

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: P597001

Luminaire Tested: **MSA-SA2D-835-U-T4W-HSS**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P597001  
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-835-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**

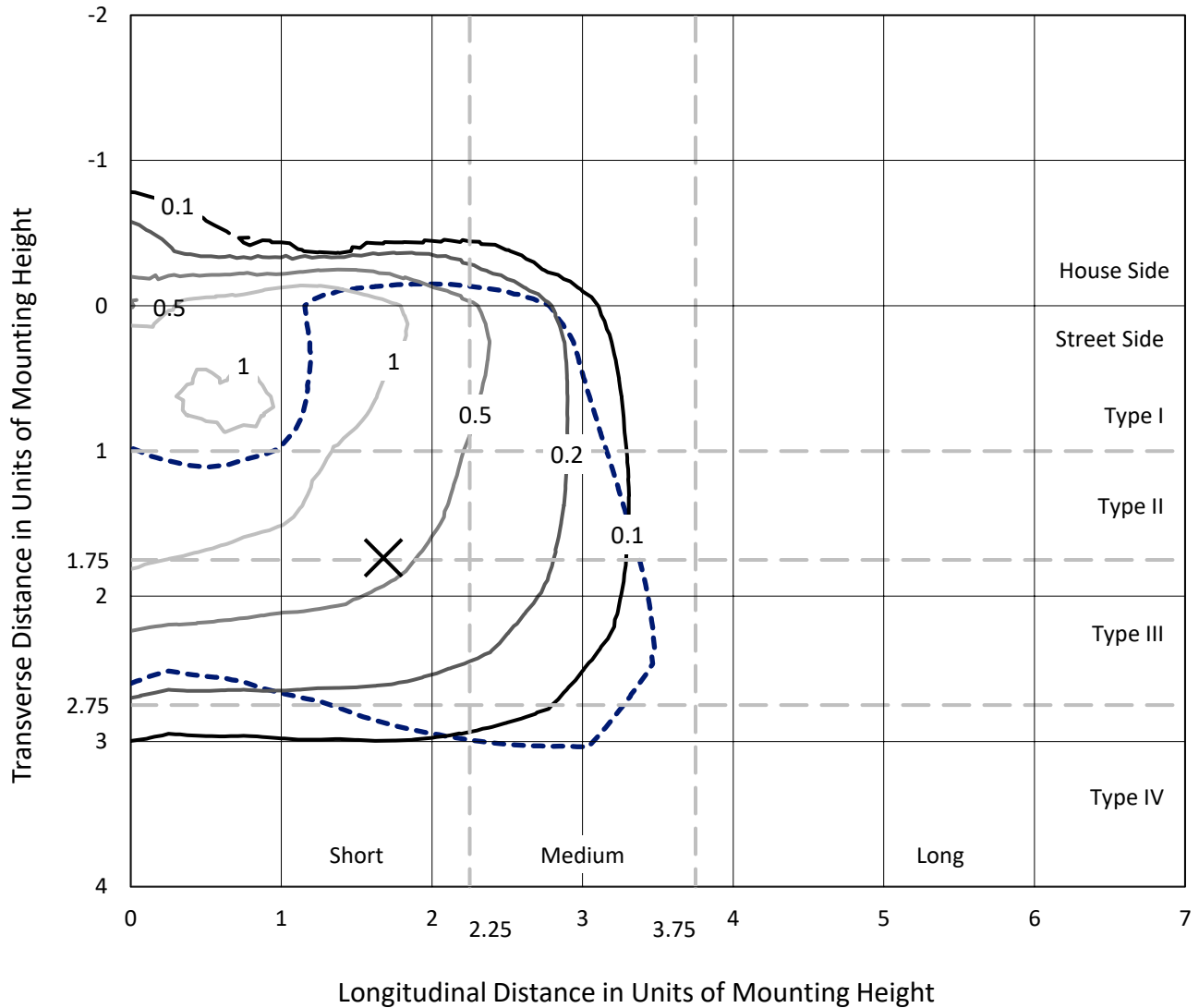
Lumens per Lamp: N/A  
Luminaire Lumens: 8383 lumens  
Efficiency: N/A  
Efficacy: 65.0 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G2  
  
Input Watts (W): 129  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage 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



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### Iso-Footcandle Lines of Horizontal Illumination

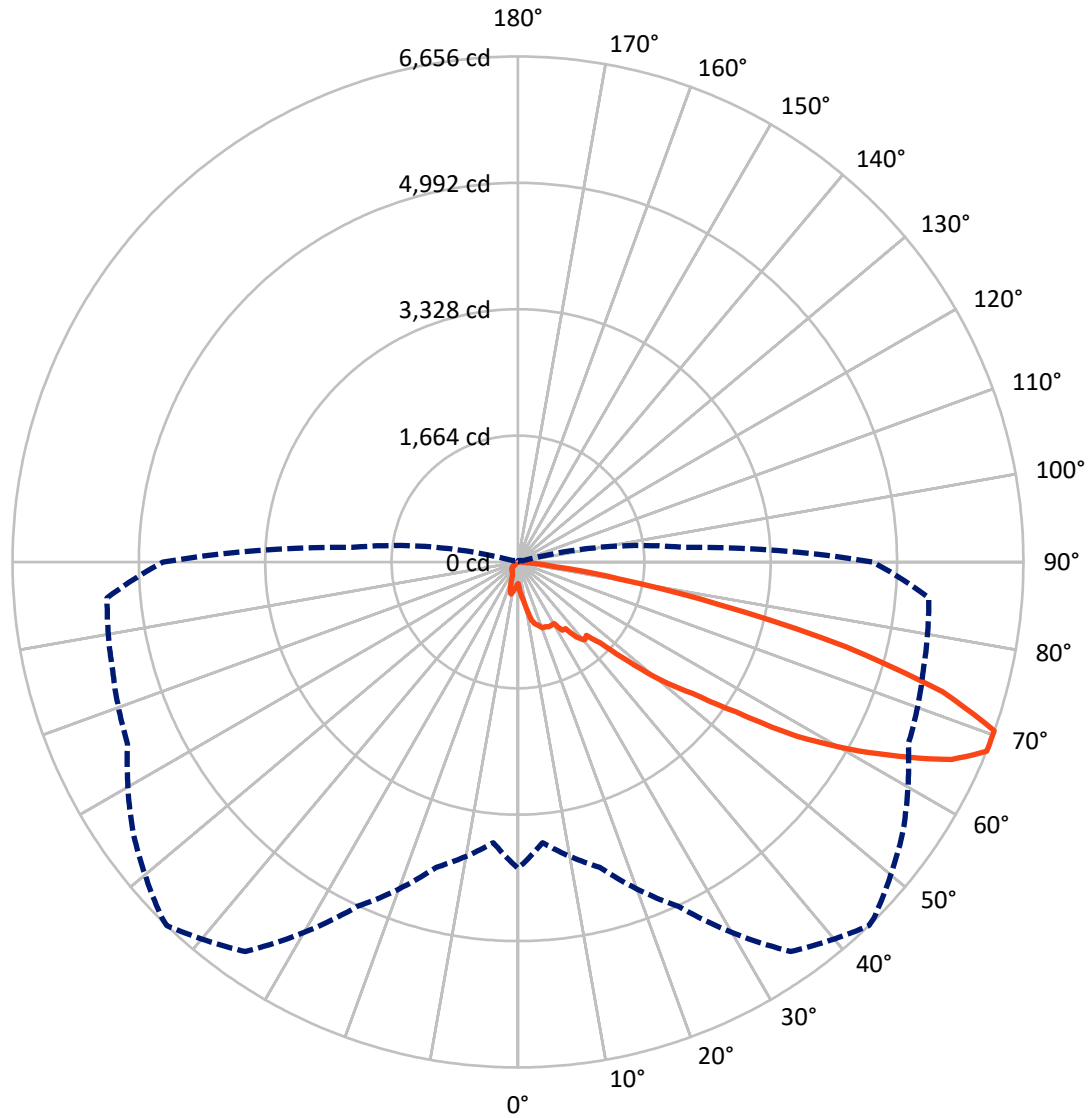
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.9 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
<b>House Side</b>	Lumens	851.5	0.0	851.5
	% Fixture	10.2	0.0	10.2
<b>Street Side</b>	Lumens	7531.4	0.0	7531.4
	% Fixture	89.8	0.0	89.8
<b>Total</b>	Lumens	8383.0	0.0	8383.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	41.9	0.5
10°-20°	175.3	2.1
20°-30°	310.5	3.7
30°-40°	504.6	6.0
40°-50°	1009.8	12.0
50°-60°	2071.7	24.7
60°-70°	2845.9	33.9
70°-80°	1337.6	16.0
80°-90°	85.7	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°	8383.0	100.0
0°-180°	8383.0	100.0

**Coefficient of Utilization**



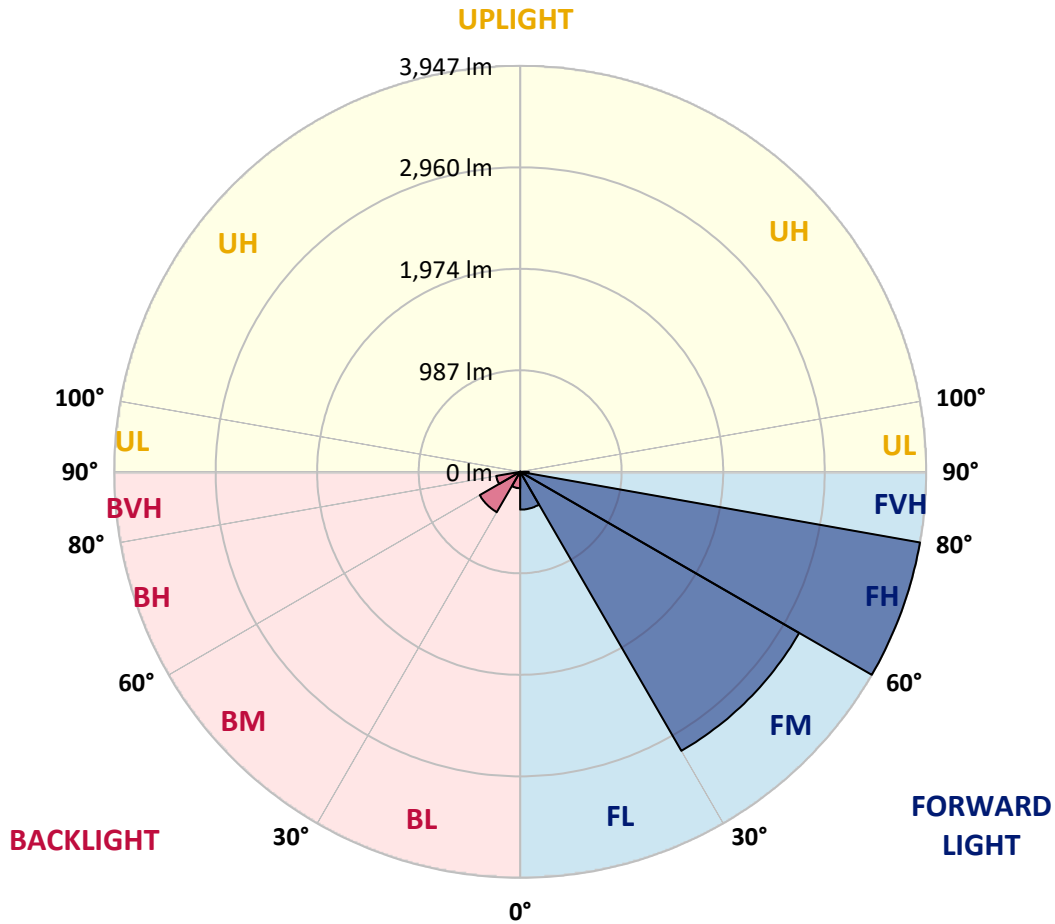
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	367.7	4.4			
FM (30°-60°)	3132.6	37.4			
FH (60°-80°)	3947.2	47.1			G2/5000
FVH (80°-90°)	83.9	1.0			G1/100
BL (0°-30°)	159.9	1.9	B1/500		
BM (30°-60°)	453.6	5.4	B1/1000		
BH (60°-80°)	236.3	2.8	B1/500		G1/500
BVH (80°-90°)	1.7	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°	282.4	282.4	282.4	282.4	282.4	282.4	282.4	282.4	282.4	282.4	282.4
2.5°	359.2	347.6	331.0	334.7	336.5	341.6	342.1	335.6	317.1	312.0	334.7
5°	503.4	475.2	470.1	459.5	438.2	426.7	423.9	435.4	420.7	416.0	422.0
7.5°	643.0	619.0	592.6	578.3	533.9	506.6	505.2	509.9	512.6	496.5	504.8
10°	735.9	709.6	704.0	670.3	631.9	625.4	622.7	605.1	590.8	578.7	538.5
12.5°	820.0	819.6	829.8	781.2	775.2	781.7	779.4	716.5	702.2	651.8	640.2
15°	931.9	959.6	915.7	875.1	823.3	845.5	839.5	799.2	789.5	755.3	705.9
17.5°	1047.9	1055.3	981.8	919.4	906.0	876.9	882.9	868.6	819.6	846.9	797.9
20°	1050.7	1066.9	988.3	885.2	926.4	925.0	925.4	911.6	846.9	910.6	865.8
22.5°	1089.5	1049.8	976.8	911.1	918.5	925.4	932.8	915.7	901.9	917.6	925.9
25°	1073.8	1058.1	987.8	944.4	937.5	943.0	944.9	966.6	957.8	995.7	974.9
27.5°	1114.5	1091.9	966.1	974.0	949.5	943.0	931.9	1004.5	1030.4	1000.3	1055.8
30°	1184.3	1181.1	1003.6	1015.1	996.2	939.3	968.9	1063.7	1096.0	1077.5	1145.0
32.5°	1293.4	1304.5	1113.1	1038.2	1047.9	1073.4	1062.3	1063.7	1145.5	1186.6	1240.2
35°	1448.3	1442.2	1219.9	1126.1	1075.2	1079.4	1095.1	1170.4	1276.3	1273.5	1330.4
37.5°	1752.4	1686.8	1409.0	1215.7	1231.0	1251.8	1240.2	1341.5	1351.6	1355.3	1491.2
40°	2200.8	2113.4	1707.1	1404.8	1257.8	1349.8	1344.2	1369.2	1437.2	1462.6	1660.9
42.5°	2791.6	2674.2	2231.8	1752.4	1387.2	1323.9	1358.1	1405.3	1633.6	1706.2	1923.5
45°	3444.3	3206.7	2755.1	2248.0	1711.7	1515.3	1541.2	1629.0	1945.6	2065.8	2305.7
47.5°	3867.3	3658.3	3273.3	2687.1	2050.1	1947.0	1949.3	1968.3	2312.2	2535.0	2856.8
50°	4234.7	4012.4	3655.1	3146.1	2648.7	2453.7	2409.3	2321.9	2779.1	3083.7	3440.6
52.5°	4753.4	4493.6	4036.9	3684.7	3331.5	2872.0	2856.3	2885.9	3329.6	3650.0	4039.2
55°	5221.2	4905.5	4469.6	4247.7	4109.9	3486.8	3500.2	3549.7	4036.4	4206.1	4571.7
57.5°	5427.8	5085.8	4861.6	4761.7	4688.2	4326.7	4281.4	4251.9	4593.9	4658.6	5129.7
60°	5563.3	5237.8	5136.2	5159.3	5382.1	4998.4	4957.3	4785.3	5055.3	5108.4	5629.8
62.5°	5477.8	5181.0	5202.7	5395.5	5890.1	5637.7	5518.9	5231.4	5432.5	5475.4	5989.0
65°	4939.2	4630.0	4909.2	5375.6	6277.5	6271.5	6216.4	5643.2	5641.4	5696.4	6016.8
67.5°	4034.6	3710.1	4161.7	5003.0	6261.3	6655.6	6629.7	6189.6	5671.4	5524.4	5429.7
70°	2805.0	2523.5	3035.6	4131.7	5703.3	6652.8	6611.2	6556.7	5433.8	4755.3	4209.8
72.5°	1457.5	1302.6	1779.7	2847.0	4546.3	5845.3	5982.5	5892.9	4639.7	3454.9	2479.1
75°	495.1	444.2	734.1	1511.1	3022.2	4463.6	4624.4	4533.4	3151.2	1853.7	980.4
77.5°	191.8	178.4	263.0	613.4	1516.2	2719.9	2894.7	2801.7	1690.0	679.1	230.7
80°	109.1	105.4	145.1	276.4	668.4	1353.0	1476.0	1338.7	609.3	228.8	60.1
82.5°	46.2	47.6	80.9	149.3	336.1	477.5	532.5	485.8	255.2	156.7	22.2
85°	10.2	12.5	38.4	83.2	141.0	136.4	142.8	158.6	156.7	115.1	9.7
87.5°	0.0	0.0	12.0	22.7	33.7	22.2	17.6	31.0	48.1	46.2	4.2
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°	282.4	282.4	282.4	282.4	282.4	282.4	282.4	282.4	282.4	282.4	282.4
2.5°	338.8	334.2	305.1	303.2	305.1	300.0	299.5	288.9	289.8	313.9	315.7
5°	422.0	398.9	374.0	366.1	358.7	342.1	351.3	351.3	351.3	366.6	371.2
7.5°	497.4	466.4	431.3	401.7	373.0	352.2	366.6	376.7	382.7	402.6	411.9
10°	531.6	501.1	469.7	427.6	405.4	397.5	380.9	372.1	382.7	378.6	383.7
12.5°	604.6	576.9	522.8	479.4	462.7	435.9	386.9	352.7	330.1	326.4	325.4
15°	675.8	658.7	586.1	527.9	470.1	408.2	324.5	279.2	255.2	251.0	251.5
17.5°	766.0	741.5	634.7	551.0	453.0	341.6	250.5	211.7	209.9	220.0	221.0
20°	826.1	785.8	659.2	532.1	396.6	258.4	196.0	186.8	201.5	220.0	218.2
22.5°	883.4	839.9	691.5	515.4	307.4	196.0	180.3	181.2	193.7	213.6	218.6
25°	921.3	905.6	731.3	476.6	234.4	169.6	172.4	179.4	190.0	208.9	208.9
27.5°	1035.5	962.0	726.7	401.2	180.3	158.1	164.6	173.3	178.9	201.5	203.9
30°	1104.8	1080.8	750.7	324.5	158.1	143.3	155.8	163.6	167.3	193.2	194.1
32.5°	1189.9	1136.7	779.8	239.4	147.0	142.4	139.6	145.6	156.2	178.9	180.3
35°	1293.4	1277.7	738.2	188.1	143.3	133.1	127.6	130.8	137.8	153.0	156.2
37.5°	1504.7	1411.3	713.3	161.3	143.3	129.9	123.9	115.6	116.5	127.1	133.1
40°	1682.6	1654.0	643.5	156.7	136.8	125.3	110.5	100.3	93.4	96.6	98.9
42.5°	2009.4	1876.8	553.3	154.4	130.8	113.3	93.8	83.2	72.6	73.5	77.2
45°	2406.1	2119.9	472.9	152.1	126.7	101.2	79.0	66.6	55.5	55.9	59.6
47.5°	2935.8	2474.5	375.4	145.1	119.3	90.1	63.8	50.8	44.4	45.8	49.0
50°	3537.7	2785.6	296.8	134.5	110.5	79.5	51.8	41.1	38.8	40.2	43.9
52.5°	4075.3	3014.8	245.0	124.8	98.0	64.7	43.5	36.5	35.6	36.5	39.3
55°	4553.2	3148.0	204.8	113.7	84.1	52.2	39.3	33.7	33.3	32.8	34.7
57.5°	5001.6	3186.3	159.9	96.1	68.4	45.3	36.5	31.4	30.5	29.1	30.5
60°	5328.5	3120.7	117.4	77.2	55.9	41.1	34.2	28.2	26.8	24.5	25.4
62.5°	5486.1	2940.9	88.8	61.9	47.6	37.4	30.5	24.5	22.7	19.9	20.3
65°	5336.3	2644.6	69.8	52.2	40.7	31.4	25.9	20.8	18.5	15.7	15.7
67.5°	4673.0	2193.9	59.2	45.3	34.2	26.8	21.3	19.0	15.3	12.9	12.5
70°	3430.0	1578.1	50.8	39.8	29.6	23.1	18.0	17.1	14.8	12.5	11.6
72.5°	1935.9	893.1	43.5	35.1	25.0	19.4	15.3	15.7	14.3	11.6	10.6
75°	738.7	300.9	36.1	29.1	20.3	14.8	12.9	12.9	12.9	9.7	8.3
77.5°	183.1	76.7	28.7	23.6	16.2	9.7	10.6	11.1	11.1	8.3	6.0
80°	50.4	25.9	17.1	17.1	11.6	5.5	7.4	7.4	6.0	2.8	0.0
82.5°	18.5	9.7	6.0	7.4	5.1	1.8	2.8	1.8	1.4	0.0	0.0
85°	7.9	5.1	3.7	4.2	2.3	0.0	0.5	0.9	0.0	0.0	0.0
87.5°	3.2	2.3	1.8	1.8	0.9	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)