

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: P401230

Luminaire Tested: **ENT-SA1B-830-U-T4FT**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401230
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-15)
Test Lab: INNOVATION CENTER
Issue Date: 5/20/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENT-SA1B-830-U-T4FT
Description: ENTRI LED LUMINAIRE
(1) 80 CRI, 3000K, 450mA LIGHTSQUARE WITH 16 LEDS AND TYPE IV FORWARD
THROW OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2608 lumens
Efficiency: N/A
Efficacy: 102.7 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B1 - U0 - G1

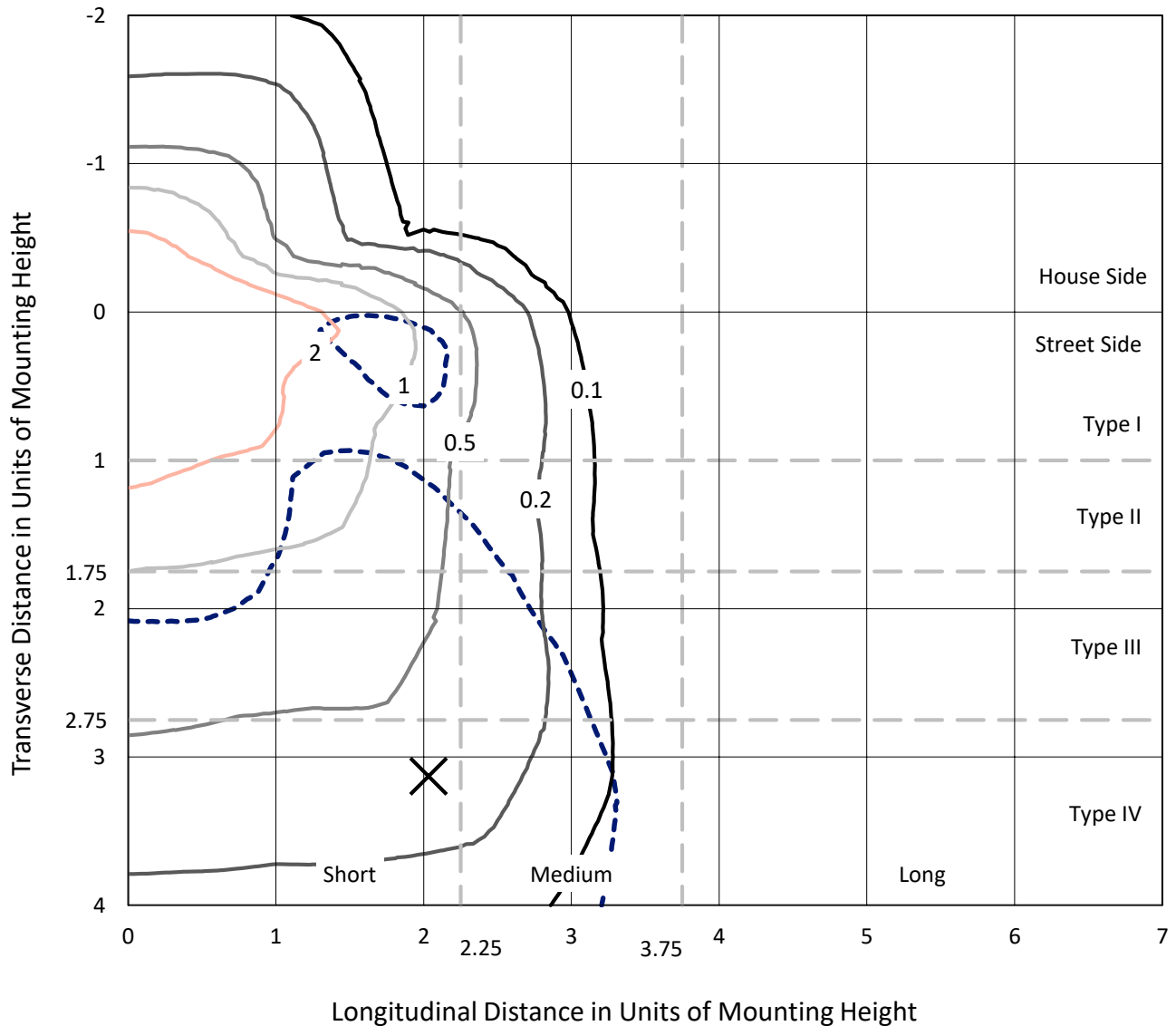
Input Watts (W): 25.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

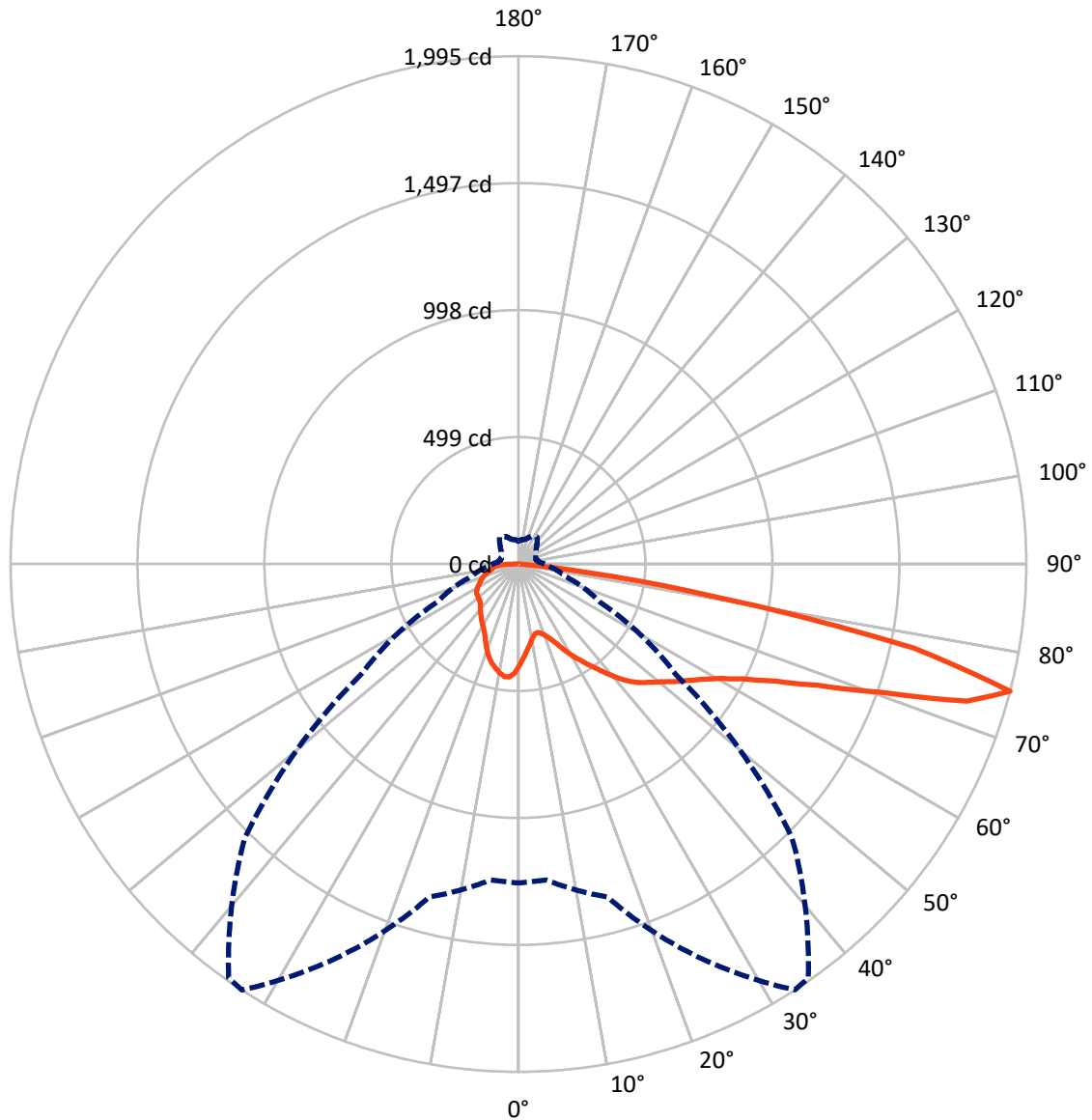
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 4.3 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 33-Deg Lateral - - - Horizontal Cone Through 75-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	633.6	0.0	633.6
	% Fixture	24.3	0.0	24.3
Street Side	Lumens	1974.4	0.0	1974.4
	% Fixture	75.7	0.0	75.7
Total	Lumens	2608.0	0.0	2608.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	37.3	1.4
10°-20°	105.0	4.0
20°-30°	174.6	6.7
30°-40°	260.5	10.0
40°-50°	363.8	14.0
50°-60°	485.7	18.6
60°-70°	602.2	23.1
70°-80°	520.7	20.0
80°-90°	58.2	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°	2608.0	100.0
0°-180°	2608.0	100.0



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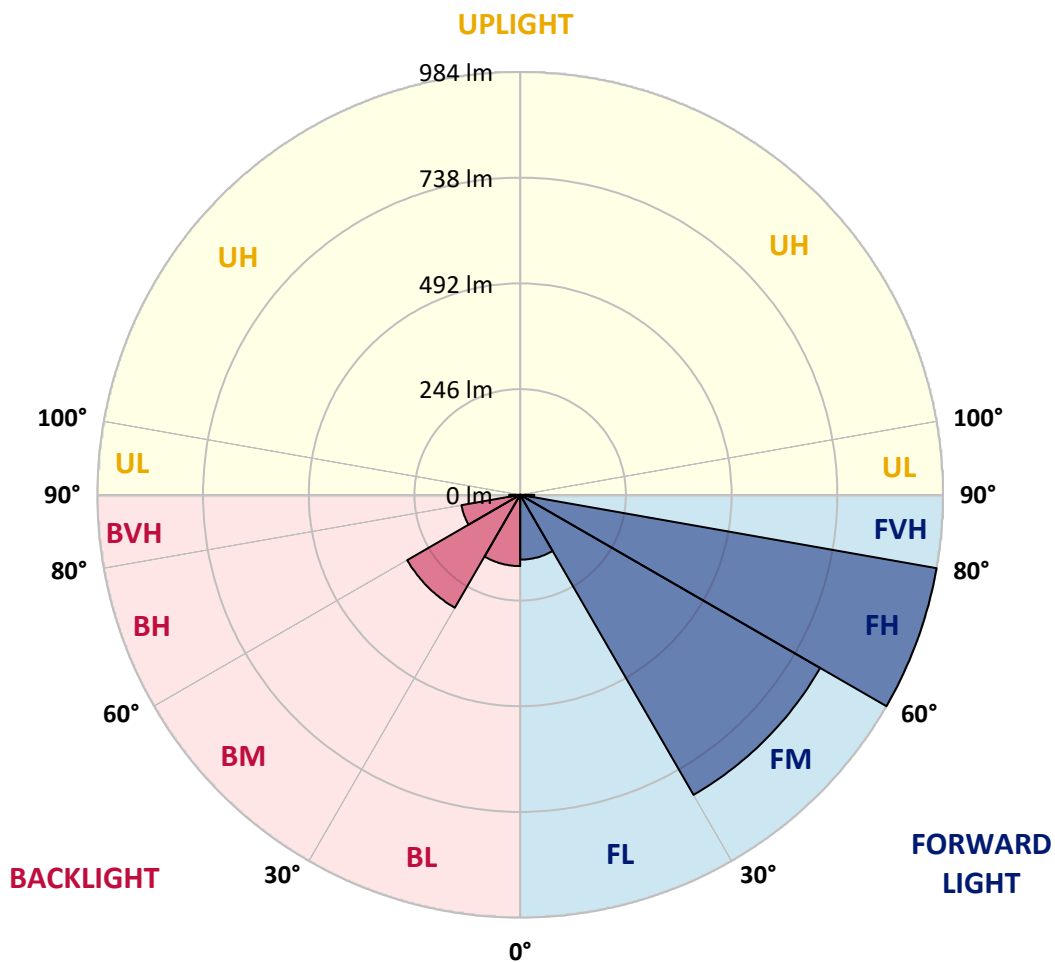
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	151.0	5.8			
FM	(30°-60°)	806.4	30.9			
FH	(60°-80°)	984.1	37.7			G1/1800
FVH	(80°-90°)	32.9	1.3			G1/100
BL	(0°-30°)	165.9	6.4	B1/500		
BM	(30°-60°)	303.6	11.6	B1/1000		
BH	(60°-80°)	138.7	5.3	B1/500		G1/500
BVH	(80°-90°)	25.3	1.0			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G1

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	33°	35°	45°	55°	65°	75°	85°
0°	399.6	399.6	399.6	399.6	399.6	399.6	399.6	399.6	399.6	399.6	399.6
2.5°	362.4	363.2	365.5	368.3	369.8	369.8	374.1	379.1	385.3	390.7	396.5
5°	332.2	333.4	335.3	338.8	343.1	343.9	352.4	361.3	372.5	384.5	396.1
7.5°	302.4	304.8	308.6	313.3	319.9	321.4	333.4	345.4	360.9	379.1	398.1
10°	279.6	281.1	283.1	289.6	297.8	300.5	316.4	331.5	352.8	375.2	400.4
12.5°	273.4	273.4	273.4	276.5	283.1	285.4	302.0	321.4	345.4	372.5	403.9
15°	282.3	281.9	277.6	275.3	279.2	281.1	295.5	314.4	341.5	373.3	410.5
17.5°	302.4	301.3	291.2	283.5	286.2	287.3	296.6	312.9	340.4	376.4	420.1
20°	328.8	326.0	310.6	298.9	298.6	299.3	306.3	317.5	342.3	381.8	430.6
22.5°	363.6	362.1	339.2	321.4	318.3	318.3	321.4	328.4	347.3	388.0	444.9
25°	408.5	404.3	376.8	352.8	345.8	343.9	343.5	343.5	356.3	397.3	462.7
27.5°	454.6	449.6	421.7	389.2	379.9	376.4	370.2	365.5	367.9	407.4	484.0
30°	496.0	489.1	465.5	431.8	417.8	412.4	401.2	391.5	385.3	421.3	512.3
32.5°	518.9	516.2	499.9	469.3	453.4	451.1	432.5	419.8	408.9	439.5	550.3
35°	549.5	546.0	535.5	510.4	491.4	485.6	471.6	456.5	439.1	463.9	598.3
37.5°	577.8	575.8	571.9	554.5	534.4	528.6	515.8	499.9	476.3	499.9	652.1
40°	606.4	604.1	602.5	596.3	582.0	578.1	571.9	553.4	521.6	539.4	705.1
42.5°	648.2	643.2	626.9	626.5	627.7	630.8	631.2	610.7	571.2	588.6	751.6
45°	702.8	688.9	652.5	651.3	664.9	673.0	692.8	675.3	622.7	638.9	803.5
47.5°	730.7	716.4	678.8	676.5	694.3	706.3	755.1	738.1	676.1	695.5	857.3
50°	744.3	735.0	702.1	709.4	727.6	739.2	814.3	800.8	731.5	756.7	925.1
52.5°	763.2	747.7	724.5	740.0	767.1	779.1	867.4	865.1	778.3	823.3	999.4
55°	756.7	748.5	752.8	773.7	807.8	825.6	920.8	920.8	826.0	894.5	1073.0
57.5°	762.1	756.7	791.9	810.5	853.5	879.0	985.1	968.1	866.2	954.1	1122.6
60°	808.2	792.7	820.2	856.9	912.3	937.1	1058.7	1017.6	899.2	1005.6	1131.5
62.5°	889.5	877.1	879.8	922.0	993.6	1022.3	1131.5	1061.4	921.2	1027.3	1098.2
65°	1024.2	1018.4	985.1	1010.7	1109.4	1135.4	1222.5	1099.4	915.0	1011.1	1010.3
67.5°	1205.5	1182.2	1137.3	1160.1	1274.0	1300.3	1332.1	1113.7	874.8	913.9	812.0
70°	1355.7	1336.3	1315.8	1375.8	1506.7	1521.0	1446.3	1100.1	776.8	715.2	544.4
72.5°	1451.3	1437.4	1456.4	1633.0	1842.5	1815.3	1559.0	1005.3	606.0	438.0	272.2
75°	1252.7	1246.1	1354.5	1712.7	1995.4	1985.3	1519.9	752.4	351.6	192.8	123.9
77.5°	630.0	701.7	815.9	1215.1	1587.7	1589.6	1107.5	361.7	147.9	108.0	85.2
80°	177.4	179.7	272.2	501.1	792.7	844.6	419.0	122.8	84.4	80.5	63.5
82.5°	42.2	39.1	69.7	148.3	266.0	276.9	125.9	44.1	47.2	50.3	39.1
85°	0.4	0.4	0.4	0.4	0.4	0.8	4.6	4.6	11.2	14.3	11.2
87.5°	0.0	0.0	0.0	0.4	0.4	0.4	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



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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	399.6	399.6	399.6	399.6	399.6	399.6	399.6	399.6	399.6	399.6	399.6
2.5°	399.2	403.1	409.3	414.7	419.4	422.9	428.3	429.1	430.6	431.4	432.2
5°	402.7	410.1	421.7	431.8	438.7	440.7	445.3	444.9	445.3	445.3	444.9
7.5°	407.4	417.4	433.7	444.9	448.8	447.6	446.5	442.2	438.7	437.2	435.2
10°	413.2	424.8	443.8	451.9	450.0	443.8	436.4	428.7	422.5	419.4	418.6
12.5°	419.0	434.1	451.9	454.2	446.5	435.2	422.9	414.3	406.2	401.9	401.9
15°	428.7	445.3	458.5	453.8	439.9	425.6	408.5	396.9	387.6	381.8	381.4
17.5°	440.3	458.1	465.5	451.9	431.8	411.6	391.1	376.0	364.0	358.2	354.7
20°	454.6	471.3	468.9	445.7	419.8	395.0	369.4	351.2	338.8	332.6	331.5
22.5°	470.9	484.8	470.1	435.6	403.5	371.7	343.9	325.7	317.5	312.9	313.3
25°	490.6	501.5	470.5	423.6	380.3	341.2	316.8	308.2	307.1	305.1	305.9
27.5°	515.4	518.9	468.9	407.4	350.4	309.0	294.7	298.2	301.3	300.1	300.9
30°	544.8	539.8	465.5	383.7	313.7	279.6	280.4	288.1	292.4	291.2	291.6
32.5°	579.3	560.7	458.9	355.1	278.8	261.8	268.0	275.7	280.0	280.0	280.4
35°	618.0	585.9	446.1	317.9	254.4	250.9	256.3	262.5	265.3	263.7	264.9
37.5°	658.7	607.6	425.6	276.5	236.2	242.4	245.5	247.1	246.7	244.3	243.2
40°	696.6	624.6	388.8	235.4	221.1	233.5	235.0	230.8	225.8	221.5	218.8
42.5°	725.7	633.5	337.7	205.6	206.8	223.4	224.6	216.1	206.4	199.8	198.3
45°	755.5	636.6	286.9	181.6	191.3	213.4	216.5	204.8	191.7	183.9	182.8
47.5°	789.6	644.4	237.0	165.0	178.1	206.4	211.4	197.1	182.4	170.8	168.8
50°	835.3	659.1	199.4	152.2	168.8	202.9	209.9	190.9	172.3	159.5	158.0
52.5°	893.3	680.8	164.6	142.1	161.5	197.5	207.6	184.7	165.0	149.5	147.1
55°	943.3	688.9	142.1	133.6	153.7	190.9	205.6	182.4	156.8	139.4	136.7
57.5°	966.1	665.7	126.2	125.1	145.6	182.8	201.7	174.6	147.9	134.4	132.0
60°	955.7	608.0	114.2	117.3	136.3	172.3	191.7	166.9	141.7	130.5	128.2
62.5°	909.2	541.4	105.3	110.0	125.9	159.2	180.1	159.9	136.3	126.2	123.1
65°	827.5	468.2	98.7	103.4	116.6	146.4	170.8	151.8	130.1	120.0	117.3
67.5°	675.3	372.5	91.8	96.8	108.8	135.9	162.3	145.2	123.1	116.6	114.2
70°	446.9	250.5	85.2	90.2	101.1	125.9	153.3	138.2	116.6	112.3	109.2
72.5°	205.2	134.8	78.2	83.3	92.2	114.6	142.1	127.8	107.7	104.9	100.3
75°	101.5	82.9	69.7	74.3	81.3	101.1	128.9	118.9	99.5	94.9	89.5
77.5°	74.0	62.0	60.0	64.7	70.5	89.5	115.0	109.6	91.4	84.8	81.7
80°	55.0	48.0	50.3	55.0	60.4	80.9	107.7	102.6	84.4	77.8	75.5
82.5°	33.7	32.1	38.7	44.1	50.7	74.3	102.6	93.7	75.9	69.7	67.0
85°	9.7	11.6	19.7	28.7	36.0	60.0	95.6	82.1	63.9	53.4	51.5
87.5°	0.0	1.2	6.2	13.2	21.3	39.9	73.6	64.3	48.8	39.5	37.9
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)