

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: P401571

Luminaire Tested: **ENT-SA1D-827-U-T4FT-HSS**

Issue Date: 5/20/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P401571  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-16)  
Test Lab: INNOVATION CENTER  
Issue Date: 5/20/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: ENT-SA1D-827-U-T4FT-HSS  
Description: ENTRI LED LUMINAIRE  
(1) 80 CRI, 2700K, 800mA LIGHTSQUARE WITH 16 LEDS AND TYPE IV FORWARD  
THROW OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2939 lumens  
Efficiency: N/A  
Efficacy: 68.2 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

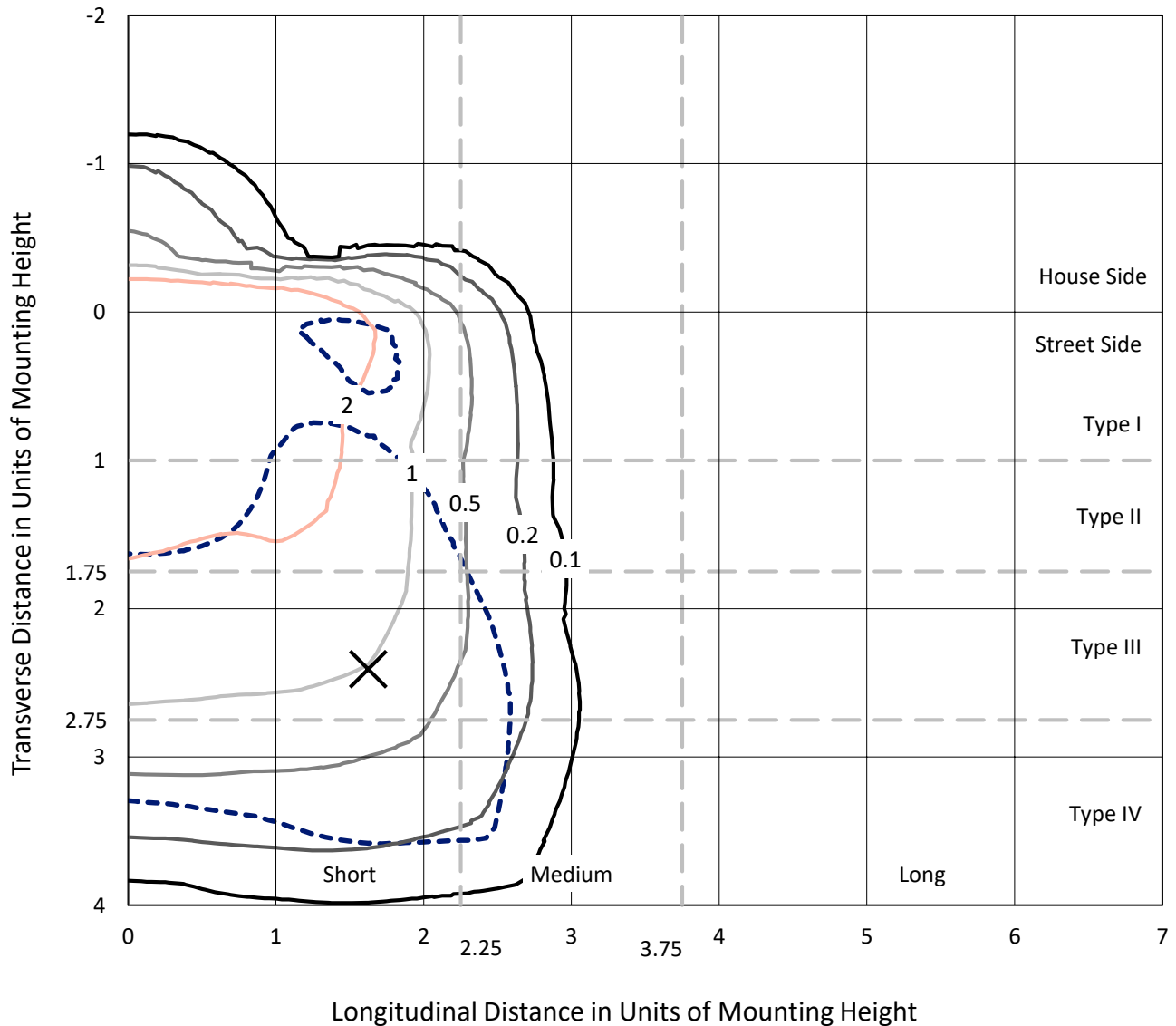
Input Watts (W): 43.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

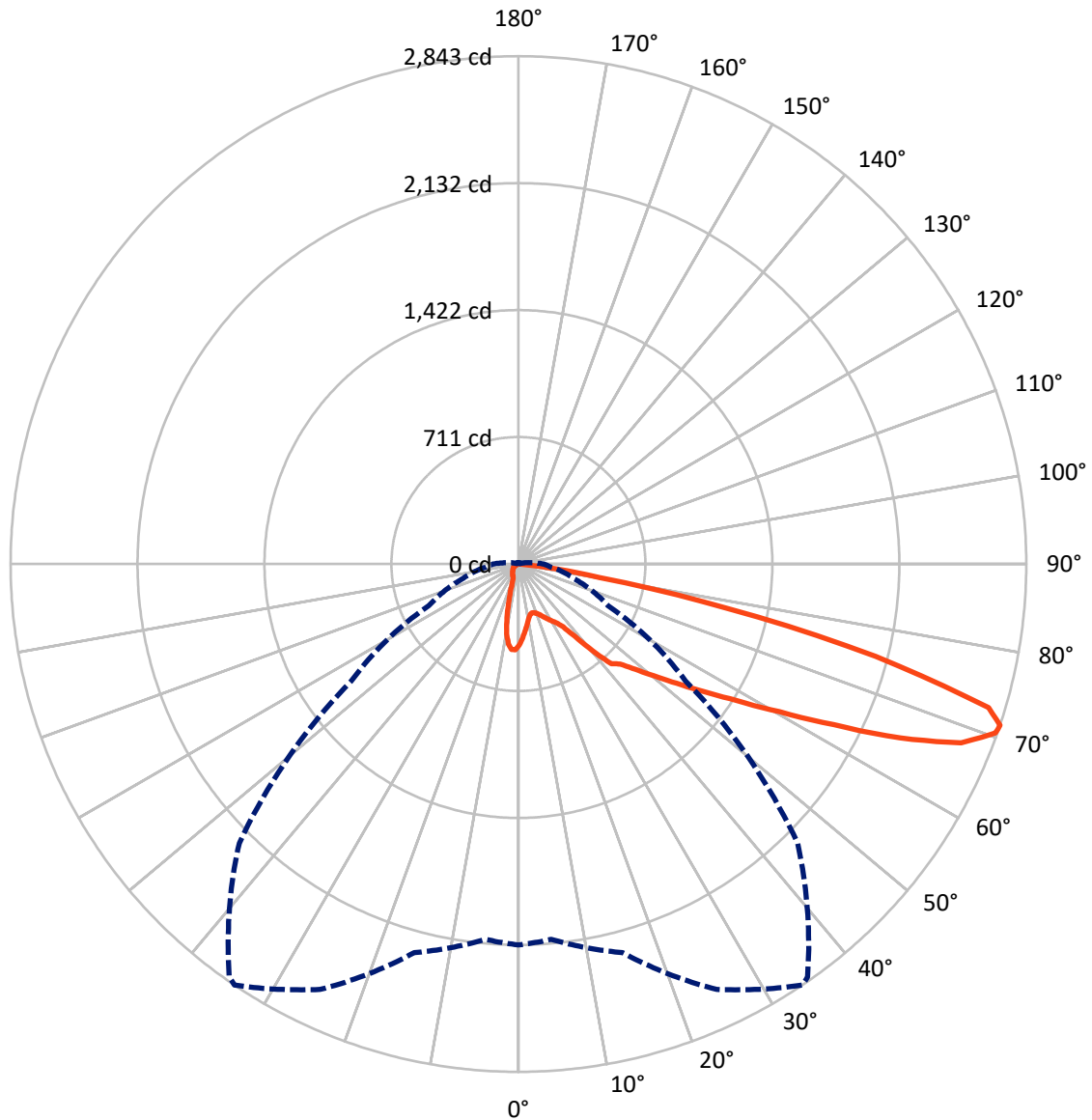
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 4.6 fc  
 Type IV - Short - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 34-Deg Lateral      - - - Horizontal Cone Through 71-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	325.0	0.0	325.0
	% Fixture	11.1	0.0	11.1
<b>Street Side</b>	Lumens	2614.0	0.0	2614.0
	% Fixture	88.9	0.0	88.9
<b>Total</b>	Lumens	2939.0	0.0	2939.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	40.1	1.4
10°-20°	92.0	3.1
20°-30°	137.3	4.7
30°-40°	229.3	7.8
40°-50°	414.2	14.1
50°-60°	657.1	22.4
60°-70°	883.1	30.0
70°-80°	468.6	15.9
80°-90°	17.3	0.6
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°	2939.0	100.0
0°-180°	2939.0	100.0



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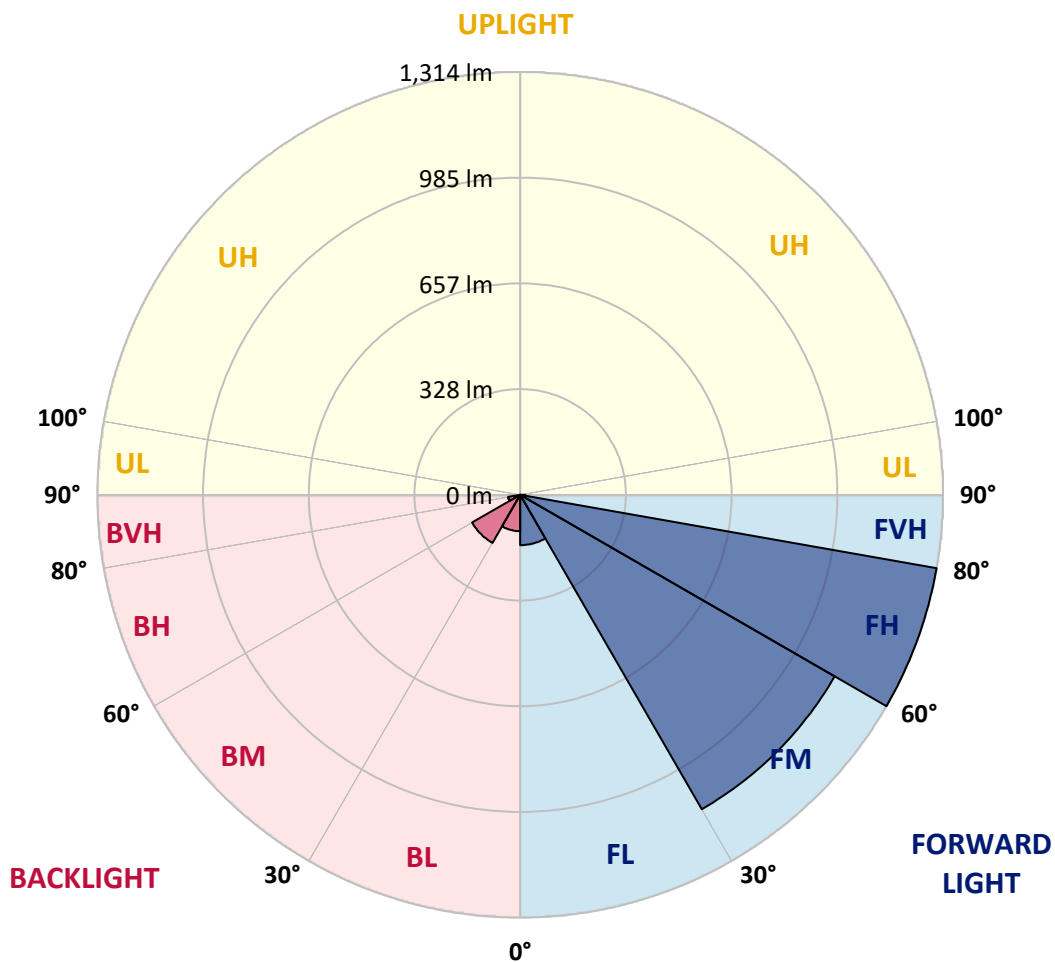
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	156.4	5.3			
FM	(30°-60°)	1128.2	38.4			
FH	(60°-80°)	1313.7	44.7			G1/1800
FVH	(80°-90°)	15.7	0.5			G1/100
BL	(0°-30°)	113.0	3.8	B1/500		
BM	(30°-60°)	172.4	5.9	B0/220		
BH	(60°-80°)	37.9	1.3	B0/110		G0/110
BVH	(80°-90°)	1.6	0.1			G0/10
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°	34°	35°	45°	55°	65°	75°	85°
0°	455.4	455.4	455.4	455.4	455.4	455.4	455.4	455.4	455.4	455.4	455.4
2.5°	414.7	409.4	414.1	416.5	418.2	420.6	424.1	430.6	437.7	445.9	450.7
5°	361.6	364.5	366.3	372.8	379.3	380.5	391.7	404.7	421.2	437.7	451.8
7.5°	318.5	318.5	323.8	333.9	344.5	345.7	365.1	382.2	405.8	431.2	454.2
10°	284.3	285.5	289.6	299.7	313.2	316.2	338.0	361.6	391.1	424.1	456.6
12.5°	273.1	272.5	271.9	279.0	290.2	293.2	317.4	345.7	380.5	420.6	462.5
15°	280.2	278.4	274.3	275.5	282.5	285.5	306.7	335.0	374.0	420.0	472.5
17.5°	291.4	289.0	281.4	279.0	286.7	289.6	307.3	332.1	371.6	422.9	484.3
20°	305.0	302.6	290.8	287.9	295.5	297.9	316.2	337.4	372.8	428.8	500.2
22.5°	324.4	321.5	304.4	300.8	308.5	310.9	330.3	349.8	379.9	439.5	522.0
25°	348.0	344.5	322.7	317.9	327.4	329.7	349.2	367.5	391.7	453.6	549.8
27.5°	374.0	369.9	346.8	337.4	348.0	351.6	369.9	389.9	408.8	471.3	586.3
30°	397.6	392.9	370.4	359.8	370.4	372.2	394.0	416.5	436.5	501.4	640.0
32.5°	463.1	451.3	416.5	385.8	392.9	396.4	422.9	458.3	488.4	537.4	709.0
35°	561.0	551.5	509.1	456.0	431.2	432.4	466.6	511.4	525.0	579.3	794.6
37.5°	655.3	647.1	609.9	561.0	513.8	515.5	521.4	564.5	580.4	651.8	899.0
40°	758.6	745.6	716.1	669.5	637.1	629.4	600.5	630.6	665.4	743.2	1012.8
42.5°	806.4	794.0	763.3	766.2	762.7	749.1	691.9	733.8	772.7	876.0	1138.5
45°	885.4	861.2	798.1	802.8	798.1	799.3	813.4	874.2	907.8	1016.4	1280.6
47.5°	958.5	930.8	864.8	860.0	880.7	891.3	967.4	1041.1	1044.1	1138.5	1392.1
50°	1025.2	1005.1	944.4	945.0	982.7	994.5	1146.7	1214.0	1154.4	1232.2	1479.4
52.5°	1113.7	1085.4	1031.1	1050.6	1109.6	1120.2	1325.4	1365.6	1234.0	1317.2	1547.8
55°	1195.7	1180.3	1140.2	1169.1	1259.4	1287.1	1507.1	1482.4	1290.1	1392.7	1580.9
57.5°	1330.2	1315.4	1304.8	1319.5	1440.5	1475.3	1691.2	1564.9	1333.7	1442.8	1565.5
60°	1554.3	1539.6	1507.7	1521.3	1678.8	1696.5	1835.7	1648.7	1350.8	1457.0	1505.4
62.5°	1831.0	1812.7	1761.4	1823.9	1982.0	1981.4	1985.5	1692.9	1329.0	1415.1	1346.7
65°	2080.5	2055.1	2028.6	2156.0	2348.3	2321.7	2144.8	1698.2	1260.0	1212.8	1041.7
67.5°	2262.2	2252.1	2266.9	2465.7	2672.7	2646.2	2299.3	1625.1	1048.8	875.4	643.6
70°	2255.1	2234.4	2328.2	2645.6	2833.8	2811.9	2292.8	1335.5	699.6	463.6	269.6
71°	2133.0	2109.4	2252.1	2627.9	2843.2	2822.5	2210.3	1142.6	553.3	327.4	177.6
72.5°	1648.1	1719.5	1946.6	2438.5	2752.3	2725.8	1985.5	874.8	350.4	189.3	89.1
75°	697.2	736.2	1155.6	1740.7	2064.6	2051.0	1338.4	404.1	161.0	85.5	34.2
77.5°	179.3	177.0	353.9	746.8	1202.2	1223.4	617.0	138.6	83.8	60.8	19.5
80°	34.8	37.8	100.9	259.5	458.9	471.3	201.1	60.8	56.0	47.8	10.0
82.5°	3.5	4.1	17.7	80.2	154.0	148.6	44.2	23.0	34.2	32.4	4.7
85°	0.0	0.0	0.6	0.6	0.6	0.6	0.6	2.4	8.3	8.8	1.2
87.5°	0.0	0.0	0.6	0.6	0.0	0.0	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°	455.4	455.4	455.4	455.4	455.4	455.4	455.4	455.4	455.4	455.4	455.4
2.5°	454.2	459.5	465.4	469.5	473.7	474.3	480.2	479.0	480.7	481.3	480.7
5°	459.5	466.6	477.8	483.7	486.1	481.9	480.7	474.3	471.9	468.9	466.0
7.5°	465.4	474.3	487.2	490.2	481.9	466.6	454.2	438.3	423.5	414.1	415.3
10°	471.9	483.1	493.7	486.1	464.8	434.7	399.9	364.5	333.3	321.5	325.6
12.5°	480.2	493.7	498.4	477.2	435.9	375.2	312.0	258.4	225.9	206.5	204.1
15°	492.5	506.1	500.8	463.1	389.9	294.9	216.5	162.2	131.0	120.9	115.6
17.5°	507.9	520.9	500.8	437.7	324.4	211.2	131.5	98.5	88.5	86.1	86.7
20°	526.8	539.1	498.4	399.3	250.1	129.8	87.9	81.4	81.4	81.4	80.8
22.5°	552.1	558.6	494.9	348.6	172.2	87.9	77.9	77.3	77.9	77.9	77.9
25°	582.8	581.6	488.4	287.9	108.5	74.9	74.3	74.3	74.9	75.5	75.5
27.5°	623.5	611.1	477.2	215.3	76.7	69.6	70.8	72.0	73.1	74.3	74.3
30°	680.1	650.0	458.9	145.7	64.9	64.3	66.7	70.2	72.0	73.1	73.1
32.5°	740.9	690.2	427.7	93.2	59.6	59.0	61.3	66.7	71.4	72.6	72.6
35°	817.6	733.2	381.1	67.2	56.0	54.9	57.2	61.9	69.0	72.6	72.6
37.5°	898.4	779.2	313.2	56.6	52.5	51.3	53.1	56.6	64.9	71.4	72.0
40°	984.5	819.9	235.4	52.5	49.0	48.4	49.0	52.5	59.0	67.8	69.6
42.5°	1071.2	854.1	164.6	48.4	46.0	44.8	46.0	48.4	54.3	61.9	63.1
45°	1166.8	891.9	109.7	44.8	43.7	42.5	43.7	45.4	49.5	53.7	54.3
47.5°	1236.4	905.5	75.5	40.7	40.1	40.7	41.3	42.5	44.8	45.4	44.8
50°	1282.4	898.4	54.3	36.6	37.2	38.9	38.9	39.5	39.5	37.8	37.2
52.5°	1316.0	872.4	41.9	31.3	34.8	36.6	36.6	35.4	34.2	31.9	31.3
55°	1319.5	814.0	33.0	27.1	31.3	34.2	33.6	31.3	28.9	26.5	26.5
57.5°	1274.7	725.5	27.1	23.0	27.1	30.1	28.9	26.5	23.6	21.8	21.8
60°	1202.2	634.7	23.0	19.5	22.4	25.4	23.6	21.8	18.9	17.1	17.1
62.5°	1068.3	545.0	18.9	15.9	18.3	20.1	19.5	17.7	14.7	13.6	13.0
65°	818.7	414.7	14.2	12.4	14.2	16.5	15.3	13.6	11.8	10.0	9.4
67.5°	492.0	249.5	11.2	9.4	11.2	13.0	11.8	10.0	8.3	7.1	7.1
70°	208.2	106.8	8.8	7.1	8.3	10.0	9.4	8.3	6.5	5.9	5.9
71°	141.6	76.1	7.7	6.5	7.7	9.4	8.8	7.7	6.5	5.9	5.9
72.5°	72.6	38.9	6.5	5.3	7.1	8.3	8.3	7.1	5.9	5.9	5.9
75°	26.0	16.5	5.3	4.7	5.9	5.9	6.5	6.5	6.5	6.5	5.9
77.5°	14.7	10.0	4.7	4.7	4.7	5.3	6.5	7.1	7.7	7.7	7.1
80°	8.3	5.3	2.9	3.5	4.7	5.3	6.5	7.1	8.3	8.3	7.7
82.5°	4.1	1.8	0.6	1.8	2.9	4.7	5.3	5.9	7.1	6.5	6.5
85°	0.6	0.0	0.0	0.6	1.8	2.4	3.5	4.7	5.9	5.9	5.3
87.5°	0.0	0.0	0.0	0.0	0.6	1.2	1.8	2.9	4.1	4.7	4.1
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)