

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: P401036

Luminaire Tested: **ENT-SA1A-830-U-SL2**

Issue Date: 5/20/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P401036  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 5/20/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: ENT-SA1A-830-U-SL2  
Description: ENTRI LED LUMINAIRE  
(1) 80 CRI, 3000K, 350mA LIGHTSQUARE WITH 16 LEDS AND TYPE II SPILL LIGHT ELIMINATOR OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2146 lumens  
Efficiency: N/A  
Efficacy: 106.8 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Medium - Non-Cutoff  
BUG Rating: B1 - U0 - G1

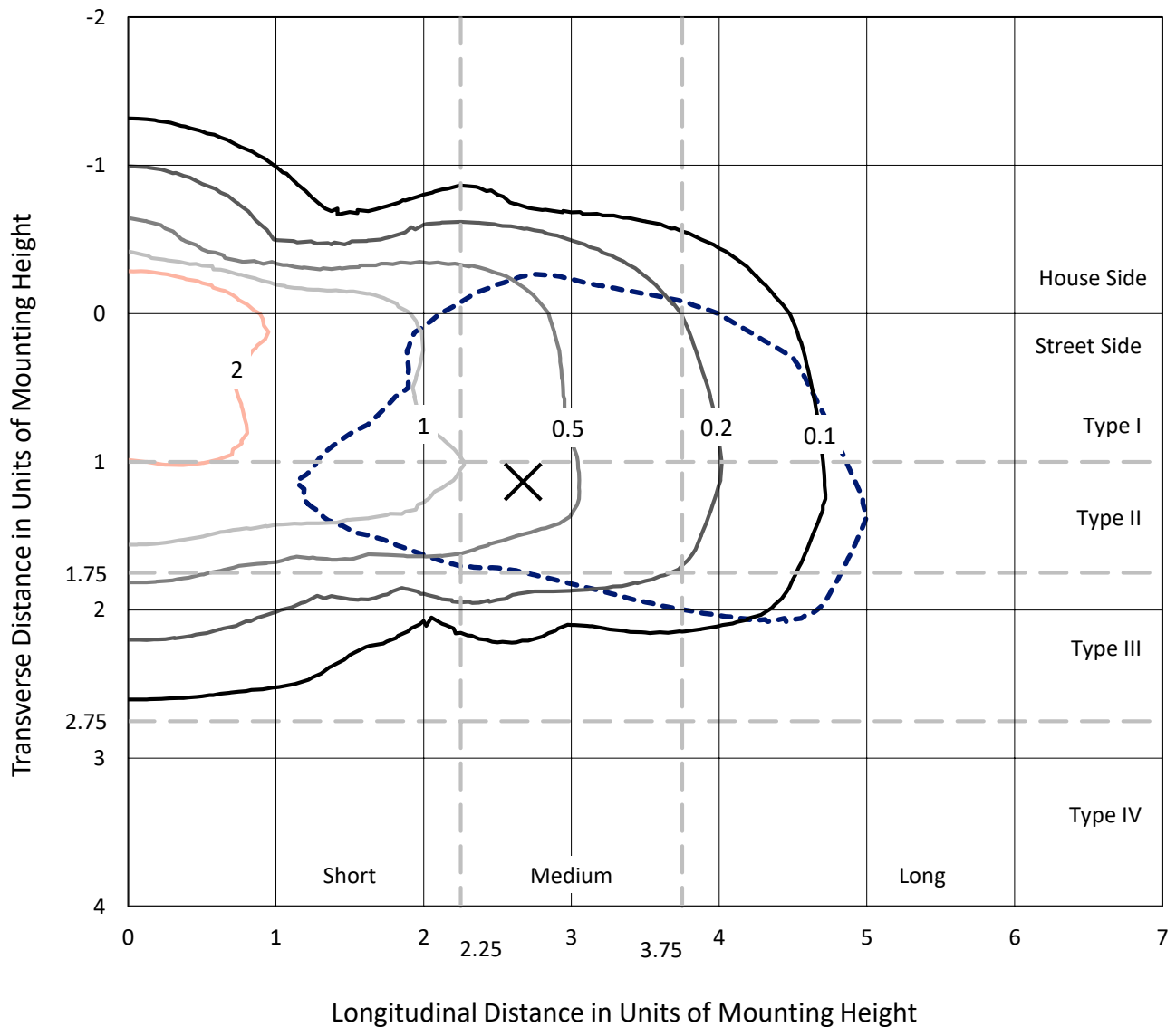
Input Watts (W): 20.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

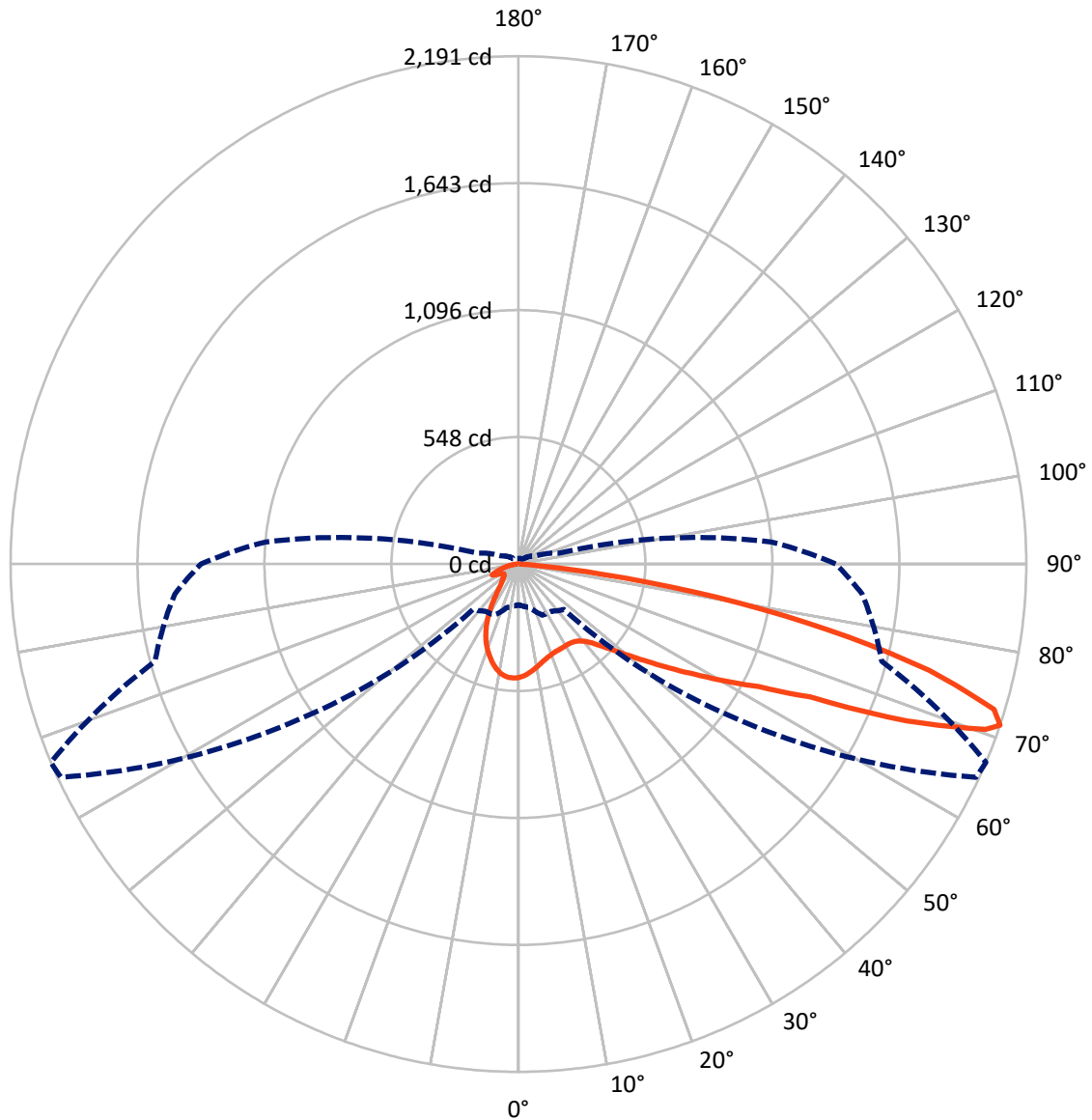
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 4.9 fc  
 Type III - Medium - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 67-Deg Lateral    - - - Horizontal Cone Through 71-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	439.7	0.0	439.7
	% Fixture	20.5	0.0	20.5
<b>Street Side</b>	Lumens	1706.3	0.0	1706.3
	% Fixture	79.5	0.0	79.5
<b>Total</b>	Lumens	2146.0	0.0	2146.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	43.4	2.0
10°-20°	106.6	5.0
20°-30°	143.9	6.7
30°-40°	189.5	8.8
40°-50°	269.9	12.6
50°-60°	412.3	19.2
60°-70°	514.8	24.0
70°-80°	415.6	19.4
80°-90°	50.1	2.3
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°	2146.0	100.0
0°-180°	2146.0	100.0



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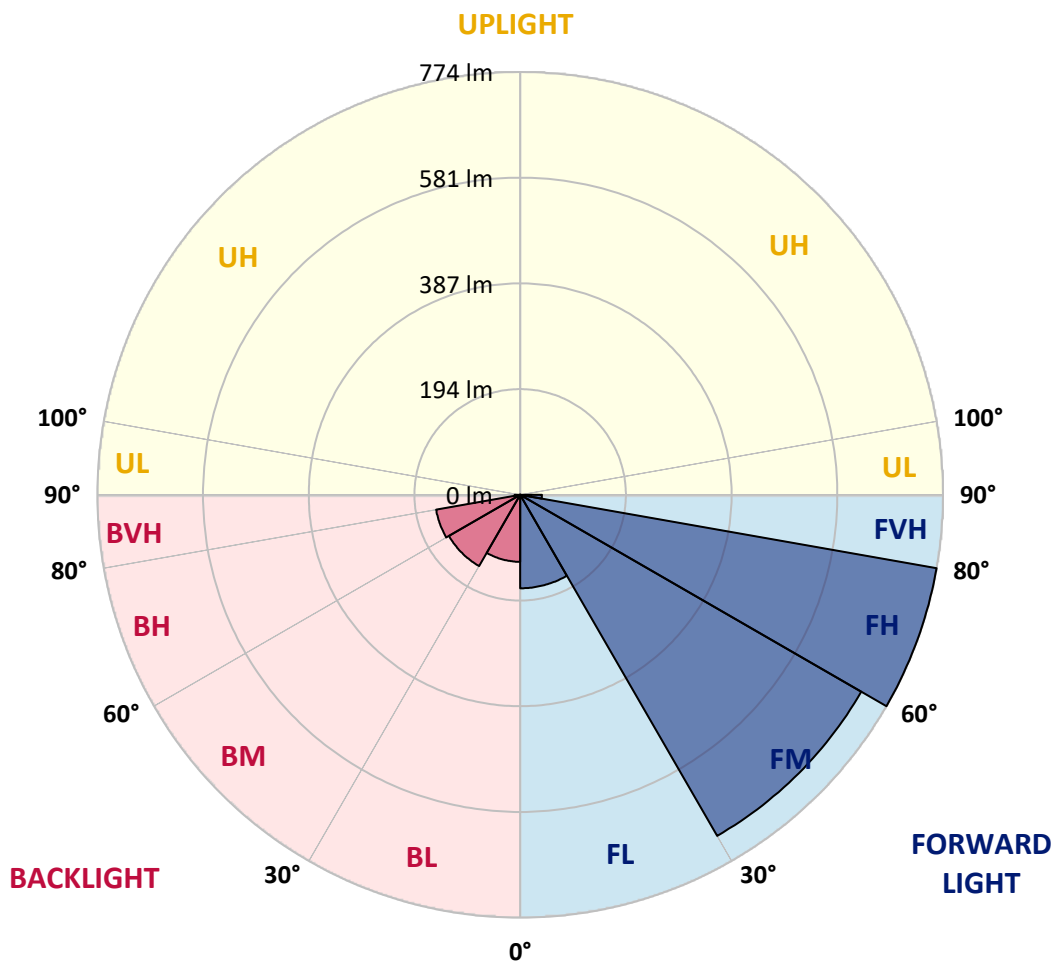
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	171.1	8.0			
FM	(30°-60°)	721.1	33.6			
FH	(60°-80°)	774.2	36.1			G1/1800
FVH	(80°-90°)	39.9	1.9			G1/100
BL	(0°-30°)	122.7	5.7	B1/500		
BM	(30°-60°)	150.6	7.0	B0/220		
BH	(60°-80°)	156.2	7.3	B1/500		G1/500
BVH	(80°-90°)	10.1	0.5			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 III Medium



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	67°	75°	85°
0°	489.3	489.3	489.3	489.3	489.3	489.3	489.3	489.3	489.3	489.3	489.3
2.5°	461.5	463.7	464.0	468.3	469.9	474.8	477.6	482.2	482.9	485.6	487.5
5°	431.6	431.9	433.7	437.4	443.3	452.3	459.1	470.5	472.7	480.7	487.8
7.5°	404.7	406.2	409.3	414.9	421.7	432.2	442.7	458.5	461.5	474.5	488.1
10°	386.5	388.0	390.5	396.7	403.5	415.2	427.9	446.1	449.5	467.4	487.2
12.5°	372.0	373.5	375.3	382.1	389.6	401.3	414.3	434.7	438.1	458.8	485.0
15°	362.4	362.7	365.2	370.7	379.1	390.5	403.5	424.5	428.5	452.0	484.4
17.5°	356.5	357.1	359.3	363.6	371.0	382.1	394.8	416.1	420.8	446.4	484.7
20°	356.8	357.4	358.7	360.2	365.5	375.0	388.3	409.9	414.6	443.0	486.9
22.5°	363.3	363.6	363.9	361.8	363.6	370.4	383.4	405.6	410.6	441.5	489.3
25°	375.7	375.7	375.0	370.1	366.1	368.9	380.6	404.1	409.0	440.2	491.8
27.5°	392.6	393.9	390.8	384.9	375.7	371.0	380.0	402.8	407.8	440.2	493.1
30°	415.8	416.4	415.2	407.5	392.3	379.7	381.8	401.9	406.9	439.6	493.4
32.5°	439.3	441.2	442.7	435.9	417.7	395.1	389.3	403.2	407.5	439.3	492.4
35°	463.1	464.3	471.7	470.5	450.7	418.3	401.3	408.1	411.8	440.8	493.1
37.5°	483.5	486.3	497.1	505.4	490.0	449.8	422.0	418.9	421.1	448.6	496.5
40°	505.4	509.4	525.5	541.2	534.4	489.3	451.3	438.4	437.8	462.8	504.8
42.5°	530.1	534.8	555.5	578.3	580.5	539.7	490.6	465.9	465.2	487.2	523.0
45°	559.2	563.5	591.6	618.8	632.1	595.9	538.8	504.8	505.1	521.2	552.1
47.5°	595.0	601.8	629.0	663.6	687.4	659.3	597.2	559.2	556.7	572.4	599.6
50°	645.4	650.9	673.5	707.1	748.8	735.9	670.7	624.7	622.8	630.2	663.3
52.5°	698.2	700.0	710.8	745.8	815.9	828.9	761.2	705.9	698.8	702.8	742.4
55°	701.3	705.3	712.4	756.6	876.1	940.4	861.0	801.7	792.4	789.6	832.3
57.5°	637.0	643.5	652.8	709.9	878.6	1069.2	1002.8	913.5	896.8	882.9	928.3
60°	500.8	509.1	526.1	596.2	815.9	1142.7	1239.4	1038.9	1024.1	976.8	1022.2
62.5°	362.1	365.5	381.8	413.3	647.5	1147.1	1486.0	1202.7	1165.9	1068.3	1103.2
65°	291.6	297.2	302.1	301.8	383.4	1017.3	1649.7	1494.0	1383.1	1170.5	1192.2
67.5°	240.3	242.2	254.2	275.3	260.7	628.4	1666.1	1919.7	1807.2	1308.3	1297.8
70°	200.8	201.4	213.5	251.2	249.6	324.4	1397.0	2164.7	2137.5	1534.5	1463.1
71°	175.8	181.0	194.3	243.1	248.4	277.1	1186.9	2177.6	2191.2	1623.1	1488.7
72.5°	138.4	138.4	157.2	223.0	250.5	255.8	874.6	2106.9	2146.1	1723.8	1444.2
75°	81.2	80.6	90.8	155.4	256.1	254.9	477.6	1751.0	1830.4	1742.1	1336.7
77.5°	45.7	46.6	52.2	86.5	203.3	244.7	274.3	1275.0	1368.6	1457.2	1130.4
80°	21.0	22.2	26.3	42.0	119.9	211.3	195.9	827.9	863.5	875.8	534.1
82.5°	5.6	6.2	8.0	16.1	46.3	144.0	144.9	346.6	358.0	207.0	114.6
85°	0.0	0.0	0.0	0.0	0.6	17.6	41.1	62.4	51.9	27.5	23.5
87.5°	0.0	0.0	0.0	0.0	0.0	0.6	0.9	1.2	1.2	1.2	1.5
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°	489.3	489.3	489.3	489.3	489.3	489.3	489.3	489.3	489.3	489.3	489.3
2.5°	489.0	490.3	492.4	492.1	491.5	487.8	490.0	487.8	487.5	486.6	486.9
5°	490.3	492.1	493.4	490.6	485.9	477.9	475.1	468.0	463.4	460.9	459.7
7.5°	492.1	493.4	492.7	485.0	473.0	457.8	444.9	434.7	423.9	422.0	421.4
10°	492.1	493.4	488.4	473.6	452.9	429.1	409.3	392.6	376.0	369.8	370.7
12.5°	490.9	491.5	480.1	456.3	426.3	393.9	366.1	338.6	317.3	304.3	301.8
15°	490.0	489.0	469.0	434.7	394.8	354.7	312.6	275.6	250.2	233.2	231.1
17.5°	490.0	486.6	455.7	409.9	360.5	305.2	249.6	209.5	181.3	171.5	171.1
20°	490.6	483.2	441.5	384.3	317.9	246.5	186.3	152.0	141.5	139.9	140.3
22.5°	491.2	478.5	426.0	355.3	270.3	183.8	133.1	120.8	121.7	125.4	125.1
25°	490.6	472.4	407.8	322.8	218.4	132.5	107.5	104.4	110.0	114.3	115.5
27.5°	489.0	464.3	388.3	284.2	166.5	104.4	93.9	93.6	99.2	103.2	102.9
30°	484.4	454.7	365.8	243.4	120.2	89.0	84.6	85.6	89.3	93.0	93.0
32.5°	479.5	443.9	342.0	199.0	92.4	80.6	79.1	79.4	81.9	84.6	84.3
35°	474.2	433.4	317.6	152.6	80.9	75.7	75.1	74.8	75.7	76.3	76.3
37.5°	471.1	424.2	290.7	114.9	74.8	72.6	71.4	70.1	69.8	69.2	68.6
40°	472.4	418.0	264.8	89.0	71.1	69.2	67.3	65.5	64.3	63.6	63.3
42.5°	481.0	416.1	236.0	76.6	67.7	66.1	63.6	60.6	59.3	59.3	59.0
45°	501.1	421.7	209.1	70.4	64.6	62.7	58.7	56.5	55.6	55.9	55.9
47.5°	532.6	437.4	185.0	67.3	62.4	59.6	55.0	52.8	52.2	52.5	52.5
50°	579.9	467.1	160.3	64.6	59.9	56.2	52.2	49.7	48.8	48.8	48.8
52.5°	649.1	515.9	142.4	62.7	57.8	53.4	49.4	46.6	45.4	45.4	45.1
55°	733.4	579.6	135.6	61.5	55.0	51.0	46.6	43.9	42.0	41.4	41.7
57.5°	825.8	662.0	145.5	61.2	51.9	48.2	43.9	40.5	38.6	38.3	38.0
60°	920.9	743.9	173.9	59.6	49.4	44.8	40.8	37.7	35.8	35.2	34.9
62.5°	1003.1	825.5	220.9	58.4	47.6	41.7	37.4	34.6	33.1	32.1	32.1
65°	1102.3	919.1	292.6	59.9	46.6	38.6	34.3	31.8	30.6	29.7	29.7
67.5°	1237.6	1057.8	346.9	67.3	48.8	36.1	30.9	29.0	28.1	27.5	27.5
70°	1370.7	1135.6	241.3	79.1	54.4	34.0	27.8	26.6	26.0	25.3	25.3
71°	1368.9	1093.9	181.3	81.9	56.2	33.4	26.6	25.6	25.0	24.7	24.4
72.5°	1300.3	994.4	130.1	79.4	55.3	31.5	25.0	24.1	23.5	23.5	23.2
75°	1166.2	876.4	101.6	66.4	46.3	28.1	22.2	21.6	21.0	20.7	21.0
77.5°	955.5	701.3	80.0	52.5	35.2	23.2	19.8	18.8	18.5	18.2	18.5
80°	439.0	305.5	58.4	40.8	26.3	18.5	16.7	16.4	16.1	15.8	15.8
82.5°	105.7	85.6	31.2	27.2	17.9	14.2	13.3	13.3	13.3	13.0	13.0
85°	23.2	23.2	12.7	12.7	10.8	9.9	10.5	10.5	10.5	9.9	9.9
87.5°	1.2	3.7	4.0	5.9	6.2	5.9	7.1	7.4	7.1	6.8	6.5
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)