

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: P401592

Luminaire Tested: **ENC-SA1D-830-U-T4W**

Issue Date: 5/20/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P401592  
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: ENC-SA1D-830-U-T4W  
Description: ENTRI LED LUMINAIRE  
(1) 80 CRI, 3000K, 800mA LIGHTSQUARE WITH 16 LEDS AND TYPE IV WIDE OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4486 lumens  
Efficiency: N/A  
Efficacy: 104.1 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): 43.1  
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

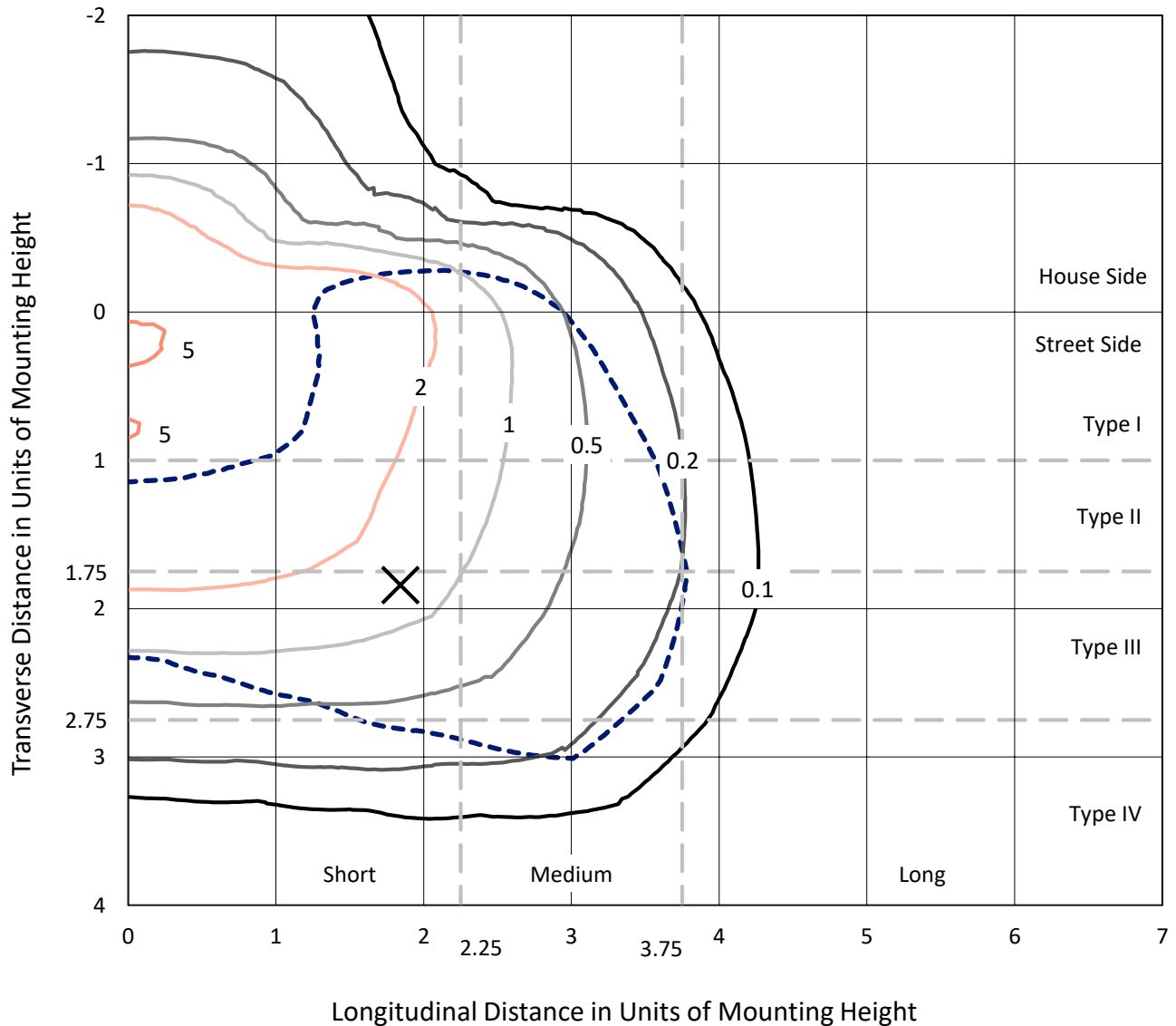


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### Iso-Footcandle Lines of Horizontal Illumination

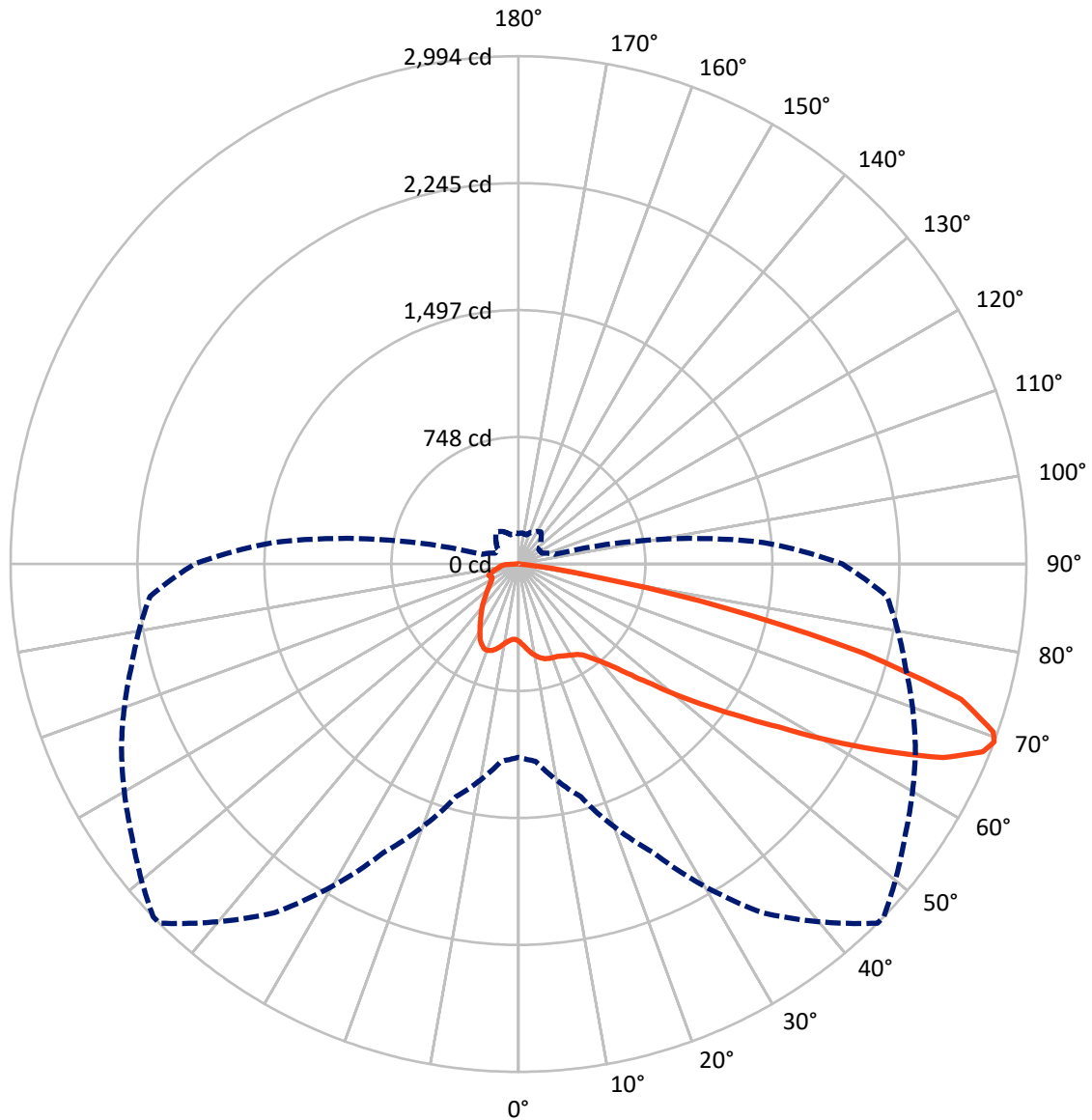
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5.6 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	1056.2	0.0	1056.2
	% Fixture	23.5	0.0	23.5
<b>Street Side</b>	Lumens	3429.8	0.0	3429.8
	% Fixture	76.5	0.0	76.5
<b>Total</b>	Lumens	4486.0	0.0	4486.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	46.4	1.0
10°-20°	153.7	3.4
20°-30°	259.8	5.8
30°-40°	375.9	8.4
40°-50°	567.6	12.7
50°-60°	957.0	21.3
60°-70°	1316.6	29.3
70°-80°	729.6	16.3
80°-90°	79.4	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°	4486.0	100.0
0°-180°	4486.0	100.0



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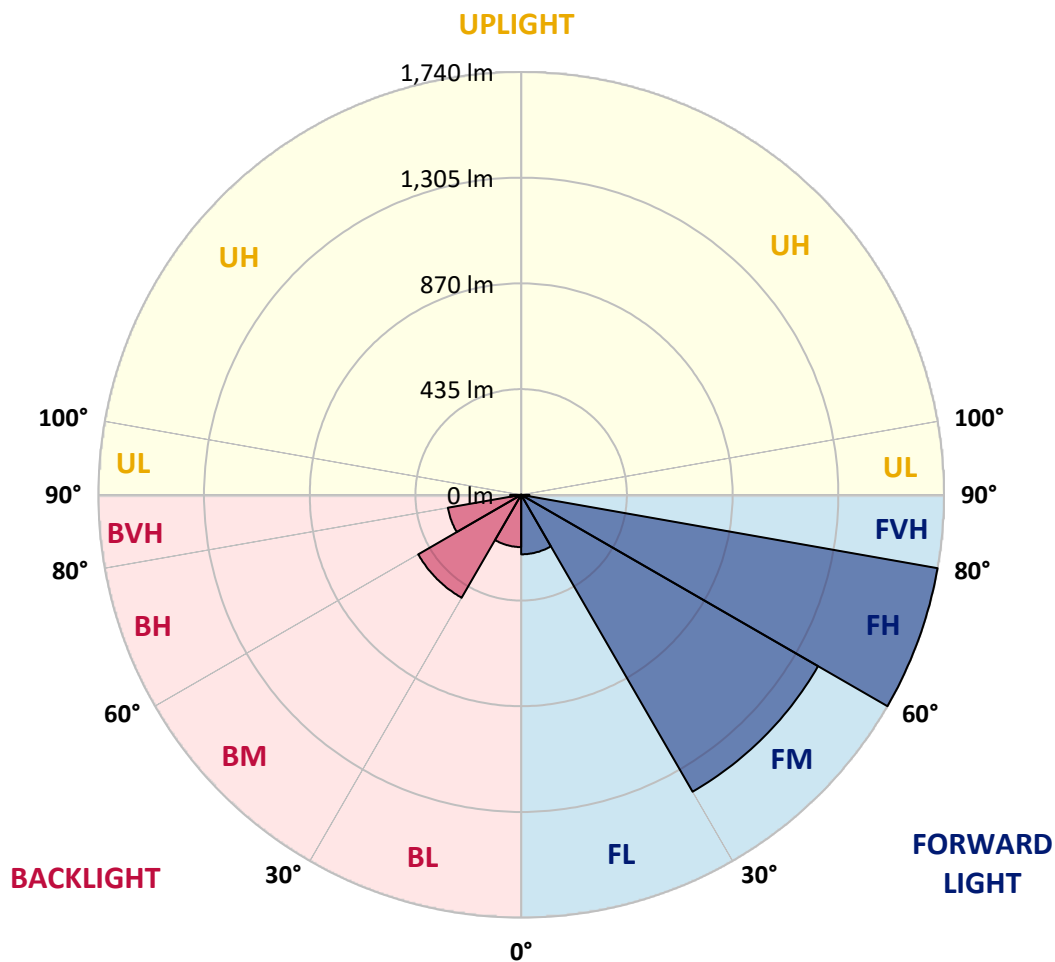
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	244.8	5.5			
FM	(30°-60°)	1410.9	31.5			
FH	(60°-80°)	1740.1	38.8			G1/1800
FVH	(80°-90°)	34.0	0.8			G1/100
BL	(0°-30°)	215.1	4.8	B1/500		
BM	(30°-60°)	489.6	10.9	B1/1000		
BH	(60°-80°)	306.1	6.8	B1/500		G1/500
BVH	(80°-90°)	45.4	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°	455.3	455.3	455.3	455.3	455.3	455.3	455.3	455.3	455.3	455.3	455.3
2.5°	484.0	483.4	484.0	481.5	478.9	475.1	473.8	469.4	466.2	461.7	457.9
5°	519.8	521.7	521.0	517.8	507.6	500.0	500.0	490.4	480.2	470.6	461.7
7.5°	558.7	558.7	554.8	548.4	538.2	526.8	525.5	512.7	498.1	484.7	470.6
10°	586.7	588.0	582.2	573.3	560.6	548.4	547.2	532.5	518.5	501.3	484.0
12.5°	606.5	606.5	601.4	593.1	577.8	566.3	565.0	551.6	537.0	519.1	499.3
15°	616.7	615.4	610.9	602.0	588.6	579.1	577.1	565.7	553.5	535.7	514.6
17.5°	614.8	614.8	610.9	602.0	592.5	584.8	583.5	575.2	566.3	549.1	528.0
20°	606.5	605.8	604.6	597.6	591.2	588.0	586.7	582.9	577.1	562.5	542.7
22.5°	598.8	598.2	596.3	591.8	589.3	591.2	591.2	590.5	589.9	578.4	559.3
25°	603.3	602.7	598.8	592.5	591.8	600.7	601.4	603.3	604.6	595.0	575.2
27.5°	634.5	632.6	621.8	605.2	599.5	610.9	612.2	618.0	616.7	606.5	589.3
30°	695.8	696.4	672.2	636.5	617.3	622.4	623.1	629.4	627.5	619.2	605.2
32.5°	788.2	788.2	748.7	694.5	646.0	635.8	633.9	639.6	647.3	636.5	622.4
35°	905.6	902.4	854.6	771.0	695.1	658.8	657.5	654.9	668.3	658.1	637.7
37.5°	1023.6	1012.1	965.5	873.7	764.0	703.4	698.3	690.7	698.3	676.6	658.8
40°	1118.6	1116.7	1078.4	985.3	845.6	757.6	753.8	720.0	725.1	707.9	700.9
42.5°	1223.2	1224.4	1198.9	1105.2	943.2	831.0	820.8	768.5	783.1	776.8	773.6
45°	1338.0	1336.7	1317.6	1219.3	1062.5	933.0	920.2	855.8	885.8	882.0	899.8
47.5°	1426.0	1433.0	1422.1	1352.6	1204.0	1056.7	1047.2	968.7	1014.0	1044.6	1078.4
50°	1545.9	1545.2	1515.9	1487.2	1368.6	1214.9	1205.3	1117.9	1183.0	1227.6	1289.5
52.5°	1694.4	1689.3	1628.8	1618.6	1568.8	1387.7	1379.4	1288.2	1381.3	1420.2	1545.9
55°	1787.6	1786.9	1755.7	1773.5	1774.8	1580.3	1570.1	1489.1	1594.3	1639.0	1829.0
57.5°	1865.4	1866.0	1892.1	1954.6	1996.7	1814.3	1810.5	1711.7	1818.2	1880.7	2105.1
60°	1925.3	1938.1	2011.4	2154.3	2224.4	2112.8	2096.2	1991.6	2063.1	2087.9	2316.2
62.5°	1901.1	1917.7	2061.8	2272.2	2452.7	2429.1	2423.4	2272.2	2271.6	2258.8	2473.8
65°	1709.8	1745.5	1972.5	2267.8	2603.2	2750.5	2742.2	2536.9	2465.5	2401.7	2520.9
67.5°	1399.2	1406.8	1680.4	2094.3	2601.9	2952.7	2943.8	2729.5	2586.0	2429.8	2382.6
69°	1139.0	1167.0	1420.2	1874.9	2510.1	2993.5	2993.5	2783.1	2581.5	2362.8	2179.8
70°	985.3	986.6	1230.8	1700.2	2385.1	2969.3	2975.0	2783.1	2545.2	2275.4	1999.9
72.5°	461.7	490.4	644.7	1109.7	1926.6	2729.5	2743.5	2599.4	2334.1	1960.4	1500.6
75°	138.4	143.5	214.9	526.1	1103.9	2102.6	2133.8	2162.5	1901.1	1443.2	924.1
77.5°	82.3	81.6	104.0	178.6	510.8	1246.8	1260.8	1383.2	1233.4	802.3	419.6
80°	40.2	41.5	55.5	86.7	191.3	452.8	498.1	646.7	546.5	313.8	153.7
82.5°	13.4	14.7	23.0	35.1	81.0	146.0	161.3	202.8	174.7	114.2	65.7
85°	0.0	0.0	0.6	1.3	4.5	10.8	10.8	24.2	36.4	40.2	21.7
87.5°	0.0	0.0	0.6	0.6	1.3	1.3	1.3	1.3	1.3	1.3	1.9
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°	455.3	455.3	455.3	455.3	455.3	455.3	455.3	455.3	455.3	455.3	455.3
2.5°	456.0	454.7	452.2	449.6	448.3	445.1	445.8	444.5	443.9	443.9	444.5
5°	457.3	455.3	451.5	449.0	446.4	445.1	448.3	449.6	450.9	450.9	451.5
7.5°	464.9	461.1	456.6	453.4	454.1	456.0	461.1	464.9	466.8	468.1	469.4
10°	477.7	473.2	466.8	466.2	467.5	472.6	479.6	485.3	490.4	493.6	493.6
12.5°	491.1	485.3	480.2	481.5	487.2	494.9	501.9	508.3	512.7	515.9	516.6
15°	505.7	500.0	494.9	498.1	507.6	516.6	522.9	525.5	527.4	530.6	531.2
17.5°	519.1	514.0	509.5	517.8	526.1	533.1	535.1	533.8	531.2	533.1	534.4
20°	533.1	528.7	526.1	535.1	540.8	541.4	536.3	530.6	524.2	524.2	524.9
22.5°	550.4	544.6	543.3	547.8	545.9	538.2	525.5	516.6	507.6	506.4	508.3
25°	566.9	561.2	560.6	557.4	540.8	521.0	503.8	493.6	486.6	487.2	491.1
27.5°	583.5	579.7	580.3	563.1	526.1	496.2	473.2	464.9	466.8	468.1	471.9
30°	600.1	600.1	602.7	563.1	505.7	461.1	439.4	438.8	443.9	447.7	452.2
32.5°	619.2	625.0	620.5	556.1	478.3	425.4	408.1	409.4	415.2	421.5	425.4
35°	637.7	651.1	638.4	540.2	440.7	392.8	378.8	376.9	381.4	387.1	389.0
37.5°	667.1	688.7	653.7	515.3	401.8	364.1	350.1	345.0	340.5	345.0	344.4
40°	718.1	744.2	665.2	473.8	364.1	337.4	322.7	313.1	302.3	292.7	292.7
42.5°	799.7	816.9	671.5	423.5	326.5	310.6	295.9	281.9	265.3	248.1	248.1
45°	933.0	936.8	674.1	369.9	292.1	283.8	268.5	255.1	233.4	216.2	212.4
47.5°	1110.9	1094.3	680.5	318.2	262.1	260.2	247.4	232.1	208.5	192.6	190.7
50°	1350.1	1278.6	708.5	276.8	237.9	239.8	230.2	212.4	190.0	178.6	176.0
52.5°	1619.2	1511.4	730.2	243.6	216.8	222.6	215.6	198.3	179.2	169.6	167.7
55°	1913.2	1735.3	725.1	221.3	200.9	207.3	204.7	190.0	172.8	164.5	162.6
57.5°	2153.0	1892.8	680.5	201.5	184.9	193.9	196.4	184.9	169.0	161.3	159.4
60°	2332.8	1978.9	588.6	184.9	172.2	183.0	190.0	181.8	168.4	163.9	162.0
62.5°	2414.4	1971.2	469.4	172.2	162.6	175.4	190.7	186.9	177.9	181.1	181.8
65°	2368.5	1874.9	352.0	162.6	156.9	176.7	201.5	201.5	188.1	193.9	194.5
67.5°	2133.2	1623.0	256.4	155.6	151.1	183.0	221.9	209.2	183.7	188.1	186.2
69°	1909.4	1452.1	220.0	151.8	146.7	186.2	230.9	210.5	178.6	183.7	178.6
70°	1744.8	1297.8	197.7	148.6	144.8	186.2	233.4	209.2	176.0	179.8	174.1
72.5°	1241.7	901.1	162.6	142.2	137.7	172.2	228.9	202.2	169.0	164.5	153.7
75°	721.9	498.1	138.4	135.2	121.8	151.1	217.5	194.5	162.0	153.7	146.0
77.5°	302.9	222.6	118.0	123.1	107.8	134.6	203.4	186.9	153.7	142.2	138.4
80°	123.1	111.0	98.2	106.5	93.7	118.6	187.5	174.1	141.6	130.1	124.4
82.5°	64.4	61.2	75.3	86.1	77.8	109.1	176.7	165.2	131.4	119.9	112.9
85°	19.1	25.5	42.7	58.7	59.3	98.2	171.5	153.1	114.2	98.8	97.6
87.5°	1.3	5.1	14.7	30.6	38.9	75.3	139.0	125.6	92.5	77.8	78.4
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)