	1030.0
77.5°	201.5	187.5	276.3	644.4	1592.9	2857.5	3041.1	2943.5	1775.5	713.4	242.3
80°	114.6	110.7	152.5	290.4	702.2	1421.5	1550.6	1406.4	640.1	240.4	63.1
82.5°	48.6	50.0	85.0	156.9	353.1	501.7	559.5	510.4	268.1	164.6	23.3
85°	10.7	13.1	40.3	87.4	148.1	143.3	150.1	166.6	164.6	120.9	10.2
87.5°	0.0	0.0	12.6	23.8	35.5	23.3	18.5	32.5	50.5	48.6	4.4
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°	296.7	296.7	296.7	296.7	296.7	296.7	296.7	296.7	296.7	296.7	296.7
2.5°	356.0	351.1	320.5	318.6	320.5	315.2	314.7	303.5	304.5	329.7	331.7
5°	443.4	419.1	392.9	384.6	376.9	359.4	369.1	369.1	369.1	385.1	390.0
7.5°	522.5	490.0	453.1	422.0	391.9	370.1	385.1	395.8	402.1	423.0	432.7
10°	558.5	526.4	493.4	449.2	425.9	417.6	400.2	390.9	402.1	397.7	403.1
12.5°	635.2	606.1	549.3	503.6	486.1	458.0	406.5	370.5	346.7	342.9	341.9
15°	710.0	692.0	615.8	554.6	493.9	428.8	340.9	293.3	268.1	263.7	264.2
17.5°	804.7	779.0	666.8	578.9	475.9	358.9	263.2	222.4	220.5	231.2	232.1
20°	867.8	825.6	692.5	559.0	416.7	271.5	205.9	196.2	211.7	231.2	229.2
22.5°	928.1	882.4	726.5	541.5	322.9	205.9	189.4	190.4	203.5	224.4	229.7
25°	967.9	951.4	768.3	500.7	246.2	178.2	181.1	188.4	199.6	219.5	219.5
27.5°	1087.8	1010.6	763.4	421.5	189.4	166.1	172.9	182.1	187.9	211.7	214.2
30°	1160.7	1135.4	788.7	340.9	166.1	150.5	163.7	171.9	175.8	203.0	204.0
32.5°	1250.0	1194.2	819.3	251.6	154.4	149.6	146.7	153.0	164.1	187.9	189.4
35°	1358.8	1342.3	775.6	197.7	150.5	139.9	134.0	137.4	144.7	160.7	164.1
37.5°	1580.8	1482.7	749.3	169.5	150.5	136.5	130.2	121.4	122.4	133.6	139.9
40°	1767.7	1737.6	676.0	164.6	143.7	131.6	116.1	105.4	98.1	101.5	103.9
42.5°	2111.1	1971.7	581.3	162.2	137.4	119.0	98.6	87.4	76.2	77.2	81.1
45°	2527.7	2227.1	496.8	159.8	133.1	106.4	83.0	69.9	58.3	58.8	62.6
47.5°	3084.3	2599.6	394.3	152.5	125.3	94.7	67.0	53.4	46.6	48.1	51.5
50°	3716.6	2926.5	311.8	141.3	116.1	83.5	54.4	43.2	40.8	42.3	46.1
52.5°	4281.4	3167.3	257.4	131.1	103.0	68.0	45.7	38.4	37.4	38.4	41.3
55°	4783.5	3307.2	215.1	119.5	88.4	54.9	41.3	35.5	35.0	34.5	36.4
57.5°	5254.6	3347.5	168.0	101.0	71.9	47.6	38.4	33.0	32.1	30.6	32.1
60°	5598.0	3278.5	123.4	81.1	58.8	43.2	35.9	29.6	28.2	25.7	26.7
62.5°	5763.6	3089.6	93.2	65.1	50.0	39.3	32.1	25.7	23.8	20.9	21.4
65°	5606.2	2778.3	73.3	54.9	42.7	33.0	27.2	21.9	19.4	16.5	16.5
67.5°	4909.3	2304.8	62.2	47.6	35.9	28.2	22.3	19.9	16.0	13.6	13.1
70°	3603.4	1658.0	53.4	41.8	31.1	24.3	18.9	18.0	15.5	13.1	12.1
72.5°	2033.9	938.3	45.7	36.9	26.2	20.4	16.0	16.5	15.1	12.1	11.2
75°	776.1	316.2	37.9	30.6	21.4	15.5	13.6	13.6	13.6	10.2	8.7
77.5°	192.3	80.6	30.1	24.8	17.0	10.2	11.2	11.7	11.7	8.7	6.3
80°	52.9	27.2	18.0	18.0	12.1	5.8	7.8	7.8	6.3	2.9	0.0
82.5°	19.4	10.2	6.3	7.8	5.3	1.9	2.9	1.9	1.5	0.0	0.0
85°	8.3	5.3	3.9	4.4	2.4	0.0	0.5	1.0	0.0	0.0	0.0
87.5°	3.4	2.4	1.9	1.9	1.0	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)