

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: P401481

Luminaire Tested: **ENV-SA1D-735-U-T4FT-HSS**

Issue Date: 5/20/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P401481  
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: ENV-SA1D-735-U-T4FT-HSS  
Description: ENTRI LED LUMINAIRE  
(1) 70 CRI, 3500K, 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: 3756 lumens  
Efficiency: N/A  
Efficacy: 87.1 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

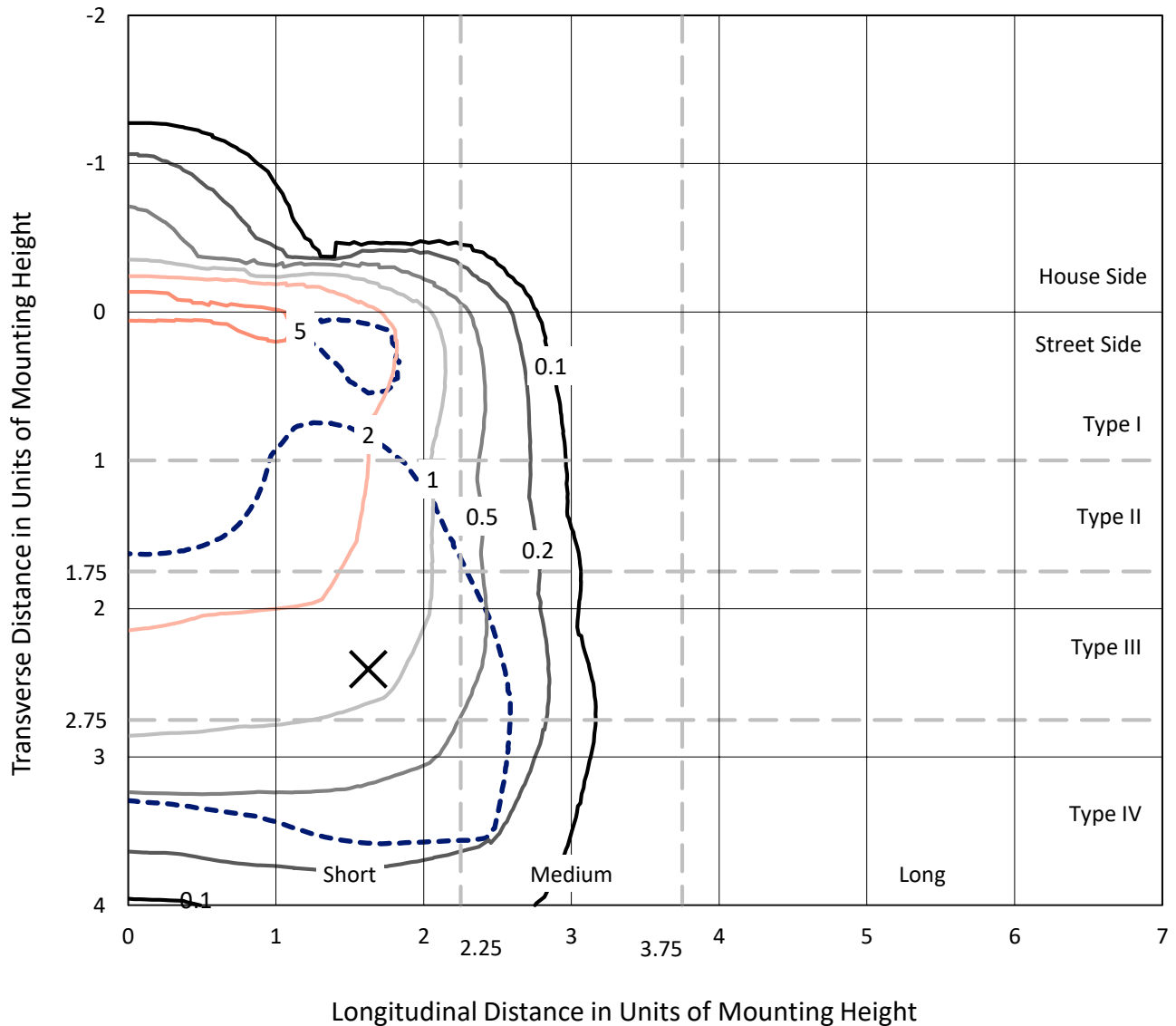
Input Watts (W): 43.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

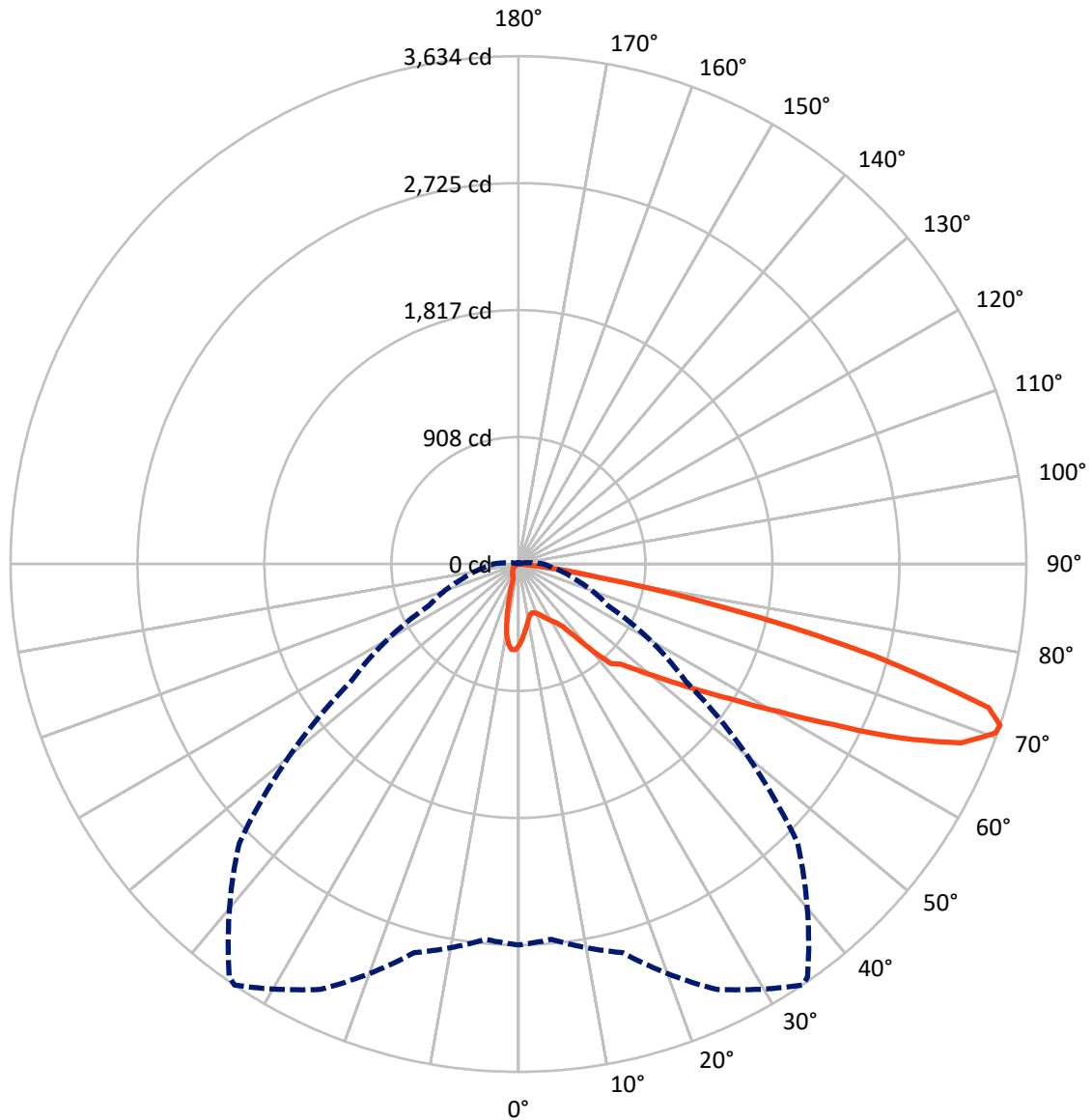
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5.8 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	415.3	0.0	415.3
	% Fixture	11.1	0.0	11.1
<b>Street Side</b>	Lumens	3340.7	0.0	3340.7
	% Fixture	88.9	0.0	88.9
<b>Total</b>	Lumens	3756.0	0.0	3756.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	51.3	1.4
10°-20°	117.6	3.1
20°-30°	175.5	4.7
30°-40°	293.1	7.8
40°-50°	529.3	14.1
50°-60°	839.8	22.4
60°-70°	1128.5	30.0
70°-80°	598.8	15.9
80°-90°	22.1	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°	3756.0	100.0
0°-180°	3756.0	100.0



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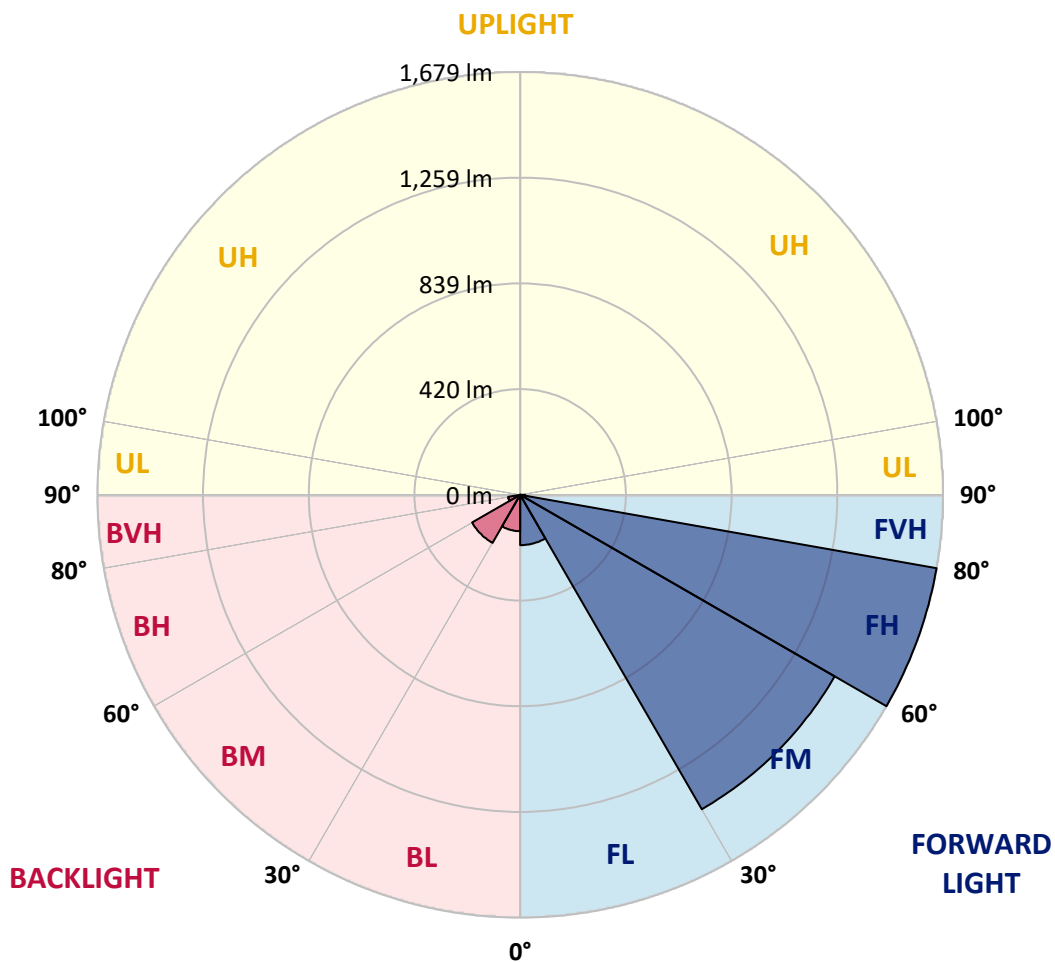
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	199.9	5.3			
FM	(30°-60°)	1441.8	38.4			
FH	(60°-80°)	1678.9	44.7			G1/1800
FVH	(80°-90°)	20.1	0.5			G1/100
BL	(0°-30°)	144.5	3.8	B1/500		
BM	(30°-60°)	220.4	5.9	B1/1000		
BH	(60°-80°)	48.5	1.3	B0/110		G0/110
BVH	(80°-90°)	2.0	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°	582.0	582.0	582.0	582.0	582.0	582.0	582.0	582.0	582.0	582.0	582.0
2.5°	530.0	523.2	529.2	532.2	534.5	537.5	542.0	550.3	559.4	569.9	575.9
5°	462.1	465.9	468.1	476.4	484.7	486.2	500.6	517.1	538.2	559.4	577.4
7.5°	407.1	407.1	413.9	426.7	440.2	441.8	466.6	488.5	518.6	551.1	580.5
10°	363.4	364.9	370.1	383.0	400.3	404.1	432.0	462.1	499.8	542.0	583.5
12.5°	349.0	348.3	347.5	356.6	370.9	374.7	405.6	441.8	486.2	537.5	591.0
15°	358.1	355.8	350.5	352.0	361.1	364.9	392.0	428.2	477.9	536.7	603.8
17.5°	372.4	369.4	359.6	356.6	366.4	370.1	392.8	424.4	474.9	540.5	618.9
20°	389.7	386.7	371.6	367.9	377.7	380.7	404.1	431.2	476.4	548.0	639.3
22.5°	414.6	410.8	389.0	384.5	394.3	397.3	422.2	447.0	485.5	561.6	667.2
25°	444.8	440.2	412.4	406.3	418.4	421.4	446.3	469.6	500.6	579.7	702.6
27.5°	477.9	472.7	443.3	431.2	444.8	449.3	472.7	498.3	522.4	602.3	749.3
30°	508.1	502.1	473.4	459.8	473.4	475.7	503.6	532.2	557.8	640.8	817.9
32.5°	591.8	576.7	532.2	493.0	502.1	506.6	540.5	585.7	624.2	686.8	906.1
35°	716.9	704.8	650.6	582.7	551.1	552.6	596.3	653.6	670.9	740.3	1015.4
37.5°	837.5	827.0	779.5	716.9	656.6	658.9	666.4	721.4	741.8	833.0	1148.9
40°	969.5	952.9	915.2	855.6	814.2	804.4	767.4	805.9	850.3	949.9	1294.4
42.5°	1030.5	1014.7	975.5	979.3	974.7	957.4	884.3	937.8	987.5	1119.5	1454.9
45°	1131.5	1100.6	1020.0	1026.0	1020.0	1021.5	1039.6	1117.2	1160.2	1298.9	1636.6
47.5°	1225.0	1189.6	1105.1	1099.1	1125.5	1139.1	1236.3	1330.5	1334.3	1454.9	1779.1
50°	1310.2	1284.6	1206.9	1207.7	1255.9	1271.0	1465.5	1551.4	1475.3	1574.8	1890.7
52.5°	1423.3	1387.1	1317.7	1342.6	1418.0	1431.6	1693.9	1745.2	1577.1	1683.3	1978.1
55°	1528.1	1508.5	1457.2	1494.1	1609.5	1644.9	1926.1	1894.4	1648.7	1779.8	2020.3
57.5°	1699.9	1681.1	1667.5	1686.4	1840.9	1885.4	2161.3	2000.0	1704.5	1843.9	2000.7
60°	1986.4	1967.5	1926.8	1944.2	2145.5	2168.1	2346.0	2107.0	1726.3	1862.0	1923.8
62.5°	2339.9	2316.6	2251.0	2330.9	2532.9	2532.2	2537.5	2163.5	1698.4	1808.5	1721.0
65°	2658.8	2626.4	2592.5	2755.3	3001.1	2967.2	2741.0	2170.3	1610.2	1549.9	1331.3
67.5°	2891.0	2878.2	2897.0	3151.1	3415.7	3381.8	2938.5	2076.9	1340.3	1118.7	822.5
70°	2882.0	2855.6	2975.4	3381.0	3621.5	3593.6	2930.2	1706.7	894.1	592.5	344.5
71°	2725.9	2695.8	2878.2	3358.4	3633.6	3607.2	2824.7	1460.2	707.1	418.4	226.9
72.5°	2106.3	2197.5	2487.7	3116.4	3517.5	3483.5	2537.5	1118.0	447.8	242.0	113.8
75°	891.1	940.8	1476.8	2224.6	2638.5	2621.1	1710.5	516.4	205.8	109.3	43.7
77.5°	229.2	226.2	452.3	954.4	1536.3	1563.5	788.5	177.2	107.0	77.6	24.9
80°	44.5	48.2	128.9	331.7	586.5	602.3	257.1	77.6	71.6	61.1	12.8
82.5°	4.5	5.3	22.6	102.5	196.8	190.0	56.5	29.4	43.7	41.5	6.0
85°	0.0	0.0	0.8	0.8	0.8	0.8	0.8	3.0	10.6	11.3	1.5
87.5°	0.0	0.0	0.8	0.8	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°	582.0	582.0	582.0	582.0	582.0	582.0	582.0	582.0	582.0	582.0	582.0
2.5°	580.5	587.2	594.8	600.1	605.3	606.1	613.6	612.1	614.4	615.1	614.4
5°	587.2	596.3	610.6	618.2	621.2	615.9	614.4	606.1	603.1	599.3	595.5
7.5°	594.8	606.1	622.7	626.4	615.9	596.3	580.5	560.1	541.3	529.2	530.7
10°	603.1	617.4	631.0	621.2	594.0	555.6	511.1	465.9	425.9	410.8	416.1
12.5°	613.6	631.0	637.0	609.9	557.1	479.4	398.8	330.2	288.7	263.8	260.8
15°	629.5	646.8	640.0	591.8	498.3	376.9	276.7	207.3	167.4	154.5	147.8
17.5°	649.1	665.6	640.0	559.4	414.6	269.9	168.1	125.9	113.1	110.1	110.8
20°	673.2	689.0	637.0	510.4	319.6	165.8	112.3	104.0	104.0	104.0	103.3
22.5°	705.6	713.9	632.5	445.5	220.1	112.3	99.5	98.8	99.5	99.5	99.5
25°	744.8	743.3	624.2	367.9	138.7	95.7	95.0	95.0	95.7	96.5	96.5
27.5°	796.8	781.0	609.9	275.2	98.0	89.0	90.5	92.0	93.5	95.0	95.0
30°	869.2	830.7	586.5	186.2	82.9	82.2	85.2	89.7	92.0	93.5	93.5
32.5°	946.8	882.0	546.5	119.1	76.1	75.4	78.4	85.2	91.2	92.7	92.7
35°	1044.8	937.0	487.0	85.9	71.6	70.1	73.1	79.2	88.2	92.7	92.7
37.5°	1148.1	995.8	400.3	72.4	67.1	65.6	67.8	72.4	82.9	91.2	92.0
40°	1258.2	1047.9	300.8	67.1	62.6	61.8	62.6	67.1	75.4	86.7	89.0
42.5°	1369.0	1091.6	210.3	61.8	58.8	57.3	58.8	61.8	69.4	79.2	80.7
45°	1491.1	1139.8	140.2	57.3	55.8	54.3	55.8	58.0	63.3	68.6	69.4
47.5°	1580.1	1157.2	96.5	52.0	51.3	52.0	52.8	54.3	57.3	58.0	57.3
50°	1638.9	1148.1	69.4	46.7	47.5	49.8	49.8	50.5	50.5	48.2	47.5
52.5°	1681.8	1114.9	53.5	40.0	44.5	46.7	46.7	45.2	43.7	40.7	40.0
55°	1686.4	1040.3	42.2	34.7	40.0	43.7	43.0	40.0	36.9	33.9	33.9
57.5°	1629.1	927.2	34.7	29.4	34.7	38.4	36.9	33.9	30.2	27.9	27.9
60°	1536.3	811.1	29.4	24.9	28.6	32.4	30.2	27.9	24.1	21.9	21.9
62.5°	1365.2	696.6	24.1	20.4	23.4	25.6	24.9	22.6	18.8	17.3	16.6
65°	1046.3	530.0	18.1	15.8	18.1	21.1	19.6	17.3	15.1	12.8	12.1
67.5°	628.7	318.9	14.3	12.1	14.3	16.6	15.1	12.8	10.6	9.0	9.0
70°	266.1	136.4	11.3	9.0	10.6	12.8	12.1	10.6	8.3	7.5	7.5
71°	180.9	97.2	9.8	8.3	9.8	12.1	11.3	9.8	8.3	7.5	7.5
72.5°	92.7	49.8	8.3	6.8	9.0	10.6	10.6	9.0	7.5	7.5	7.5
75°	33.2	21.1	6.8	6.0	7.5	7.5	8.3	8.3	8.3	8.3	7.5
77.5°	18.8	12.8	6.0	6.0	6.0	6.8	8.3	9.0	9.8	9.8	9.0
80°	10.6	6.8	3.8	4.5	6.0	6.8	8.3	9.0	10.6	10.6	9.8
82.5°	5.3	2.3	0.8	2.3	3.8	6.0	6.8	7.5	9.0	8.3	8.3
85°	0.8	0.0	0.0	0.8	2.3	3.0	4.5	6.0	7.5	7.5	6.8
87.5°	0.0	0.0	0.0	0.0	0.8	1.5	2.3	3.8	5.3	6.0	5.3
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)