

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: P401032

Luminaire Tested: **ENV-SA1A-827-U-T4FT**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401032
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: ENV-SA1A-827-U-T4FT
Description: ENTRI LED LUMINAIRE
(1) 80 CRI, 2700K, 350mA LIGHTSQUARE WITH 16 LEDS AND TYPE IV FORWARD
THROW OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1924 lumens
Efficiency: N/A
Efficacy: 95.7 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): 20.1
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

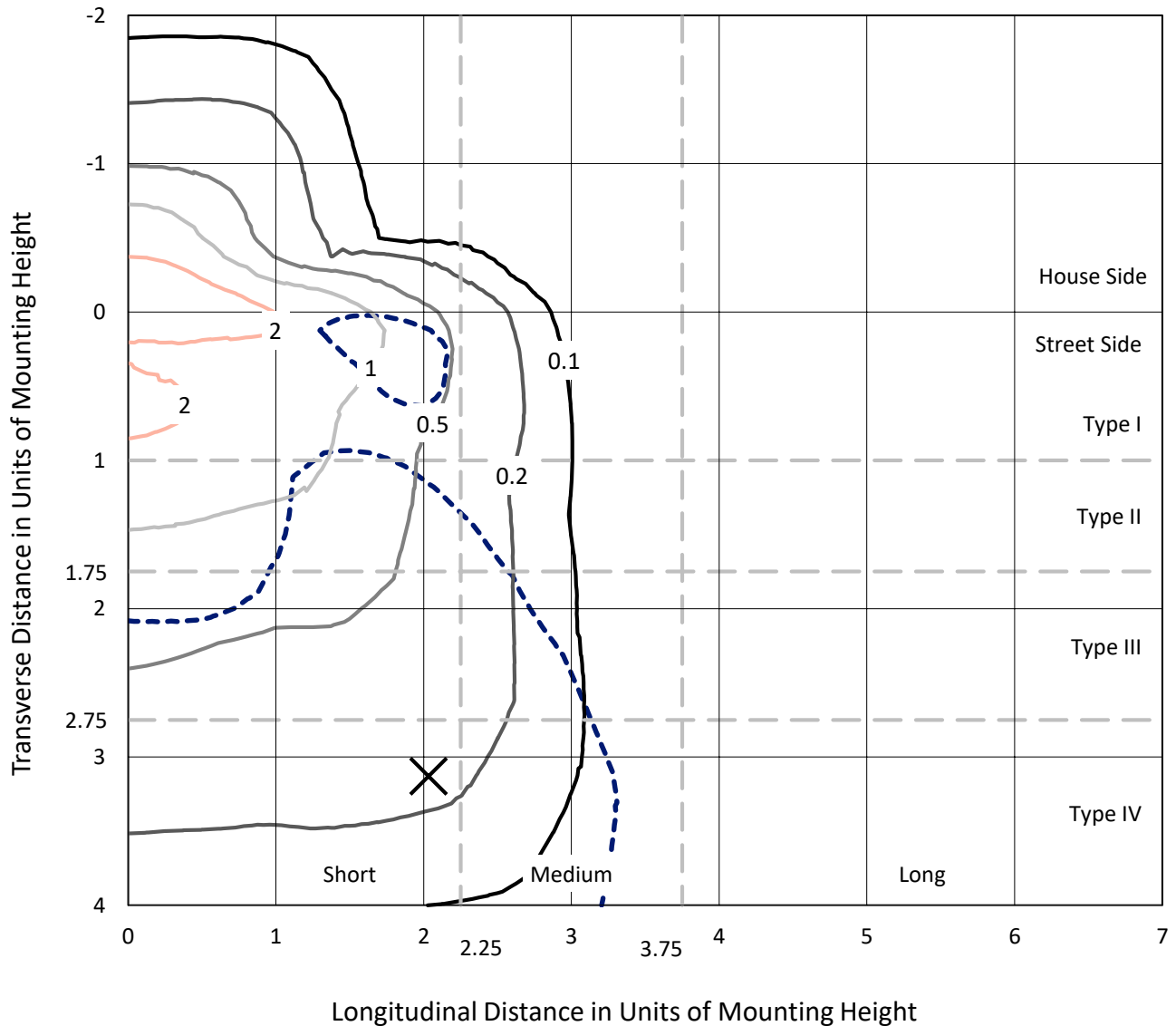


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Iso-Footcandle Lines of Horizontal Illumination

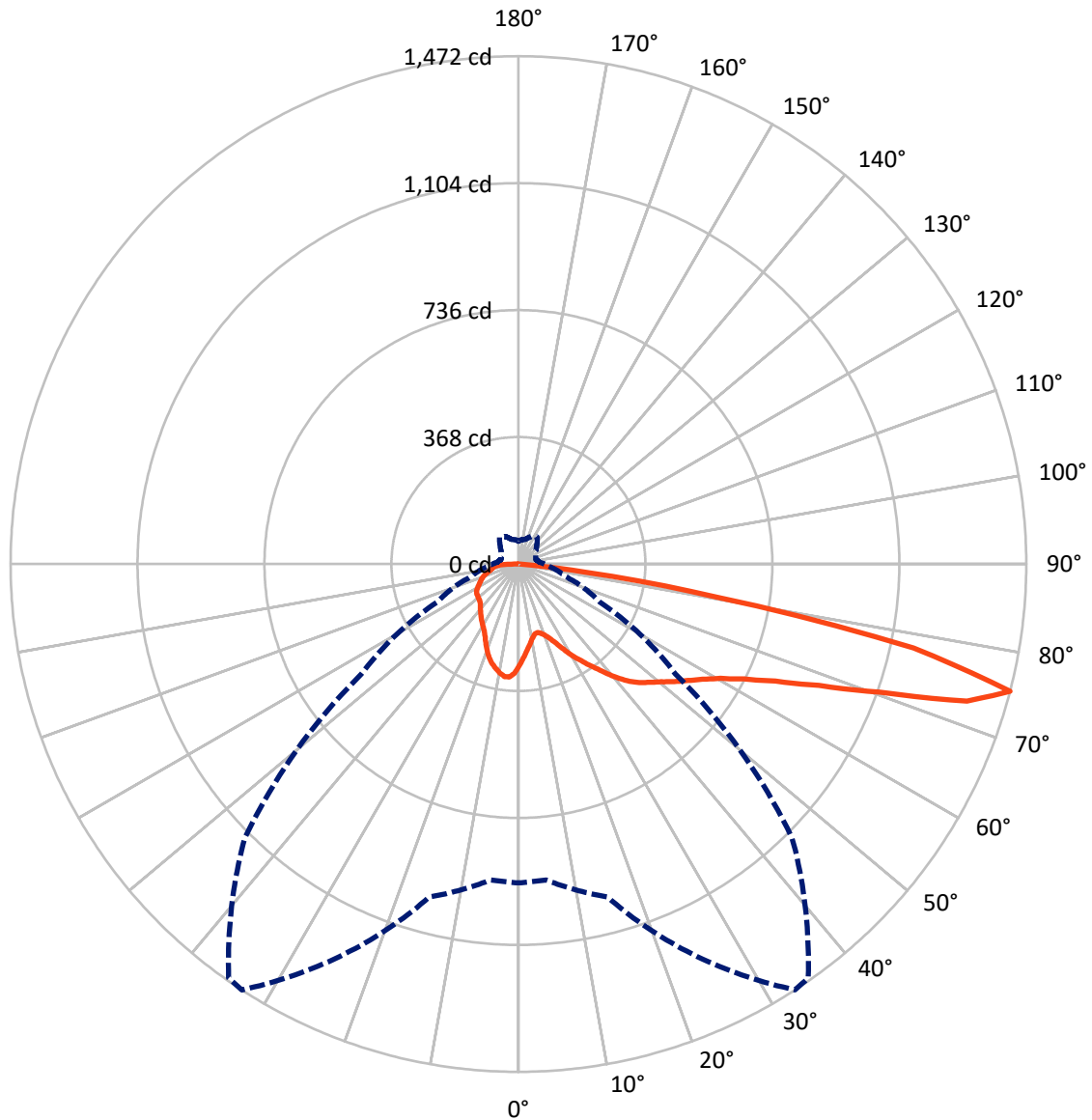
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 3.1 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	467.4	0.0	467.4
	% Fixture	24.3	0.0	24.3
Street Side	Lumens	1456.6	0.0	1456.6
	% Fixture	75.7	0.0	75.7
Total	Lumens	1924.0	0.0	1924.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	27.5	1.4
10°-20°	77.5	4.0
20°-30°	128.8	6.7
30°-40°	192.1	10.0
40°-50°	268.4	14.0
50°-60°	358.3	18.6
60°-70°	444.3	23.1
70°-80°	384.1	20.0
80°-90°	42.9	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°	1924.0	100.0
0°-180°	1924.0	100.0



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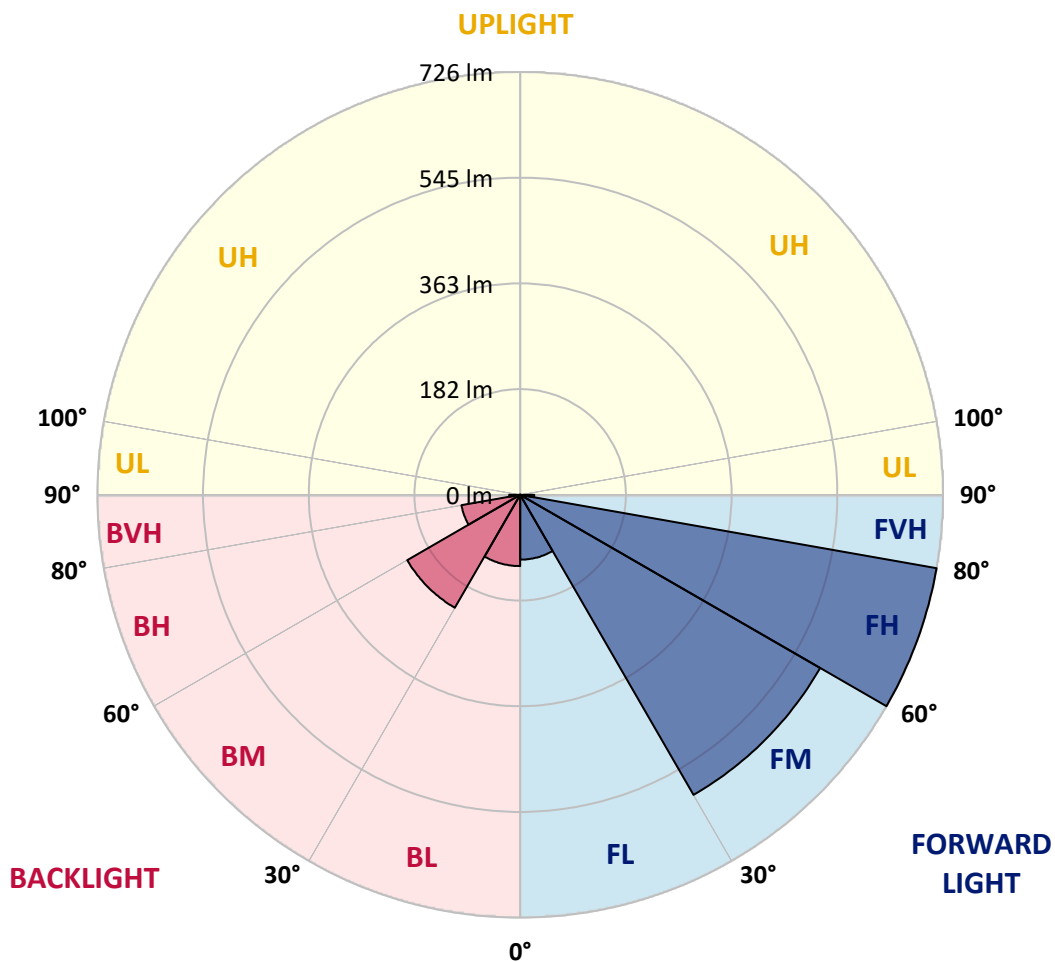
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	111.4	5.8			
FM	(30°-60°)	594.9	30.9			
FH	(60°-80°)	726.0	37.7			G1/1800
FVH	(80°-90°)	24.3	1.3			G1/100
BL	(0°-30°)	122.4	6.4	B1/500		
BM	(30°-60°)	224.0	11.6	B1/1000		
BH	(60°-80°)	102.3	5.3	B0/110		G0/110
BVH	(80°-90°)	18.7	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°	294.8	294.8	294.8	294.8	294.8	294.8	294.8	294.8	294.8	294.8	294.8
2.5°	267.4	268.0	269.7	271.7	272.8	272.8	276.0	279.7	284.2	288.2	292.5
5°	245.1	246.0	247.4	250.0	253.1	253.7	260.0	266.5	274.8	283.7	292.2
7.5°	223.1	224.8	227.7	231.1	236.0	237.1	246.0	254.8	266.2	279.7	293.7
10°	206.3	207.4	208.8	213.7	219.7	221.7	233.4	244.5	260.2	276.8	295.4
12.5°	201.7	201.7	201.7	204.0	208.8	210.5	222.8	237.1	254.8	274.8	298.0
15°	208.3	208.0	204.8	203.1	206.0	207.4	218.0	232.0	252.0	275.4	302.8
17.5°	223.1	222.3	214.8	209.1	211.1	212.0	218.8	230.8	251.1	277.7	310.0
20°	242.5	240.5	229.1	220.5	220.3	220.8	226.0	234.3	252.5	281.7	317.7
22.5°	268.2	267.1	250.2	237.1	234.8	234.8	237.1	242.3	256.2	286.2	328.2
25°	301.4	298.2	278.0	260.2	255.1	253.7	253.4	253.4	262.8	293.1	341.4
27.5°	335.4	331.7	311.1	287.1	280.2	277.7	273.1	269.7	271.4	300.5	357.1
30°	365.9	360.8	343.4	318.5	308.2	304.2	296.0	288.8	284.2	310.8	377.9
32.5°	382.8	380.8	368.8	346.2	334.5	332.8	319.1	309.7	301.7	324.2	405.9
35°	405.4	402.8	395.1	376.5	362.5	358.2	347.9	336.8	324.0	342.2	441.4
37.5°	426.2	424.8	421.9	409.1	394.2	389.9	380.5	368.8	351.4	368.8	481.1
40°	447.4	445.6	444.5	439.9	429.4	426.5	421.9	408.2	384.8	397.9	520.2
42.5°	478.2	474.5	462.5	462.2	463.1	465.4	465.6	450.5	421.4	434.2	554.5
45°	518.5	508.2	481.4	480.5	490.5	496.5	511.1	498.2	459.4	471.4	592.8
47.5°	539.1	528.5	500.8	499.1	512.2	521.1	557.1	544.5	498.8	513.1	632.5
50°	549.1	542.2	517.9	523.4	536.8	545.3	600.8	590.8	539.6	558.2	682.5
52.5°	563.1	551.6	534.5	545.9	565.9	574.8	639.9	638.2	574.2	607.3	737.3
55°	558.2	552.2	555.3	570.8	595.9	609.1	679.3	679.3	609.3	659.9	791.6
57.5°	562.2	558.2	584.2	597.9	629.6	648.5	726.8	714.2	639.1	703.9	828.2
60°	596.2	584.8	605.1	632.2	673.0	691.3	781.0	750.7	663.3	741.9	834.7
62.5°	656.2	647.0	649.0	680.2	733.0	754.2	834.7	783.0	679.6	757.9	810.2
65°	755.6	751.3	726.8	745.6	818.5	837.6	901.9	811.0	675.0	745.9	745.3
67.5°	889.3	872.2	839.0	855.9	939.9	959.3	982.7	821.6	645.3	674.2	599.1
70°	1000.1	985.9	970.7	1015.0	1111.6	1122.1	1067.0	811.6	573.1	527.6	401.7
72.5°	1070.7	1060.4	1074.4	1204.7	1359.2	1339.2	1150.1	741.6	447.1	323.1	200.8
75°	924.2	919.3	999.3	1263.5	1472.1	1464.6	1121.3	555.1	259.4	142.3	91.4
77.5°	464.8	517.6	601.9	896.4	1171.3	1172.7	817.0	266.8	109.1	79.7	62.8
80°	130.8	132.6	200.8	369.7	584.8	623.1	309.1	90.6	62.3	59.4	46.9
82.5°	31.1	28.9	51.4	109.4	196.3	204.3	92.8	32.6	34.9	37.1	28.9
85°	0.3	0.3	0.3	0.3	0.3	0.6	3.4	3.4	8.3	10.6	8.3
87.5°	0.0	0.0	0.0	0.3	0.3	0.3	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°	294.8	294.8	294.8	294.8	294.8	294.8	294.8	294.8	294.8	294.8	294.8
2.5°	294.5	297.4	302.0	306.0	309.4	312.0	316.0	316.5	317.7	318.2	318.8
5°	297.1	302.5	311.1	318.5	323.7	325.1	328.5	328.2	328.5	328.5	328.2
7.5°	300.5	308.0	320.0	328.2	331.1	330.2	329.4	326.2	323.7	322.5	321.1
10°	304.8	313.4	327.4	333.4	332.0	327.4	322.0	316.2	311.7	309.4	308.8
12.5°	309.1	320.2	333.4	335.1	329.4	321.1	312.0	305.7	299.7	296.5	296.5
15°	316.2	328.5	338.2	334.8	324.5	314.0	301.4	292.8	286.0	281.7	281.4
17.5°	324.8	338.0	343.4	333.4	318.5	303.7	288.5	277.4	268.5	264.2	261.7
20°	335.4	347.7	345.9	328.8	309.7	291.4	272.5	259.1	250.0	245.4	244.5
22.5°	347.4	357.7	346.8	321.4	297.7	274.2	253.7	240.3	234.3	230.8	231.1
25°	361.9	369.9	347.1	312.5	280.5	251.7	233.7	227.4	226.5	225.1	225.7
27.5°	380.2	382.8	345.9	300.5	258.5	228.0	217.4	220.0	222.3	221.4	222.0
30°	401.9	398.2	343.4	283.1	231.4	206.3	206.8	212.5	215.7	214.8	215.1
32.5°	427.4	413.7	338.5	262.0	205.7	193.1	197.7	203.4	206.5	206.5	206.8
35°	455.9	432.2	329.1	234.5	187.7	185.1	189.1	193.7	195.7	194.5	195.4
37.5°	485.9	448.2	314.0	204.0	174.3	178.8	181.1	182.3	182.0	180.3	179.4
40°	513.9	460.8	286.8	173.7	163.1	172.3	173.4	170.3	166.5	163.4	161.4
42.5°	535.4	467.4	249.1	151.7	152.5	164.8	165.7	159.4	152.3	147.4	146.3
45°	557.3	469.6	211.7	134.0	141.1	157.4	159.7	151.1	141.4	135.7	134.8
47.5°	582.5	475.4	174.8	121.7	131.4	152.3	156.0	145.4	134.6	126.0	124.6
50°	616.2	486.2	147.1	112.3	124.6	149.7	154.8	140.8	127.1	117.7	116.6
52.5°	659.0	502.2	121.4	104.8	119.1	145.7	153.1	136.3	121.7	110.3	108.6
55°	695.9	508.2	104.8	98.6	113.4	140.8	151.7	134.6	115.7	102.8	100.8
57.5°	712.8	491.1	93.1	92.3	107.4	134.8	148.8	128.8	109.1	99.1	97.4
60°	705.0	448.5	84.3	86.6	100.6	127.1	141.4	123.1	104.6	96.3	94.6
62.5°	670.8	399.4	77.7	81.1	92.8	117.4	132.8	118.0	100.6	93.1	90.8
65°	610.5	345.4	72.8	76.3	86.0	108.0	126.0	112.0	96.0	88.6	86.6
67.5°	498.2	274.8	67.7	71.4	80.3	100.3	119.7	107.1	90.8	86.0	84.3
70°	329.7	184.8	62.8	66.6	74.6	92.8	113.1	102.0	86.0	82.8	80.6
72.5°	151.4	99.4	57.7	61.4	68.0	84.6	104.8	94.3	79.4	77.4	74.0
75°	74.8	61.1	51.4	54.8	60.0	74.6	95.1	87.7	73.4	70.0	66.0
77.5°	54.6	45.7	44.3	47.7	52.0	66.0	84.8	80.8	67.4	62.6	60.3
80°	40.6	35.4	37.1	40.6	44.6	59.7	79.4	75.7	62.3	57.4	55.7
82.5°	24.9	23.7	28.6	32.6	37.4	54.8	75.7	69.1	56.0	51.4	49.4
85°	7.1	8.6	14.6	21.1	26.6	44.3	70.6	60.6	47.1	39.4	38.0
87.5°	0.0	0.9	4.6	9.7	15.7	29.4	54.3	47.4	36.0	29.1	28.0
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)