

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: P401931

Luminaire Tested: **ENT-SA1F-827-U-T4FT-HSS**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401931
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-827-U-T4FT-HSS
Description: ENTRI LED LUMINAIRE
(1) 80 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: 4054 lumens
Efficiency: N/A
Efficacy: 61.3 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

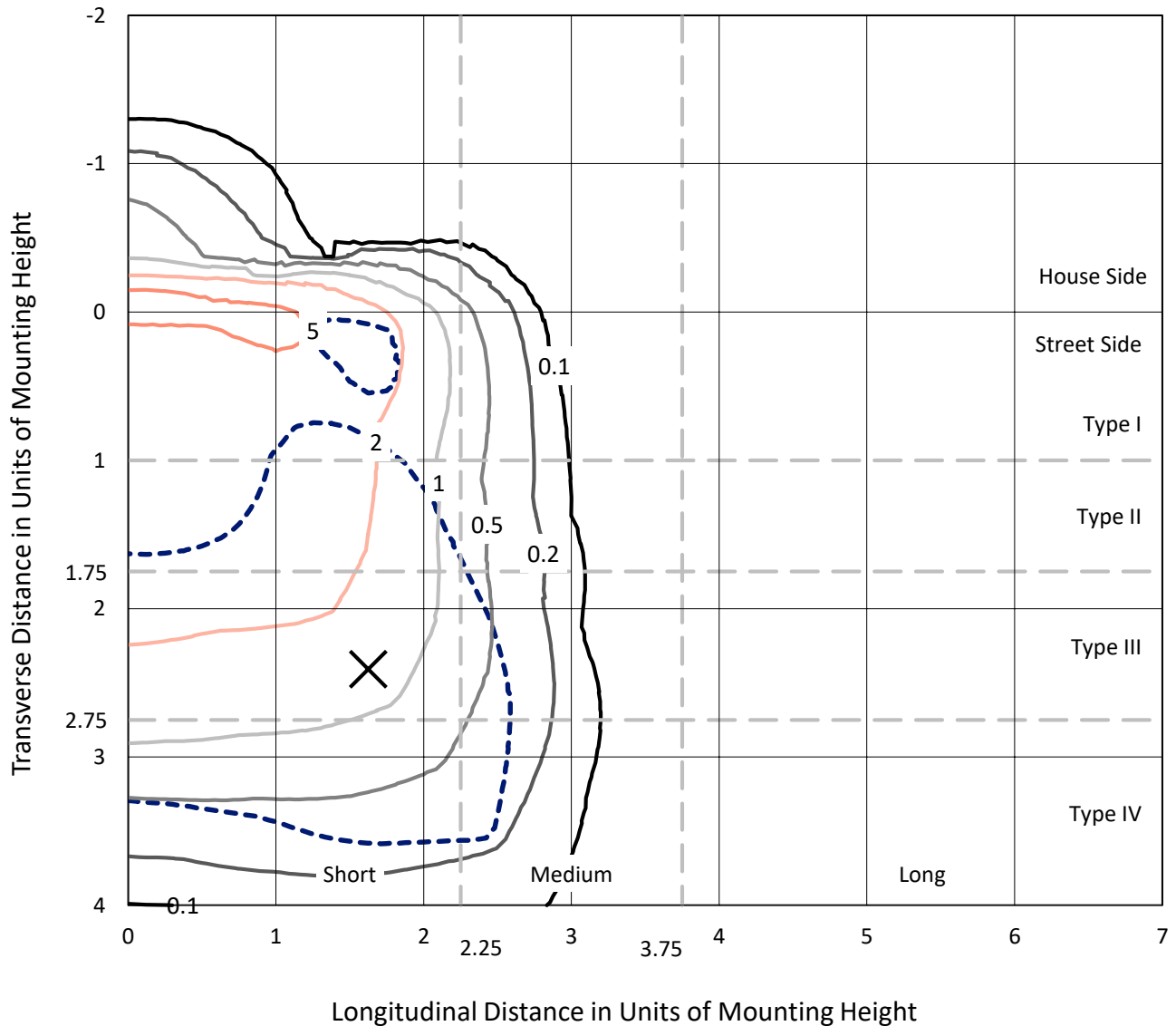
Input Watts (W): 66.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P401931
 CATALOG NUMBER: ENT-SA1F-827-U-T4FT-HSS

Iso-Footcandle Lines of Horizontal Illumination

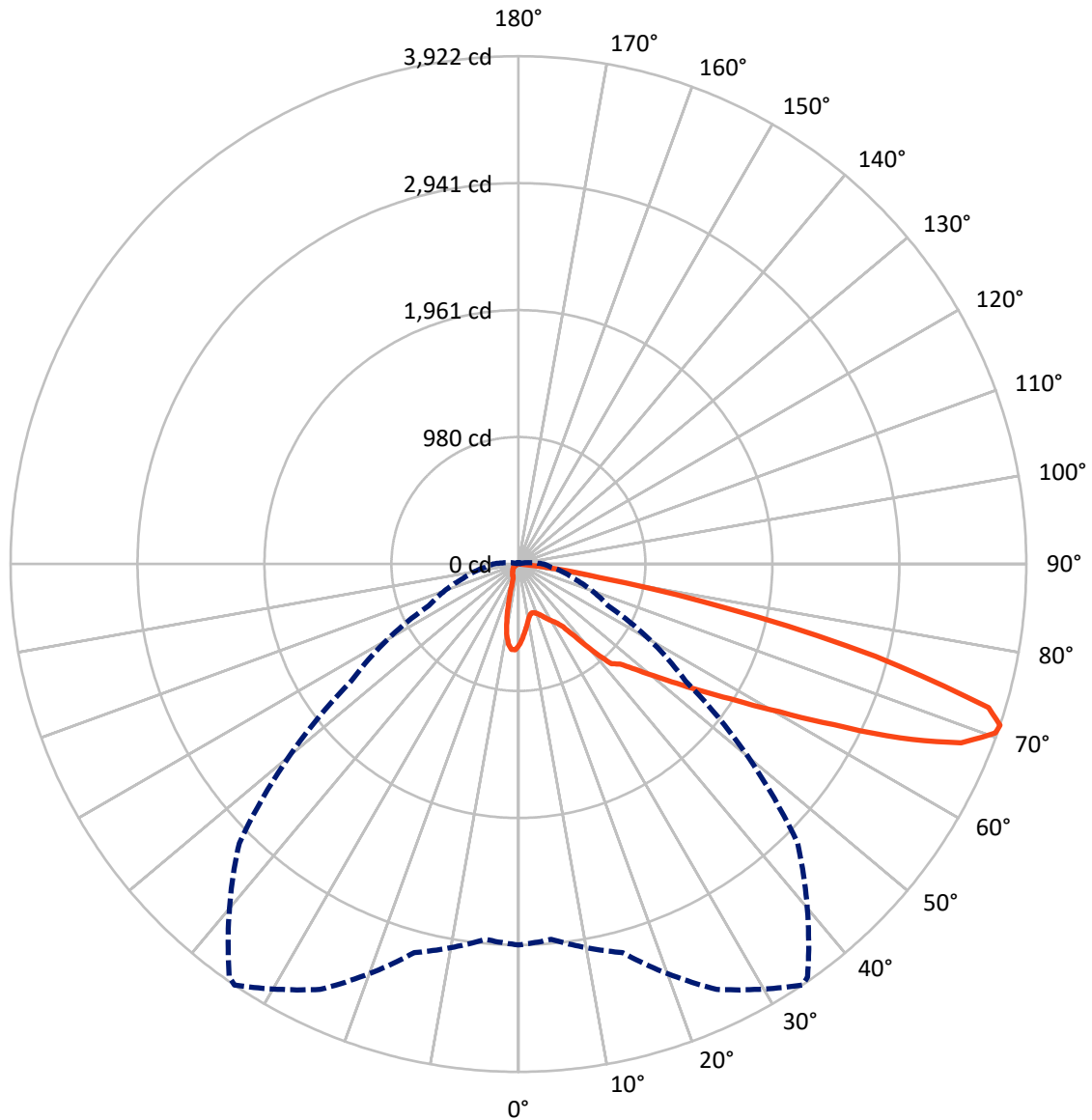
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 6.3 fc
 Type IV - Short - Semi-Cutoff

REPORT NUMBER: P401931
CATALOG NUMBER: ENT-SA1F-827-U-T4FT-HSS

Luminous Intensity Polar Plot



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

REPORT NUMBER: P401931

CATALOG NUMBER: ENT-SA1F-827-U-T4FT-HSS

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	448.3	0.0	448.3
	% Fixture	11.1	0.0	11.1
Street Side	Lumens	3605.7	0.0	3605.7
	% Fixture	88.9	0.0	88.9
Total	Lumens	4054.0	0.0	4054.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	55.4	1.4
10°-20°	126.9	3.1
20°-30°	189.4	4.7
30°-40°	316.3	7.8
40°-50°	571.3	14.1
50°-60°	906.5	22.4
60°-70°	1218.1	30.0
70°-80°	646.3	15.9
80°-90°	23.8	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°	4054.0	100.0
0°-180°	4054.0	100.0



REPORT NUMBER: P401931

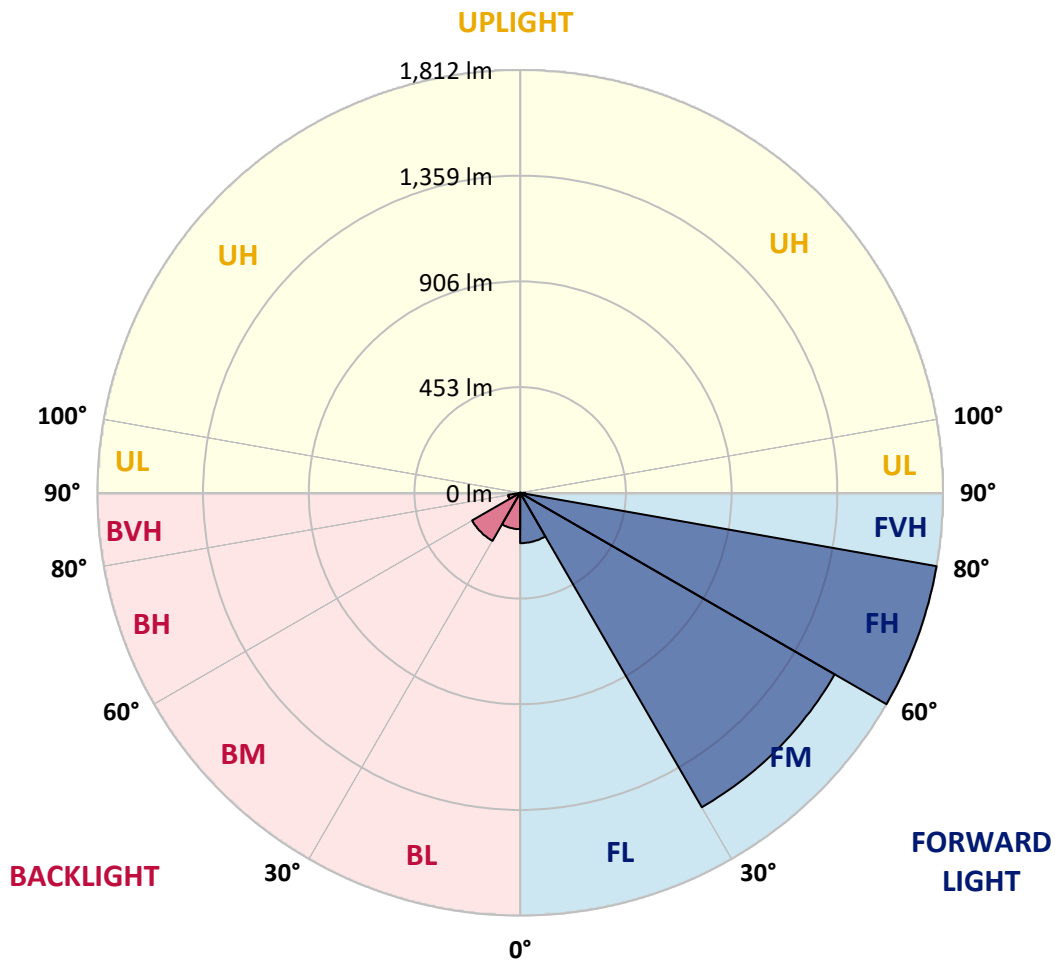
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	215.7	5.3			
FM	(30°-60°)	1556.2	38.4			
FH	(60°-80°)	1812.1	44.7			G2/5000
FVH	(80°-90°)	21.7	0.5			G1/100
BL	(0°-30°)	155.9	3.8	B1/500		
BM	(30°-60°)	237.9	5.9	B1/1000		
BH	(60°-80°)	52.3	1.3	B0/110		G0/110
BVH	(80°-90°)	2.2	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





REPORT NUMBER: P401931

CATALOG NUMBER: ENT-SA1F-827-U-T4FT-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	34°	35°	45°	55°	65°	75°	85°
0°	628.1	628.1	628.1	628.1	628.1	628.1	628.1	628.1	628.1	628.1	628.1
2.5°	572.0	564.7	571.2	574.4	576.9	580.1	585.0	594.0	603.7	615.1	621.6
5°	498.8	502.8	505.3	514.2	523.2	524.8	540.3	558.2	581.0	603.7	623.3
7.5°	439.4	439.4	446.7	460.5	475.2	476.8	503.7	527.3	559.8	594.8	626.5
10°	392.2	393.8	399.5	413.3	432.1	436.1	466.2	498.8	539.5	585.0	629.8
12.5°	376.7	375.9	375.1	384.9	400.3	404.4	437.7	476.8	524.8	580.1	637.9
15°	386.5	384.0	378.4	380.0	389.7	393.8	423.1	462.2	515.9	579.3	651.7
17.5°	401.9	398.7	388.1	384.9	395.4	399.5	423.9	458.1	512.6	583.4	668.0
20°	420.7	417.4	401.1	397.1	407.6	410.9	436.1	465.4	514.2	591.5	690.0
22.5°	447.5	443.4	419.8	415.0	425.5	428.8	455.6	482.5	524.0	606.2	720.1
25°	480.1	475.2	445.1	438.6	451.6	454.8	481.7	506.9	540.3	625.7	758.3
27.5°	515.9	510.2	478.4	465.4	480.1	484.9	510.2	537.8	563.9	650.1	808.8
30°	548.4	541.9	511.0	496.3	511.0	513.4	543.5	574.4	602.1	691.6	882.8
32.5°	638.7	622.4	574.4	532.1	541.9	546.8	583.4	632.2	673.7	741.2	978.0
35°	773.8	760.8	702.2	629.0	594.8	596.4	643.6	705.4	724.2	799.0	1096.0
37.5°	904.0	892.6	841.3	773.8	708.7	711.1	719.3	778.7	800.6	899.1	1240.0
40°	1046.4	1028.5	987.8	923.5	878.8	868.2	828.3	869.8	917.8	1025.2	1397.1
42.5°	1112.3	1095.2	1052.9	1056.9	1052.1	1033.3	954.4	1012.2	1065.9	1208.3	1570.4
45°	1221.3	1187.9	1100.9	1107.4	1100.9	1102.5	1122.0	1205.8	1252.2	1401.9	1766.5
47.5°	1322.2	1284.0	1192.8	1186.3	1214.8	1229.4	1334.4	1436.1	1440.2	1570.4	1920.2
50°	1414.1	1386.5	1302.7	1303.5	1355.6	1371.8	1581.8	1674.5	1592.3	1699.7	2040.7
52.5°	1536.2	1497.1	1422.3	1449.1	1530.5	1545.1	1828.3	1883.6	1702.2	1816.9	2135.0
55°	1649.3	1628.1	1572.8	1612.7	1737.2	1775.4	2078.9	2044.7	1779.5	1921.1	2180.6
57.5°	1834.8	1814.5	1799.8	1820.2	1987.0	2035.0	2332.8	2158.6	1839.7	1990.2	2159.5
60°	2144.0	2123.7	2079.7	2098.4	2315.7	2340.1	2532.1	2274.2	1863.3	2009.7	2076.5
62.5°	2525.6	2500.4	2429.6	2515.8	2733.9	2733.1	2738.8	2335.2	1833.2	1952.0	1857.6
65°	2869.8	2834.8	2798.2	2973.9	3239.2	3202.6	2958.5	2342.5	1738.0	1672.9	1436.9
67.5°	3120.4	3106.6	3126.9	3401.1	3686.7	3650.1	3171.6	2241.6	1446.7	1207.5	887.7
70°	3110.6	3082.1	3211.5	3649.3	3908.8	3878.7	3162.7	1842.1	965.0	639.5	371.8
71°	2942.2	2909.6	3106.6	3624.9	3921.8	3893.4	3048.8	1576.1	763.2	451.6	244.9
72.5°	2273.4	2371.8	2685.1	3363.7	3796.5	3759.9	2738.8	1206.7	483.3	261.2	122.9
75°	961.7	1015.4	1594.0	2401.1	2847.8	2829.1	1846.2	557.4	222.1	118.0	47.2
77.5°	247.4	244.1	488.2	1030.1	1658.2	1687.5	851.1	191.2	115.5	83.8	26.9
80°	48.0	52.1	139.1	358.0	633.0	650.1	277.5	83.8	77.3	65.9	13.8
82.5°	4.9	5.7	24.4	110.7	212.4	205.0	61.0	31.7	47.2	44.8	6.5
85°	0.0	0.0	0.8	0.8	0.8	0.8	0.8	3.3	11.4	12.2	1.6
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



REPORT NUMBER: P401931

CATALOG NUMBER: ENT-SA1F-827-U-T4FT-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	628.1	628.1	628.1	628.1	628.1	628.1	628.1	628.1	628.1	628.1	628.1
2.5°	626.5	633.8	642.0	647.7	653.4	654.2	662.3	660.7	663.1	663.9	663.1
5°	633.8	643.6	659.1	667.2	670.5	664.8	663.1	654.2	650.9	646.9	642.8
7.5°	642.0	654.2	672.1	676.2	664.8	643.6	626.5	604.5	584.2	571.2	572.8
10°	650.9	666.4	681.0	670.5	641.2	599.7	551.7	502.8	459.7	443.4	449.1
12.5°	662.3	681.0	687.5	658.3	601.3	517.5	430.4	356.4	311.6	284.8	281.5
15°	679.4	698.1	690.8	638.7	537.8	406.8	298.6	223.8	180.6	166.8	159.5
17.5°	700.6	718.5	690.8	603.7	447.5	291.3	181.4	135.9	122.0	118.8	119.6
20°	726.6	743.7	687.5	550.8	345.0	179.0	121.2	112.3	112.3	112.3	111.5
22.5°	761.6	770.5	682.7	480.9	237.6	121.2	107.4	106.6	107.4	107.4	107.4
25°	803.9	802.3	673.7	397.1	149.7	103.3	102.5	102.5	103.3	104.1	104.1
27.5°	860.0	843.0	658.3	297.0	105.8	96.0	97.6	99.3	100.9	102.5	102.5
30°	938.2	896.7	633.0	201.0	89.5	88.7	91.9	96.8	99.3	100.9	100.9
32.5°	1022.0	952.0	589.9	128.6	82.2	81.4	84.6	91.9	98.5	100.1	100.1
35°	1127.7	1011.4	525.6	92.8	77.3	75.7	78.9	85.4	95.2	100.1	100.1
37.5°	1239.2	1074.8	432.1	78.1	72.4	70.8	73.2	78.1	89.5	98.5	99.3
40°	1358.0	1131.0	324.7	72.4	67.5	66.7	67.5	72.4	81.4	93.6	96.0
42.5°	1477.6	1178.2	227.0	66.7	63.5	61.8	63.5	66.7	74.9	85.4	87.1
45°	1609.4	1230.3	151.3	61.8	60.2	58.6	60.2	62.7	68.3	74.0	74.9
47.5°	1705.4	1249.0	104.1	56.1	55.3	56.1	57.0	58.6	61.8	62.7	61.8
50°	1768.9	1239.2	74.9	50.4	51.3	53.7	53.7	54.5	54.5	52.1	51.3
52.5°	1815.3	1203.4	57.8	43.1	48.0	50.4	50.4	48.8	47.2	43.9	43.1
55°	1820.2	1122.9	45.6	37.4	43.1	47.2	46.4	43.1	39.9	36.6	36.6
57.5°	1758.3	1000.8	37.4	31.7	37.4	41.5	39.9	36.6	32.5	30.1	30.1
60°	1658.2	875.5	31.7	26.9	30.9	35.0	32.5	30.1	26.0	23.6	23.6
62.5°	1473.5	751.8	26.0	22.0	25.2	27.7	26.9	24.4	20.3	18.7	17.9
65°	1129.4	572.0	19.5	17.1	19.5	22.8	21.2	18.7	16.3	13.8	13.0
67.5°	678.6	344.2	15.5	13.0	15.5	17.9	16.3	13.8	11.4	9.8	9.8
70°	287.2	147.3	12.2	9.8	11.4	13.8	13.0	11.4	9.0	8.1	8.1
71°	195.3	105.0	10.6	9.0	10.6	13.0	12.2	10.6	9.0	8.1	8.1
72.5°	100.1	53.7	9.0	7.3	9.8	11.4	11.4	9.8	8.1	8.1	8.1
75°	35.8	22.8	7.3	6.5	8.1	8.1	9.0	9.0	9.0	9.0	8.1
77.5°	20.3	13.8	6.5	6.5	6.5	7.3	9.0	9.8	10.6	10.6	9.8
80°	11.4	7.3	4.1	4.9	6.5	7.3	9.0	9.8	11.4	11.4	10.6
82.5°	5.7	2.4	0.8	2.4	4.1	6.5	7.3	8.1	9.8	9.0	9.0
85°	0.8	0.0	0.0	0.8	2.4	3.3	4.9	6.5	8.1	8.1	7.3
87.5°	0.0	0.0	0.0	0.0	0.8	1.6	2.4	4.1	5.7	6.5	5.7
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)