

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: P401412

Luminaire Tested: **ENT-SA1C-830-U-T4W**

Issue Date: 5/20/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P401412  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-17)  
Test Lab: INNOVATION CENTER  
Issue Date: 5/20/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: ENT-SA1C-830-U-T4W  
Description: ENTRI LED LUMINAIRE  
(1) 80 CRI, 3000K, 615mA LIGHTSQUARE WITH 16 LEDS AND TYPE IV WIDE OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3584 lumens  
Efficiency: N/A  
Efficacy: 107.6 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type IV - Short - Semi-Cutoff  
BUG Rating: B1 - U0 - G1

Input Watts (W): 33.3  
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

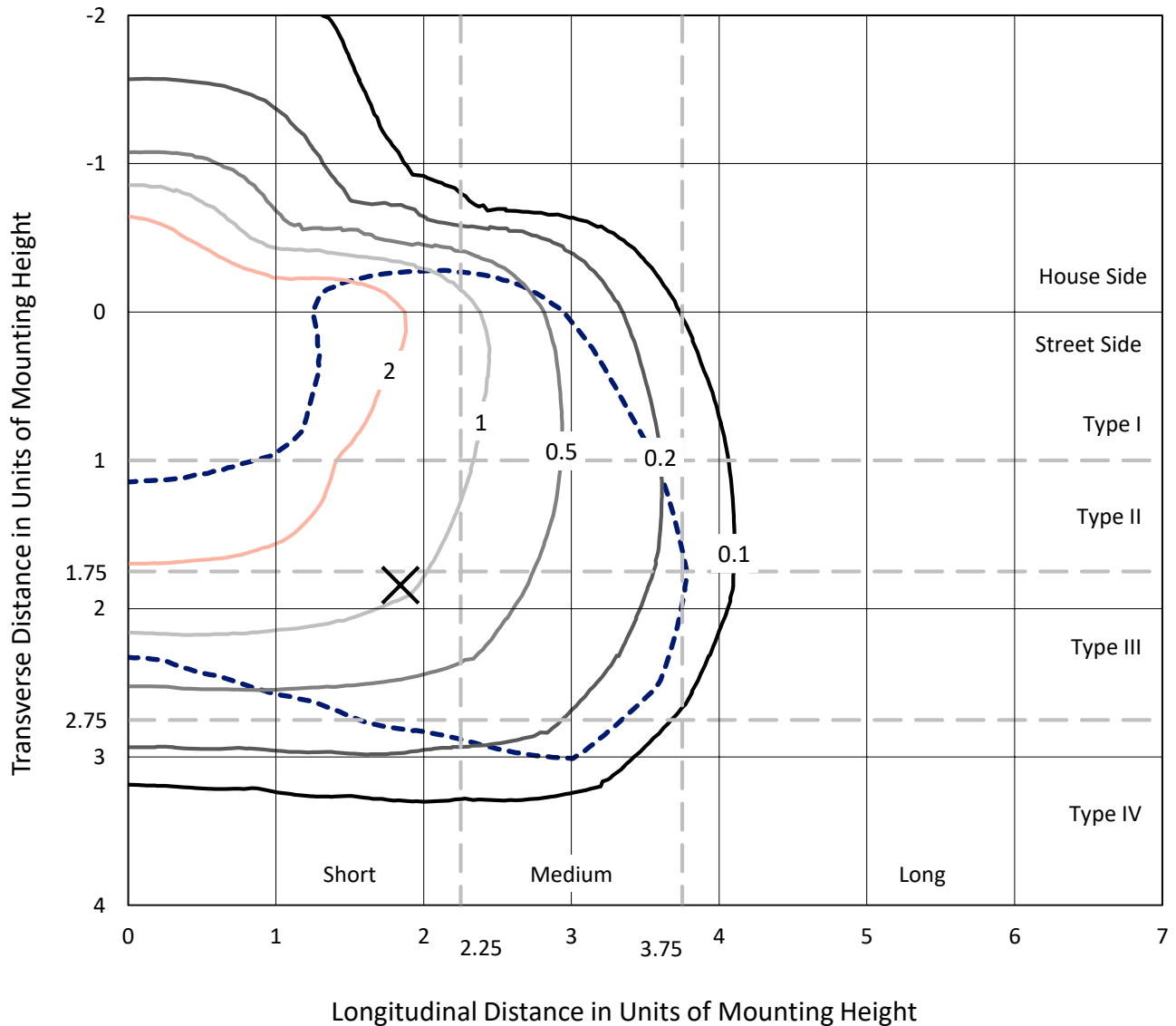


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### Iso-Footcandle Lines of Horizontal Illumination

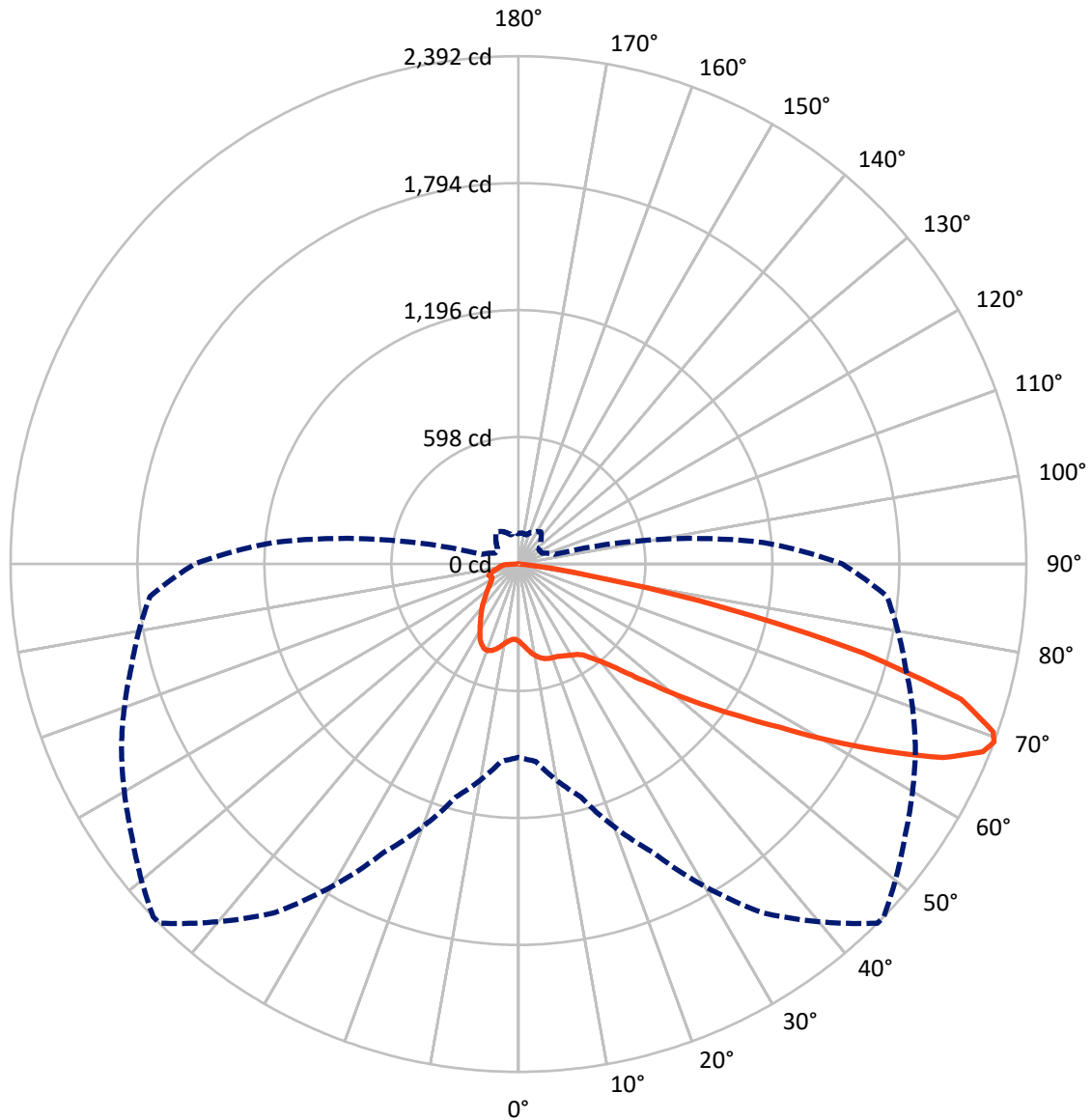
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 4.5 fc  
 Type IV - Short - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral    - - - Horizontal Cone Through 69-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	843.8	0.0	843.8
	% Fixture	23.5	0.0	23.5
<b>Street Side</b>	Lumens	2740.2	0.0	2740.2
	% Fixture	76.5	0.0	76.5
<b>Total</b>	Lumens	3584.0	0.0	3584.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	37.0	1.0
10°-20°	122.8	3.4
20°-30°	207.6	5.8
30°-40°	300.3	8.4
40°-50°	453.4	12.7
50°-60°	764.6	21.3
60°-70°	1051.9	29.3
70°-80°	582.9	16.3
80°-90°	63.5	1.8
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°	3584.0	100.0
0°-180°	3584.0	100.0



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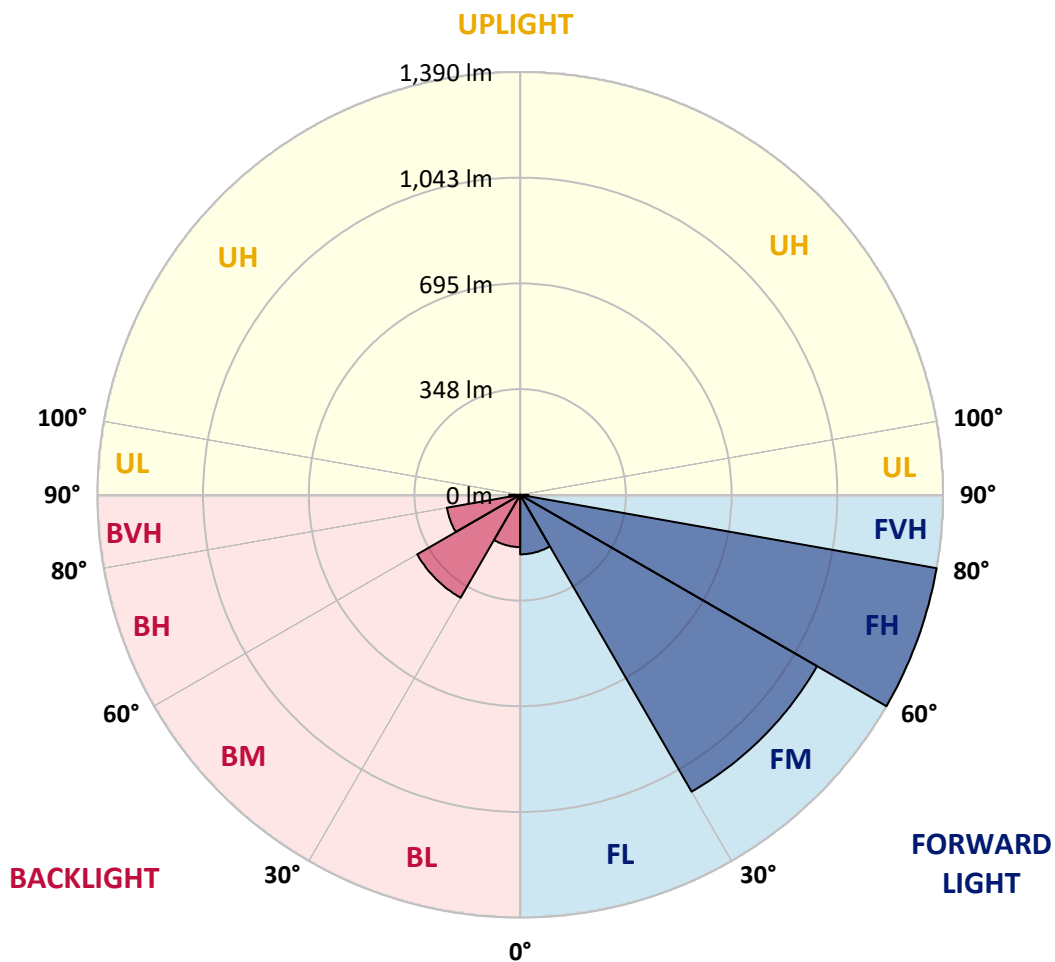
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	195.6	5.5			
FM	(30°-60°)	1127.2	31.5			
FH	(60°-80°)	1390.2	38.8			G1/1800
FVH	(80°-90°)	27.2	0.8			G1/100
BL	(0°-30°)	171.8	4.8	B1/500		
BM	(30°-60°)	391.1	10.9	B1/1000		
BH	(60°-80°)	244.6	6.8	B1/500		G1/500
BVH	(80°-90°)	36.3	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°	35°	45°	46°	55°	65°	75°	85°
0°	363.8	363.8	363.8	363.8	363.8	363.8	363.8	363.8	363.8	363.8	363.8
2.5°	386.7	386.2	386.7	384.7	382.6	379.6	378.6	375.0	372.4	368.9	365.8
5°	415.2	416.8	416.3	413.7	405.6	399.4	399.4	391.8	383.7	376.0	368.9
7.5°	446.3	446.3	443.3	438.2	430.0	420.8	419.8	409.6	397.9	387.2	376.0
10°	468.7	469.8	465.2	458.0	447.9	438.2	437.2	425.4	414.2	400.5	386.7
12.5°	484.5	484.5	480.5	473.8	461.6	452.4	451.4	440.7	429.0	414.7	398.9
15°	492.7	491.7	488.1	481.0	470.3	462.6	461.1	451.9	442.2	428.0	411.2
17.5°	491.2	491.2	488.1	481.0	473.3	467.2	466.2	459.6	452.4	438.7	421.9
20°	484.5	484.0	483.0	477.4	472.3	469.8	468.7	465.7	461.1	449.4	433.6
22.5°	478.4	477.9	476.4	472.8	470.8	472.3	472.3	471.8	471.3	462.1	446.8
25°	482.0	481.5	478.4	473.3	472.8	480.0	480.5	482.0	483.0	475.4	459.6
27.5°	507.0	505.4	496.8	483.5	478.9	488.1	489.1	493.7	492.7	484.5	470.8
30°	555.9	556.4	537.0	508.5	493.2	497.3	497.8	502.9	501.3	494.7	483.5
32.5°	629.7	629.7	598.2	554.8	516.1	508.0	506.4	511.0	517.1	508.5	497.3
35°	723.5	720.9	682.7	616.0	555.4	526.3	525.3	523.3	534.0	525.8	509.5
37.5°	817.8	808.6	771.4	698.0	610.4	562.0	557.9	551.8	557.9	540.6	526.3
40°	893.7	892.1	861.6	787.2	675.6	605.3	602.2	575.2	579.3	565.5	559.9
42.5°	977.2	978.2	957.9	883.0	753.6	663.9	655.7	613.9	625.7	620.6	618.0
45°	1068.9	1067.9	1052.6	974.2	848.8	745.4	735.2	683.8	707.7	704.6	718.9
47.5°	1139.2	1144.9	1136.2	1080.7	961.9	844.2	836.6	773.9	810.1	834.6	861.6
50°	1235.0	1234.5	1211.1	1188.2	1093.4	970.6	963.0	893.2	945.1	980.8	1030.2
52.5°	1353.7	1349.7	1301.3	1293.1	1253.4	1108.7	1102.1	1029.2	1103.6	1134.7	1235.0
55°	1428.1	1427.6	1402.7	1416.9	1417.9	1262.5	1254.4	1189.7	1273.8	1309.4	1461.3
57.5°	1490.3	1490.8	1511.7	1561.6	1595.3	1449.5	1446.5	1367.5	1452.6	1502.5	1681.9
60°	1538.2	1548.4	1607.0	1721.1	1777.1	1688.0	1674.7	1591.2	1648.2	1668.1	1850.5
62.5°	1518.8	1532.1	1647.2	1815.4	1959.5	1940.7	1936.1	1815.4	1814.8	1804.7	1976.4
65°	1366.0	1394.5	1575.9	1811.8	2079.8	2197.5	2190.9	2026.8	1969.7	1918.8	2014.1
67.5°	1117.8	1124.0	1342.5	1673.2	2078.8	2359.0	2351.9	2180.7	2066.0	1941.2	1903.5
69°	910.0	932.4	1134.7	1497.9	2005.4	2391.6	2391.6	2223.5	2062.5	1887.7	1741.5
70°	787.2	788.2	983.3	1358.3	1905.5	2372.2	2376.8	2223.5	2033.4	1817.9	1597.8
72.5°	368.9	391.8	515.1	886.5	1539.2	2180.7	2191.9	2076.7	1864.8	1566.2	1198.9
75°	110.6	114.6	171.7	420.3	881.9	1679.8	1704.8	1727.7	1518.8	1153.0	738.3
77.5°	65.7	65.2	83.0	142.7	408.1	996.1	1007.3	1105.1	985.4	641.0	335.3
80°	32.1	33.1	44.3	69.3	152.9	361.7	397.9	516.6	436.6	250.7	122.8
82.5°	10.7	11.7	18.3	28.0	64.7	116.7	128.9	162.0	139.6	91.2	52.5
85°	0.0	0.0	0.5	1.0	3.6	8.7	8.7	19.4	29.0	32.1	17.3
87.5°	0.0	0.0	0.5	0.5	1.0	1.0	1.0	1.0	1.0	1.0	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°	363.8	363.8	363.8	363.8	363.8	363.8	363.8	363.8	363.8	363.8	363.8
2.5°	364.3	363.3	361.2	359.2	358.2	355.6	356.1	355.1	354.6	354.6	355.1
5°	365.3	363.8	360.7	358.7	356.7	355.6	358.2	359.2	360.2	360.2	360.7
7.5°	371.4	368.4	364.8	362.3	362.8	364.3	368.4	371.4	373.0	374.0	375.0
10°	381.6	378.1	373.0	372.4	373.5	377.5	383.1	387.7	391.8	394.4	394.4
12.5°	392.3	387.7	383.7	384.7	389.3	395.4	401.0	406.1	409.6	412.2	412.7
15°	404.0	399.4	395.4	397.9	405.6	412.7	417.8	419.8	421.4	423.9	424.4
17.5°	414.7	410.7	407.1	413.7	420.3	425.9	427.5	426.5	424.4	425.9	427.0
20°	425.9	422.4	420.3	427.5	432.1	432.6	428.5	423.9	418.8	418.8	419.3
22.5°	439.7	435.1	434.1	437.7	436.1	430.0	419.8	412.7	405.6	404.5	406.1
25°	452.9	448.4	447.9	445.3	432.1	416.3	402.5	394.4	388.7	389.3	392.3
27.5°	466.2	463.1	463.6	449.9	420.3	396.4	378.1	371.4	373.0	374.0	377.0
30°	479.4	479.4	481.5	449.9	404.0	368.4	351.0	350.5	354.6	357.7	361.2
32.5°	494.7	499.3	495.7	444.3	382.1	339.8	326.1	327.1	331.7	336.8	339.8
35°	509.5	520.2	510.0	431.5	352.1	313.9	302.6	301.1	304.7	309.3	310.8
37.5°	532.9	550.3	522.2	411.7	321.0	290.9	279.7	275.6	272.1	275.6	275.1
40°	573.7	594.6	531.4	378.6	290.9	269.5	257.8	250.2	241.5	233.9	233.9
42.5°	638.9	652.7	536.5	338.3	260.9	248.1	236.4	225.2	212.0	198.2	198.2
45°	745.4	748.5	538.5	295.5	233.4	226.7	214.5	203.8	186.5	172.7	169.7
47.5°	887.6	874.3	543.6	254.2	209.4	207.9	197.7	185.5	166.6	153.9	152.3
50°	1078.6	1021.6	566.1	221.1	190.0	191.6	183.9	169.7	151.8	142.7	140.6
52.5°	1293.6	1207.5	583.4	194.6	173.2	177.8	172.2	158.5	143.2	135.5	134.0
55°	1528.5	1386.4	579.3	176.8	160.5	165.6	163.6	151.8	138.1	131.5	129.9
57.5°	1720.1	1512.2	543.6	161.0	147.8	154.9	156.9	147.8	135.0	128.9	127.4
60°	1863.8	1581.0	470.3	147.8	137.6	146.2	151.8	145.2	134.5	130.9	129.4
62.5°	1929.0	1574.9	375.0	137.6	129.9	140.1	152.3	149.3	142.2	144.7	145.2
65°	1892.3	1497.9	281.2	129.9	125.3	141.1	161.0	161.0	150.3	154.9	155.4
67.5°	1704.3	1296.7	204.8	124.3	120.8	146.2	177.3	167.1	146.7	150.3	148.8
69°	1525.4	1160.1	175.8	121.3	117.2	148.8	184.4	168.1	142.7	146.7	142.7
70°	1394.0	1036.8	157.9	118.7	115.7	148.8	186.5	167.1	140.6	143.7	139.1
72.5°	992.0	719.9	129.9	113.6	110.1	137.6	182.9	161.5	135.0	131.5	122.8
75°	576.8	397.9	110.6	108.0	97.3	120.8	173.7	155.4	129.4	122.8	116.7
77.5°	242.0	177.8	94.3	98.3	86.1	107.5	162.5	149.3	122.8	113.6	110.6
80°	98.3	88.7	78.5	85.1	74.9	94.8	149.8	139.1	113.1	103.9	99.4
82.5°	51.5	48.9	60.1	68.8	62.2	87.1	141.1	132.0	105.0	95.8	90.2
85°	15.3	20.4	34.1	46.9	47.4	78.5	137.1	122.3	91.2	79.0	78.0
87.5°	1.0	4.1	11.7	24.5	31.1	60.1	111.1	100.4	73.9	62.2	62.7
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)