

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: P401805

Luminaire Tested: **ENT-SA1F-727-U-T4FT-HSS**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401805
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-SA1F-727-U-T4FT-HSS
Description: ENTRI LED LUMINAIRE
(1) 70 CRI, 2700K, 1200mA 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: 4612 lumens
Efficiency: N/A
Efficacy: 69.8 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 - G2

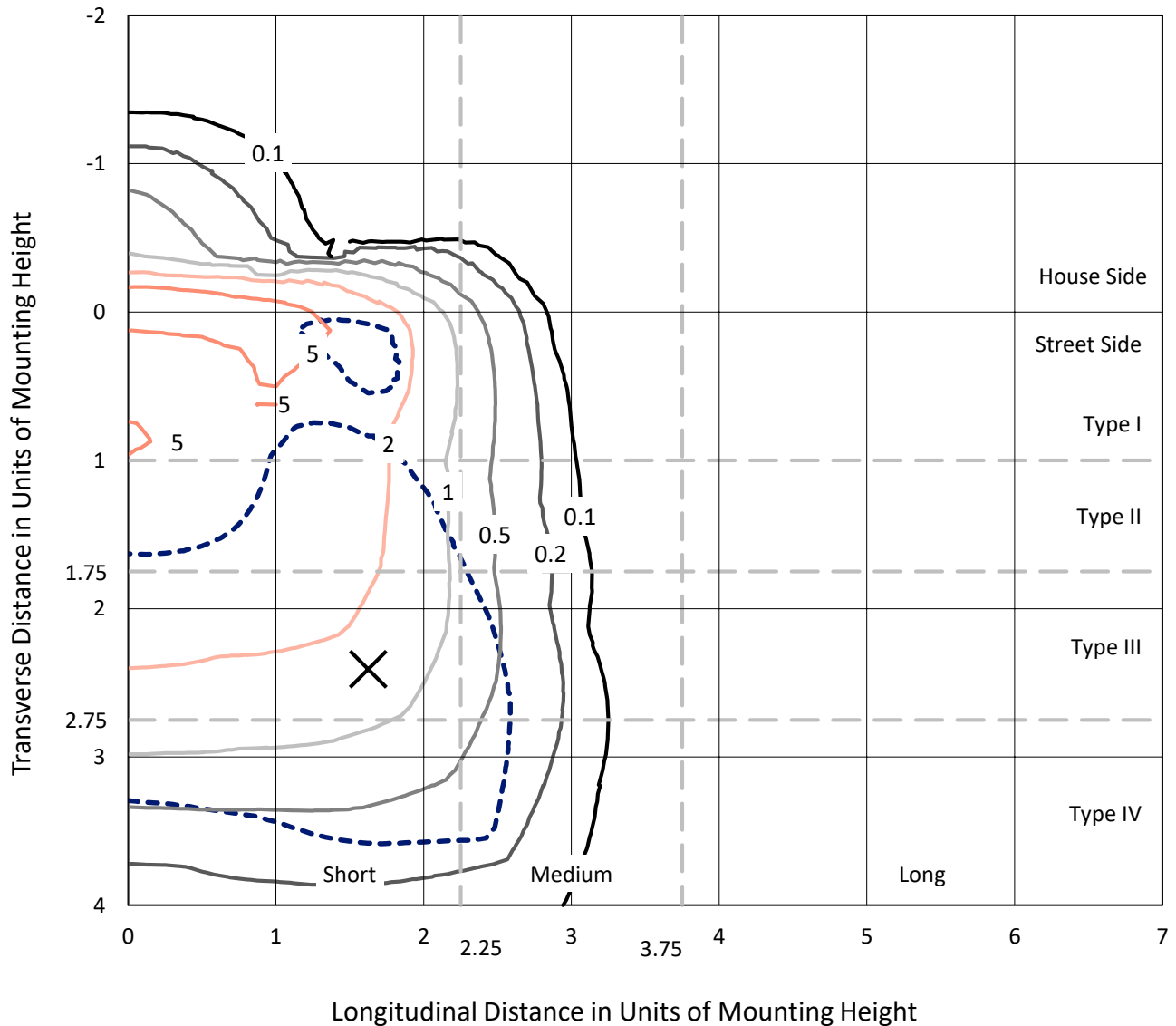
Input Watts (W): 66.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

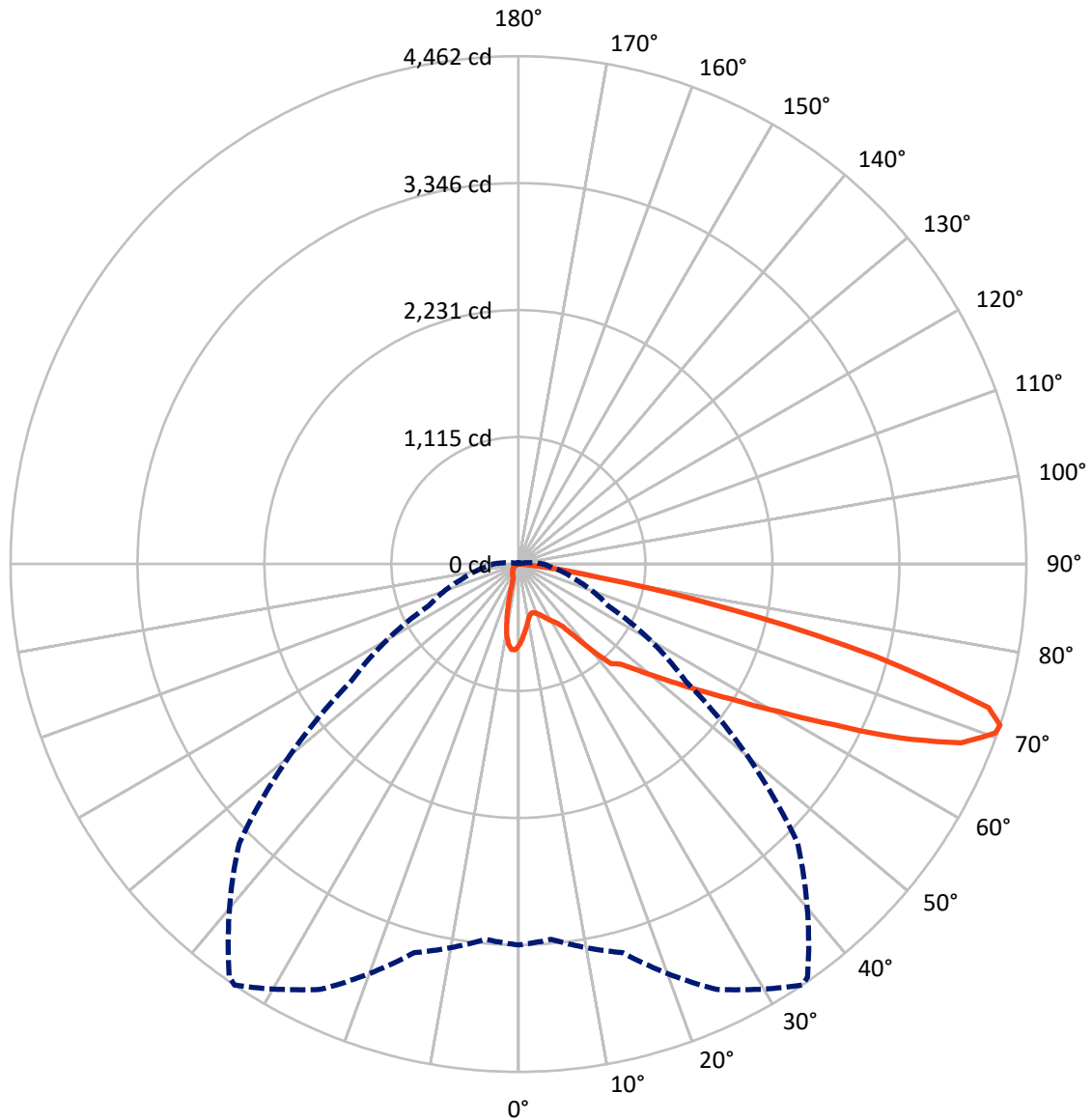
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 7.1 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
House Side	Lumens	510.0	0.0	510.0
	% Fixture	11.1	0.0	11.1
Street Side	Lumens	4102.0	0.0	4102.0
	% Fixture	88.9	0.0	88.9
Total	Lumens	4612.0	0.0	4612.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	63.0	1.4
10°-20°	144.3	3.1
20°-30°	215.5	4.7
30°-40°	359.9	7.8
40°-50°	649.9	14.1
50°-60°	1031.2	22.4
60°-70°	1385.8	30.0
70°-80°	735.3	15.9
80°-90°	27.1	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°	4612.0	100.0
0°-180°	4612.0	100.0



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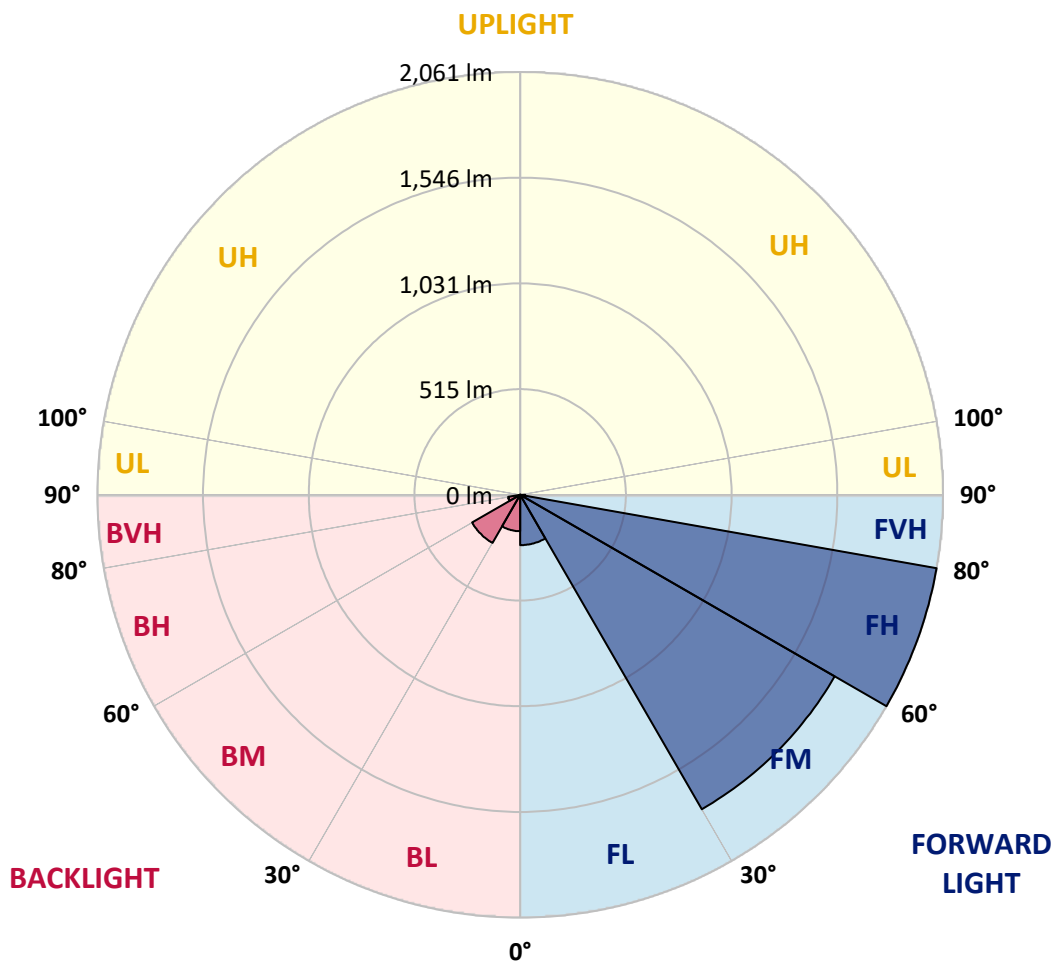
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	245.4	5.3			
FM	(30°-60°)	1770.4	38.4			
FH	(60°-80°)	2061.5	44.7			G2/5000
FVH	(80°-90°)	24.7	0.5			G1/100
BL	(0°-30°)	177.4	3.8	B1/500		
BM	(30°-60°)	270.6	5.9	B1/1000		
BH	(60°-80°)	59.5	1.3	B0/110		G0/110
BVH	(80°-90°)	2.5	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-G2

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	34°	35°	45°	55°	65°	75°	85°
0°	714.6	714.6	714.6	714.6	714.6	714.6	714.6	714.6	714.6	714.6	714.6
2.5°	650.7	642.4	649.8	653.5	656.3	660.0	665.5	675.7	686.8	699.8	707.2
5°	567.4	572.1	574.8	585.0	595.2	597.0	614.6	635.0	660.9	686.8	709.1
7.5°	499.9	499.9	508.2	523.9	540.6	542.4	573.0	599.8	636.8	676.7	712.8
10°	446.2	448.0	454.5	470.2	491.5	496.2	530.4	567.4	613.7	665.5	716.5
12.5°	428.6	427.7	426.7	437.8	455.4	460.0	498.0	542.4	597.0	660.0	725.7
15°	439.7	436.9	430.4	432.3	443.4	448.0	481.3	525.8	586.9	659.1	741.4
17.5°	457.3	453.6	441.5	437.8	449.9	454.5	482.3	521.1	583.2	663.7	760.0
20°	478.6	474.9	456.3	451.7	463.8	467.5	496.2	529.5	585.0	673.0	785.0
22.5°	509.1	504.5	477.6	472.1	484.1	487.8	518.4	548.9	596.1	689.6	819.2
25°	546.1	540.6	506.3	498.9	513.7	517.4	548.0	576.7	614.6	711.8	862.7
27.5°	586.9	580.4	544.3	529.5	546.1	551.7	580.4	611.9	641.5	739.6	920.1
30°	623.9	616.5	581.3	564.6	581.3	584.1	618.3	653.5	685.0	786.8	1004.3
32.5°	726.6	708.1	653.5	605.4	616.5	622.0	663.7	719.2	766.4	843.3	1112.6
35°	880.3	865.5	798.8	715.5	676.7	678.5	732.2	802.5	823.8	909.0	1246.9
37.5°	1028.4	1015.4	957.1	880.3	806.2	809.0	818.3	885.9	910.8	1022.8	1410.7
40°	1190.4	1170.0	1123.7	1050.6	999.7	987.7	942.3	989.5	1044.1	1166.3	1589.3
42.5°	1265.4	1245.9	1197.8	1202.4	1196.9	1175.6	1085.8	1151.5	1212.6	1374.6	1786.5
45°	1389.4	1351.5	1252.4	1259.8	1252.4	1254.3	1276.5	1371.8	1424.6	1594.9	2009.6
47.5°	1504.2	1460.7	1357.0	1349.6	1382.0	1398.7	1518.1	1633.8	1638.4	1786.5	2184.5
50°	1608.8	1577.3	1482.0	1482.9	1542.1	1560.7	1799.5	1905.0	1811.5	1933.7	2321.5
52.5°	1747.6	1703.2	1618.0	1648.6	1741.2	1757.8	2079.9	2142.9	1936.5	2067.0	2428.9
55°	1876.3	1852.2	1789.3	1834.6	1976.3	2019.8	2365.0	2326.2	2024.4	2185.5	2480.8
57.5°	2087.3	2064.2	2047.5	2070.7	2260.4	2315.1	2653.8	2455.8	2092.9	2264.1	2456.7
60°	2439.1	2416.0	2366.0	2387.3	2634.4	2662.2	2880.6	2587.2	2119.7	2286.4	2362.3
62.5°	2873.2	2844.5	2764.0	2862.1	3110.2	3109.3	3115.8	2656.6	2085.5	2220.6	2113.3
65°	3264.8	3225.0	3183.3	3383.3	3685.0	3643.4	3365.7	2665.0	1977.2	1903.1	1634.7
67.5°	3549.9	3534.1	3557.3	3869.2	4194.1	4152.5	3608.2	2550.2	1645.8	1373.7	1009.9
70°	3538.8	3506.4	3653.6	4151.6	4446.8	4412.6	3598.0	2095.7	1097.8	727.6	423.0
71°	3347.2	3310.1	3534.1	4123.8	4461.7	4429.3	3468.4	1793.0	868.3	513.7	278.6
72.5°	2586.3	2698.3	3054.7	3826.7	4319.1	4277.4	3115.8	1372.7	549.8	297.1	139.8
75°	1094.1	1155.2	1813.4	2731.6	3239.8	3218.5	2100.3	634.1	252.7	134.2	53.7
77.5°	281.4	277.7	555.4	1171.9	1886.5	1919.8	968.2	217.5	131.4	95.3	30.5
80°	54.6	59.2	158.3	407.3	720.2	739.6	315.6	95.3	87.9	75.0	15.7
82.5°	5.6	6.5	27.8	125.9	241.6	233.3	69.4	36.1	53.7	50.9	7.4
85°	0.0	0.0	0.9	0.9	0.9	0.9	0.9	3.7	13.0	13.9	1.9
87.5°	0.0	0.0	0.9	0.9	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°	714.6	714.6	714.6	714.6	714.6	714.6	714.6	714.6	714.6	714.6	714.6
2.5°	712.8	721.1	730.3	736.8	743.3	744.2	753.5	751.6	754.4	755.3	754.4
5°	721.1	732.2	749.8	759.0	762.7	756.3	754.4	744.2	740.5	735.9	731.3
7.5°	730.3	744.2	764.6	769.2	756.3	732.2	712.8	687.8	664.6	649.8	651.7
10°	740.5	758.1	774.8	762.7	729.4	682.2	627.6	572.1	523.0	504.5	511.0
12.5°	753.5	774.8	782.2	748.9	684.1	588.7	489.7	405.4	354.5	324.0	320.3
15°	772.9	794.2	785.9	726.6	611.9	462.8	339.7	254.6	205.5	189.8	181.4
17.5°	797.0	817.4	785.9	686.8	509.1	331.4	206.4	154.6	138.8	135.1	136.1
20°	826.6	846.0	782.2	626.7	392.5	203.6	137.9	127.7	127.7	127.7	126.8
22.5°	866.4	876.6	776.6	547.1	270.3	137.9	122.2	121.3	122.2	122.2	122.2
25°	914.5	912.7	766.4	451.7	170.3	117.6	116.6	116.6	117.6	118.5	118.5
27.5°	978.4	959.0	748.9	337.9	120.3	109.2	111.1	112.9	114.8	116.6	116.6
30°	1067.3	1020.1	720.2	228.6	101.8	100.9	104.6	110.2	112.9	114.8	114.8
32.5°	1162.6	1083.0	671.1	146.3	93.5	92.6	96.3	104.6	112.0	113.9	113.9
35°	1283.0	1150.6	598.0	105.5	87.9	86.1	89.8	97.2	108.3	113.9	113.9
37.5°	1409.8	1222.8	491.5	88.9	82.4	80.5	83.3	88.9	101.8	112.0	112.9
40°	1544.9	1286.7	369.3	82.4	76.8	75.9	76.8	82.4	92.6	106.5	109.2
42.5°	1681.0	1340.3	258.3	75.9	72.2	70.3	72.2	75.9	85.2	97.2	99.0
45°	1830.9	1399.6	172.2	70.3	68.5	66.6	68.5	71.3	77.8	84.2	85.2
47.5°	1940.2	1420.9	118.5	63.9	62.9	63.9	64.8	66.6	70.3	71.3	70.3
50°	2012.4	1409.8	85.2	57.4	58.3	61.1	61.1	62.0	62.0	59.2	58.3
52.5°	2065.1	1369.0	65.7	49.1	54.6	57.4	57.4	55.5	53.7	50.0	49.1
55°	2070.7	1277.4	51.8	42.6	49.1	53.7	52.8	49.1	45.4	41.7	41.7
57.5°	2000.3	1138.6	42.6	36.1	42.6	47.2	45.4	41.7	37.0	34.2	34.2
60°	1886.5	996.0	36.1	30.5	35.2	39.8	37.0	34.2	29.6	26.8	26.8
62.5°	1676.4	855.3	29.6	25.0	28.7	31.5	30.5	27.8	23.1	21.3	20.4
65°	1284.8	650.7	22.2	19.4	22.2	25.9	24.1	21.3	18.5	15.7	14.8
67.5°	772.0	391.6	17.6	14.8	17.6	20.4	18.5	15.7	13.0	11.1	11.1
70°	326.8	167.5	13.9	11.1	13.0	15.7	14.8	13.0	10.2	9.3	9.3
71°	222.2	119.4	12.0	10.2	12.0	14.8	13.9	12.0	10.2	9.3	9.3
72.5°	113.9	61.1	10.2	8.3	11.1	13.0	13.0	11.1	9.3	9.3	9.3
75°	40.7	25.9	8.3	7.4	9.3	9.3	10.2	10.2	10.2	10.2	9.3
77.5°	23.1	15.7	7.4	7.4	7.4	8.3	10.2	11.1	12.0	12.0	11.1
80°	13.0	8.3	4.6	5.6	7.4	8.3	10.2	11.1	13.0	13.0	12.0
82.5°	6.5	2.8	0.9	2.8	4.6	7.4	8.3	9.3	11.1	10.2	10.2
85°	0.9	0.0	0.0	0.9	2.8	3.7	5.6	7.4	9.3	9.3	8.3
87.5°	0.0	0.0	0.0	0.0	0.9	1.9	2.8	4.6	6.5	7.4	6.5
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)