

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: P401588

Luminaire Tested: **ENT-SA1D-830-U-T3**

Issue Date: 5/20/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P401588  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-13)  
Test Lab: INNOVATION CENTER  
Issue Date: 5/20/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: ENT-SA1D-830-U-T3  
Description: ENTRI LED LUMINAIRE  
(1) 80 CRI, 3000K, 800mA LIGHTSQUARE WITH 16 LEDS AND TYPE III OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4568 lumens  
Efficiency: N/A  
Efficacy: 106.0 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Short - Semi-Cutoff  
BUG Rating: B1 - U0 - G1

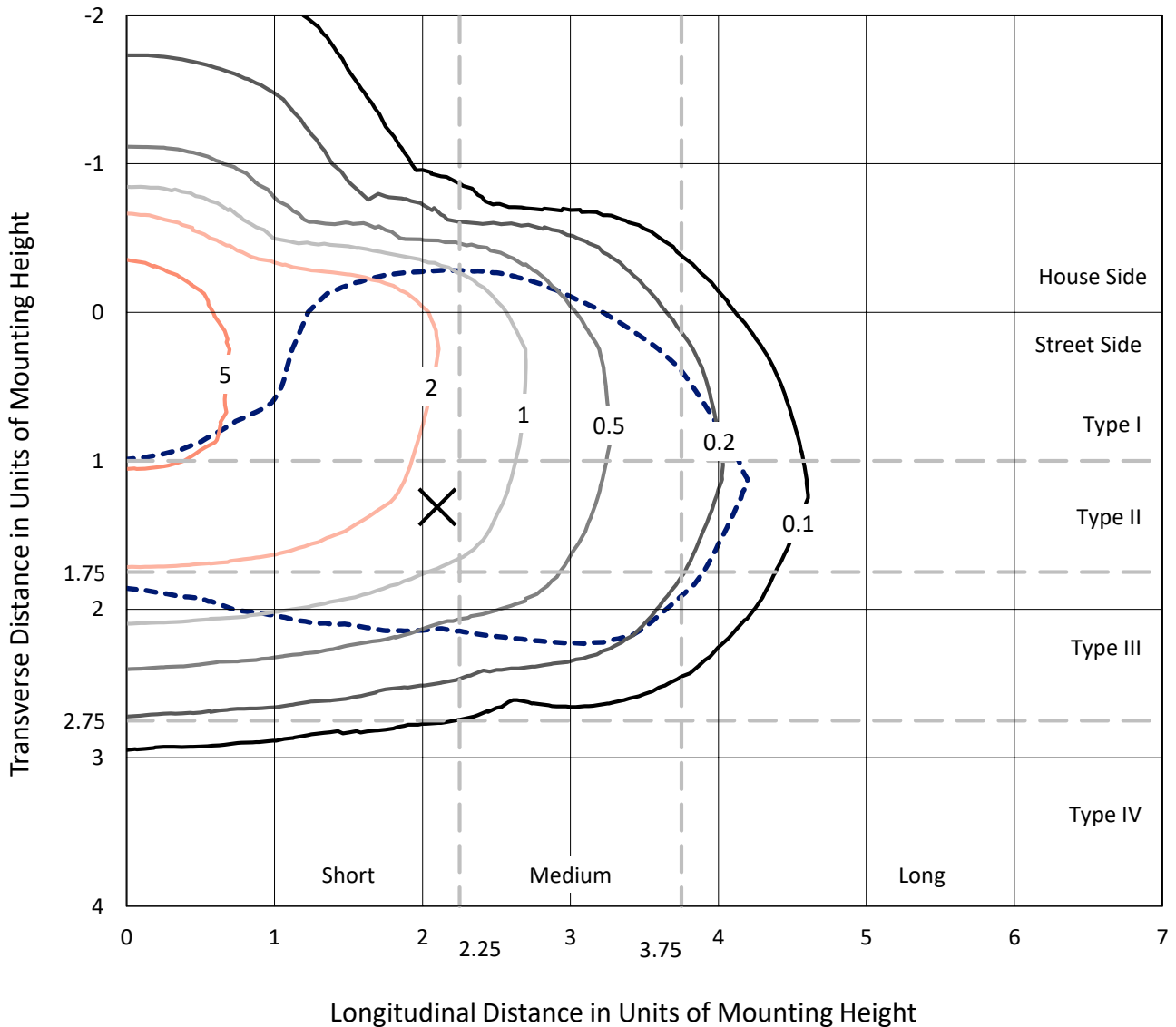
Input Watts (W): 43.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

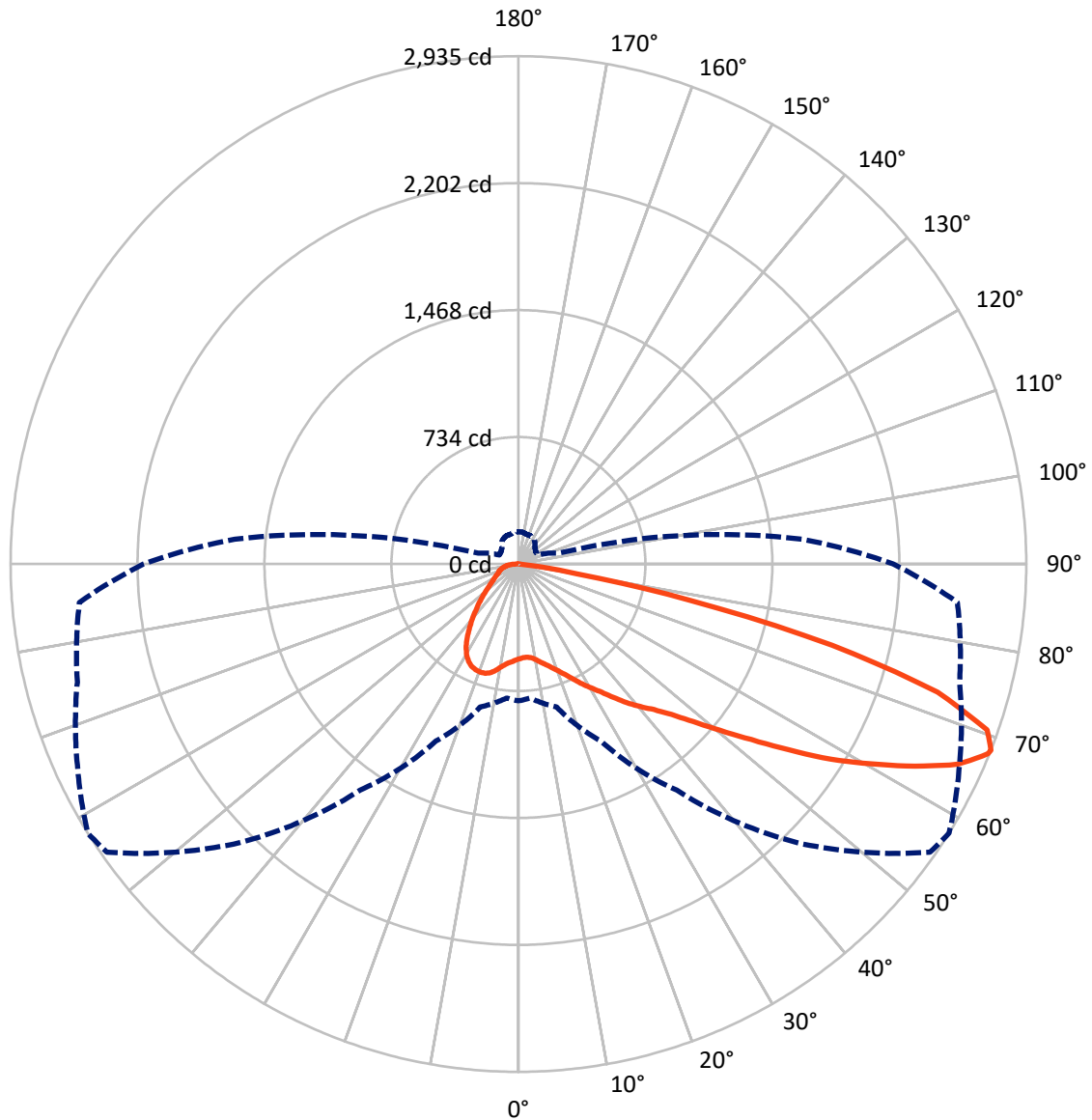
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 6.1 fc  
 Type III - Short - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral    - - - Horizontal Cone Through 68-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1069.6	0.0	1069.6
	% Fixture	23.4	0.0	23.4
<b>Street Side</b>	Lumens	3498.4	0.0	3498.4
	% Fixture	76.6	0.0	76.6
<b>Total</b>	Lumens	4568.0	0.0	4568.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	54.0	1.2
10°-20°	176.7	3.9
20°-30°	317.8	7.0
30°-40°	466.9	10.2
40°-50°	684.7	15.0
50°-60°	1023.5	22.4
60°-70°	1196.8	26.2
70°-80°	590.0	12.9
80°-90°	57.6	1.3
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°	4568.0	100.0
0°-180°	4568.0	100.0



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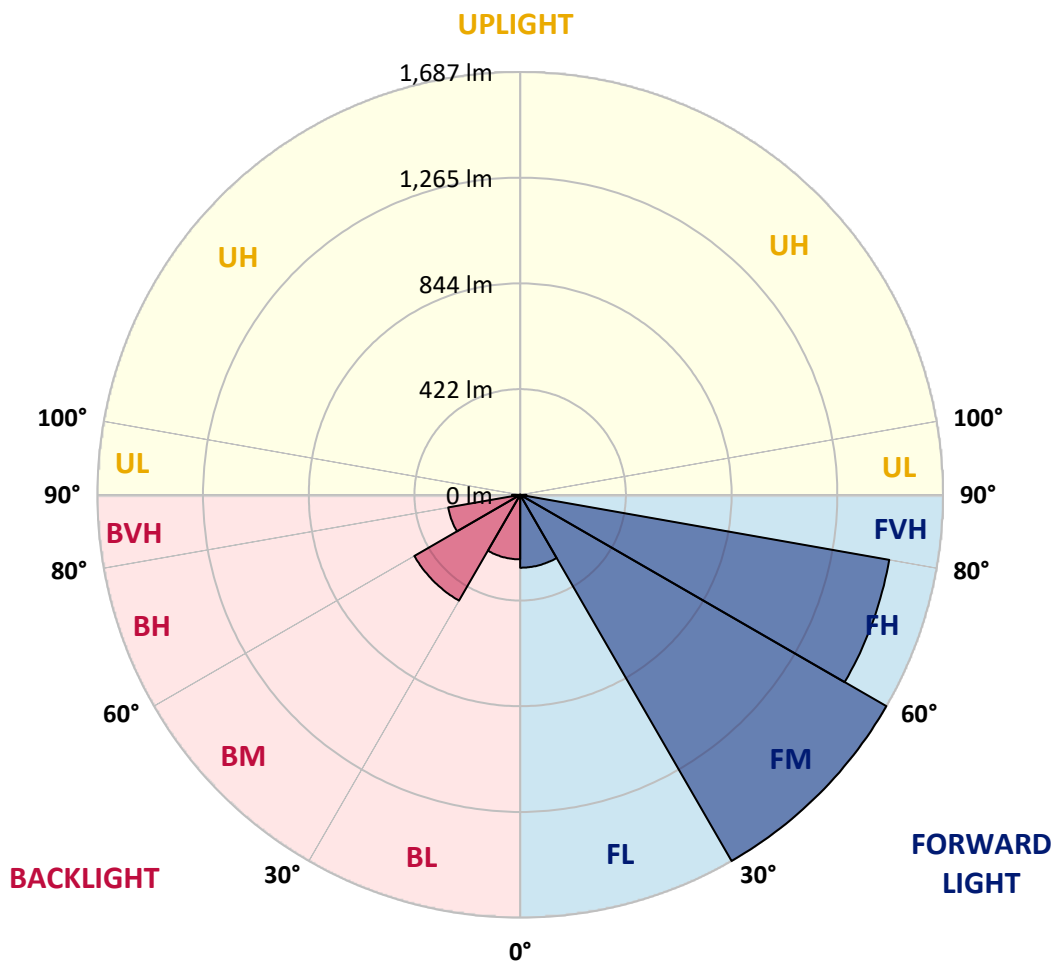
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	291.0	6.4			
FM	(30°-60°)	1687.2	36.9			
FH	(60°-80°)	1495.4	32.7			G1/1800
FVH	(80°-90°)	24.8	0.5			G1/100
BL	(0°-30°)	257.6	5.6	B1/500		
BM	(30°-60°)	487.8	10.7	B1/1000		
BH	(60°-80°)	291.4	6.4	B1/500		G1/500
BVH	(80°-90°)	32.8	0.7			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 Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	548.6	548.6	548.6	548.6	548.6	548.6	548.6	548.6	548.6	548.6	548.6
2.5°	535.2	535.2	537.1	537.7	539.0	540.3	541.5	542.2	544.1	546.6	547.9
5°	530.7	531.3	532.6	533.2	535.2	537.7	539.6	540.9	544.1	549.2	552.4
7.5°	540.9	542.8	543.5	544.1	544.7	546.6	546.6	547.3	550.5	555.6	560.0
10°	557.5	558.8	560.7	562.6	564.5	565.8	561.9	562.6	563.9	569.0	575.3
12.5°	578.5	578.5	579.2	581.7	583.6	587.5	583.6	583.6	583.6	588.1	595.8
15°	602.1	600.9	600.9	603.4	604.0	606.6	604.7	604.7	607.2	611.7	619.4
17.5°	628.9	630.8	628.9	627.6	625.7	627.0	628.3	629.6	634.7	641.7	646.1
20°	667.8	671.0	669.7	664.6	656.4	652.5	657.0	659.5	669.7	678.0	678.7
22.5°	729.7	727.8	725.9	716.9	700.4	690.2	690.8	694.6	710.6	723.3	716.9
25°	787.1	789.0	789.0	776.3	754.6	733.5	735.4	737.4	753.3	764.8	747.6
27.5°	856.6	855.4	854.7	837.5	811.4	790.9	780.1	785.2	796.7	801.1	768.0
30°	928.7	933.8	928.7	904.5	879.6	853.4	831.8	830.5	836.2	835.6	792.2
32.5°	1015.5	1011.0	1009.1	981.0	949.8	915.3	887.9	883.4	880.2	875.8	820.9
35°	1082.4	1088.2	1088.2	1063.9	1026.9	993.1	950.4	946.6	938.9	924.3	858.6
37.5°	1161.5	1160.3	1164.7	1136.7	1099.7	1067.1	1027.6	1016.7	999.5	977.8	903.2
40°	1238.7	1241.9	1252.1	1218.3	1184.5	1159.0	1102.9	1083.1	1056.9	1037.2	968.3
42.5°	1344.0	1348.4	1352.3	1324.2	1284.0	1261.0	1174.3	1149.4	1134.7	1130.9	1054.4
45°	1471.5	1479.2	1482.4	1456.9	1433.9	1379.0	1264.2	1241.3	1225.3	1241.9	1171.7
47.5°	1594.0	1590.2	1604.8	1604.2	1606.8	1541.1	1393.7	1359.3	1344.0	1386.1	1306.3
50°	1662.9	1668.6	1700.5	1733.1	1778.3	1731.1	1543.6	1509.2	1491.3	1543.6	1464.5
52.5°	1698.6	1706.3	1749.0	1840.2	1936.5	1914.2	1724.1	1685.8	1670.5	1721.6	1634.2
55°	1701.8	1706.3	1763.7	1905.3	2057.1	2064.1	1930.1	1893.8	1872.7	1905.9	1819.2
57.5°	1648.9	1635.5	1734.3	1914.8	2134.3	2220.4	2156.6	2130.4	2071.1	2106.8	2048.8
60°	1554.5	1567.8	1664.8	1875.3	2166.8	2342.2	2383.7	2344.1	2275.2	2289.9	2296.3
62.5°	1411.6	1428.8	1529.6	1783.4	2140.6	2445.5	2593.5	2573.7	2481.3	2473.6	2485.1
65°	1208.1	1197.9	1310.2	1582.5	2016.9	2480.0	2799.5	2791.3	2680.9	2591.0	2595.4
67.5°	871.3	861.7	940.2	1221.5	1682.0	2351.8	2909.3	2927.8	2801.5	2642.6	2573.7
68°	790.9	777.5	856.0	1129.0	1595.9	2277.8	2903.5	2935.4	2810.4	2639.4	2547.0
70°	455.4	433.7	509.6	736.7	1174.9	1917.4	2786.1	2874.2	2789.3	2577.6	2371.5
72.5°	142.9	142.9	197.1	297.9	576.6	1213.2	2383.7	2533.6	2551.4	2342.8	1971.0
75°	89.3	89.3	102.7	141.0	229.6	514.7	1644.4	1872.7	2027.1	1972.2	1437.1
77.5°	60.6	59.3	68.3	87.4	128.2	165.2	825.4	1014.2	1240.0	1346.5	840.7
80°	33.2	33.8	42.1	52.3	72.7	76.5	242.4	342.5	546.0	639.8	318.9
82.5°	19.1	18.5	20.4	23.0	31.9	33.2	69.5	85.5	142.9	132.7	85.5
85°	0.0	0.6	0.6	0.6	1.3	3.2	8.9	13.4	21.7	30.0	21.0
87.5°	0.0	0.0	0.0	0.0	0.6	0.6	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°	548.6	548.6	548.6	548.6	548.6	548.6	548.6	548.6	548.6	548.6	548.6
2.5°	549.2	551.1	554.3	556.8	558.1	556.8	561.3	560.7	561.9	561.9	563.2
5°	554.9	557.5	563.2	566.4	569.6	570.9	576.0	577.3	579.8	581.1	580.4
7.5°	563.2	566.4	573.4	579.2	583.6	586.8	595.1	598.9	602.8	604.0	605.3
10°	578.5	583.0	590.7	597.7	604.0	608.5	615.5	620.6	624.5	625.7	627.0
12.5°	598.9	604.0	613.6	623.2	630.2	632.8	632.1	630.8	630.8	630.2	630.8
15°	622.5	627.6	639.8	648.7	649.3	641.0	629.6	623.8	622.5	622.5	623.2
17.5°	650.0	656.4	664.0	669.1	657.0	636.6	623.2	617.4	616.2	615.5	614.3
20°	681.2	685.1	687.6	681.2	654.4	630.8	615.5	607.2	600.9	600.2	597.7
22.5°	714.4	713.1	709.9	687.0	647.4	617.4	596.4	581.1	572.8	572.2	569.6
25°	738.6	733.5	724.0	688.2	634.7	595.8	565.8	541.5	530.7	525.6	526.9
27.5°	754.6	743.7	727.2	681.9	612.3	562.6	520.5	488.6	472.7	470.1	472.0
30°	773.7	756.5	729.7	665.9	580.4	516.0	461.2	429.3	420.3	415.9	417.2
32.5°	796.7	774.4	738.0	641.7	540.3	461.8	402.5	380.2	370.0	361.7	364.2
35°	826.7	798.6	751.4	607.2	489.2	404.4	360.4	340.0	321.5	312.5	313.2
37.5°	861.7	829.8	762.9	567.1	433.7	361.0	324.0	299.8	276.8	259.6	256.4
40°	917.9	891.7	772.4	522.4	380.8	325.3	288.3	260.9	239.2	222.0	220.1
42.5°	1011.6	966.3	773.1	468.8	335.5	294.7	259.0	229.0	204.8	190.1	189.4
45°	1122.0	1051.8	759.7	411.4	296.0	264.1	232.8	199.0	185.0	175.4	174.1
47.5°	1252.7	1150.1	730.3	357.8	262.2	234.1	206.0	185.6	175.4	168.4	168.4
50°	1402.0	1265.5	701.0	311.9	229.6	209.9	190.7	179.9	172.2	165.8	165.2
52.5°	1570.4	1402.0	691.4	265.3	202.8	187.5	185.6	175.4	169.0	164.6	163.3
55°	1771.3	1555.1	700.4	229.0	181.8	178.6	182.4	174.1	169.7	162.7	160.7
57.5°	2003.5	1704.3	690.8	198.4	167.1	170.3	178.6	174.1	170.3	161.4	158.8
60°	2222.3	1837.7	625.7	172.9	153.1	160.1	173.5	168.4	162.7	160.7	159.5
62.5°	2339.7	1881.0	498.8	153.1	142.2	149.9	165.2	158.8	155.0	159.5	160.1
65°	2340.9	1831.9	366.8	138.4	133.3	141.0	156.9	155.0	157.6	167.8	169.7
67.5°	2210.8	1682.7	259.0	125.0	124.4	133.9	160.7	173.5	175.4	185.6	185.6
68°	2166.2	1645.7	240.5	123.1	122.5	133.9	163.9	176.7	178.0	187.5	186.9
70°	1921.2	1391.2	174.1	115.5	119.3	143.5	181.2	185.6	178.0	188.8	188.2
72.5°	1501.5	1028.9	130.1	107.2	113.5	141.6	182.4	178.0	166.5	169.0	165.8
75°	1014.8	655.7	107.2	98.2	100.8	119.9	165.8	167.8	154.4	151.8	148.0
77.5°	531.3	307.4	86.7	87.4	89.9	104.0	148.0	152.4	140.3	132.7	131.4
80°	195.8	121.8	70.8	77.2	78.5	91.2	126.9	133.9	122.5	116.7	115.5
82.5°	71.4	60.6	58.7	67.6	66.3	77.8	111.0	116.1	104.0	98.2	95.0
85°	19.8	22.3	37.0	52.9	51.7	60.6	89.3	93.8	83.6	68.9	67.0
87.5°	1.3	4.5	14.7	31.3	32.5	37.6	64.4	70.8	61.9	51.0	50.4
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)