

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: P401514

Luminaire Tested: **ENT-SA1D-740-U-T4FT-HSS**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401514
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-740-U-T4FT-HSS
Description: ENTRI LED LUMINAIRE
(1) 70 CRI, 4000K, 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: 3999 lumens
Efficiency: N/A
Efficacy: 92.8 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 - G1

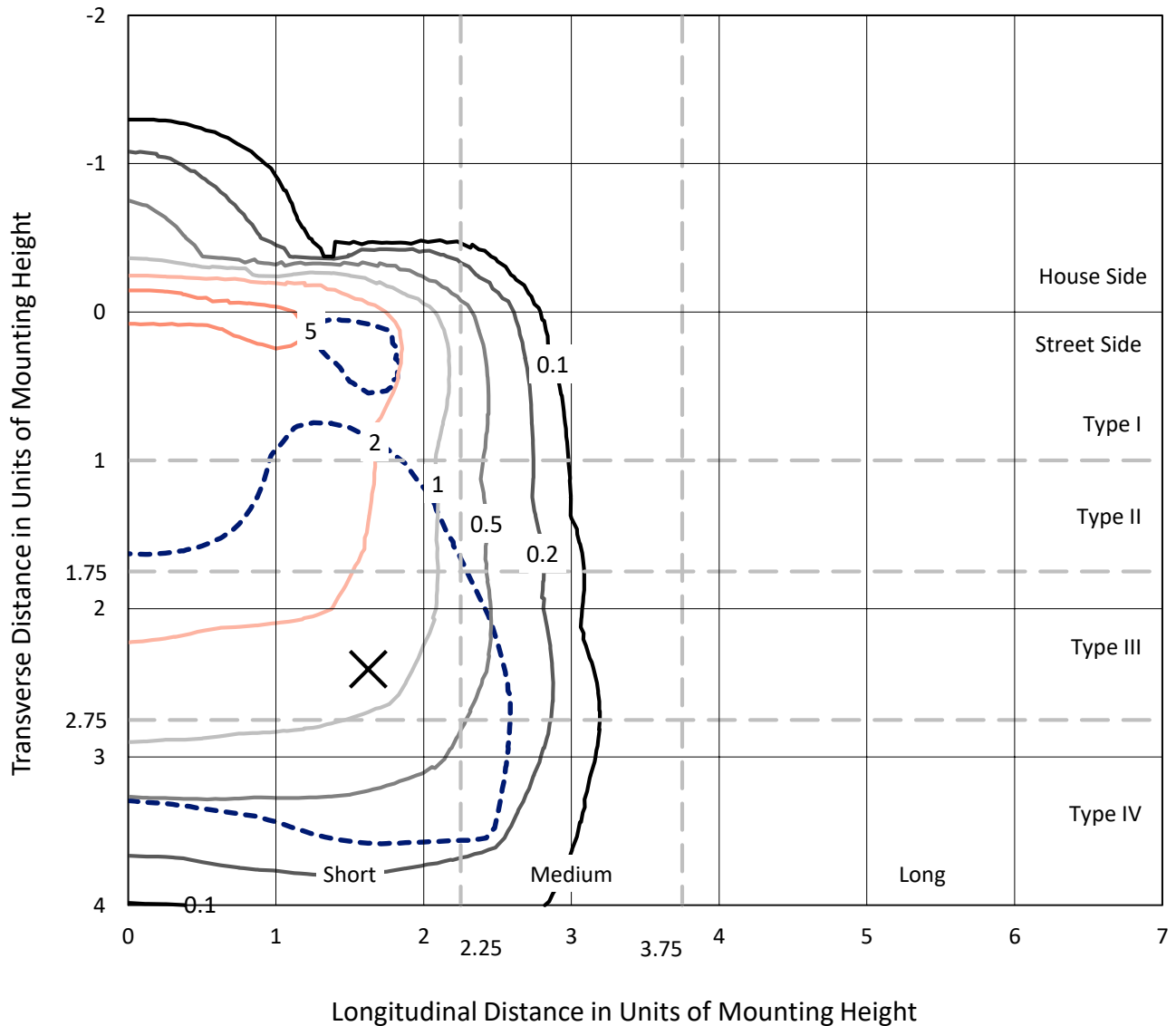
Input Watts (W): 43.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

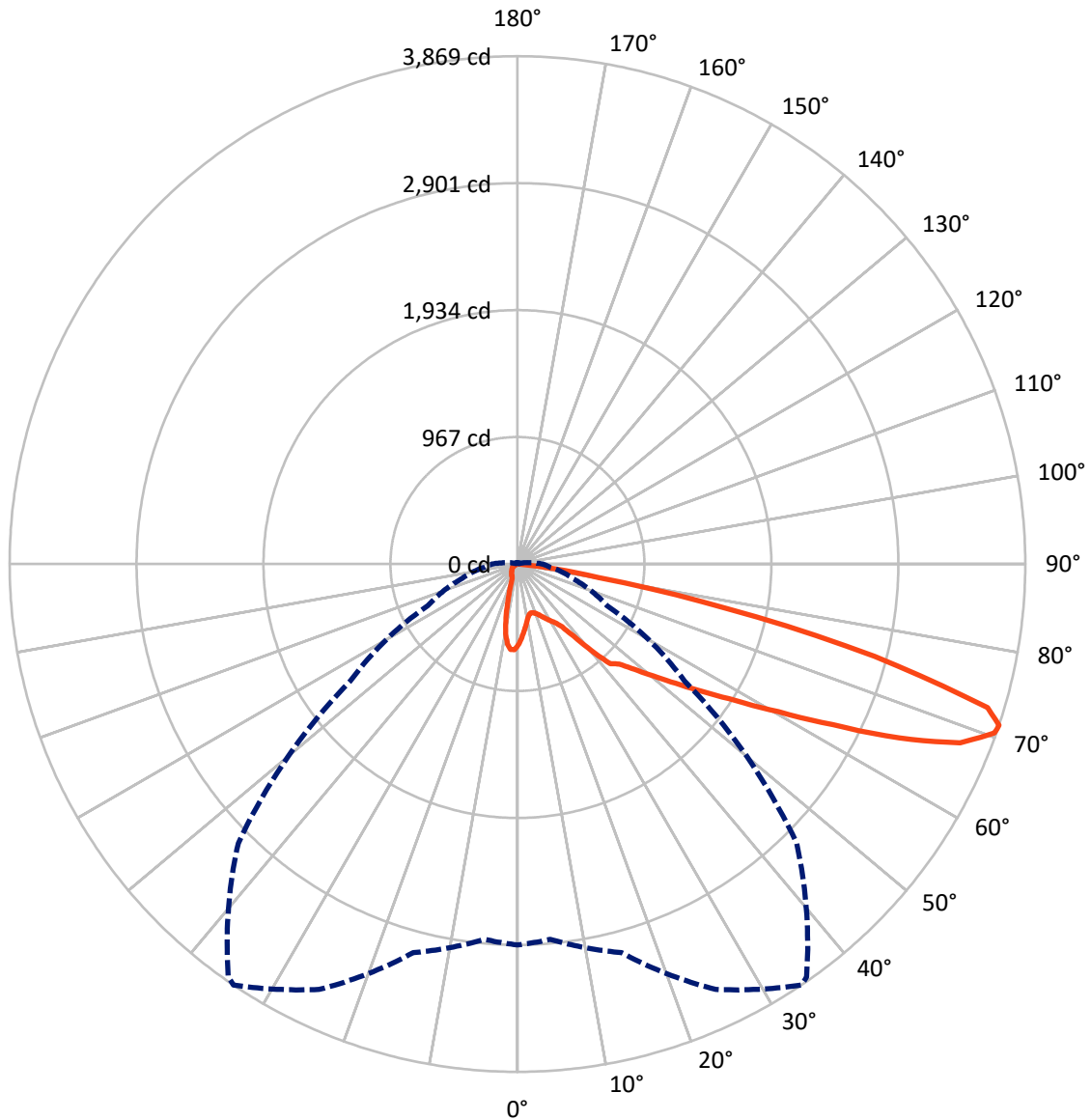
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 6.2 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	442.2	0.0	442.2
	% Fixture	11.1	0.0	11.1
Street Side	Lumens	3556.8	0.0	3556.8
	% Fixture	88.9	0.0	88.9
Total	Lumens	3999.0	0.0	3999.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	54.6	1.4
10°-20°	125.2	3.1
20°-30°	186.8	4.7
30°-40°	312.0	7.8
40°-50°	563.5	14.1
50°-60°	894.2	22.4
60°-70°	1201.6	30.0
70°-80°	637.5	15.9
80°-90°	23.5	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°	3999.0	100.0
0°-180°	3999.0	100.0



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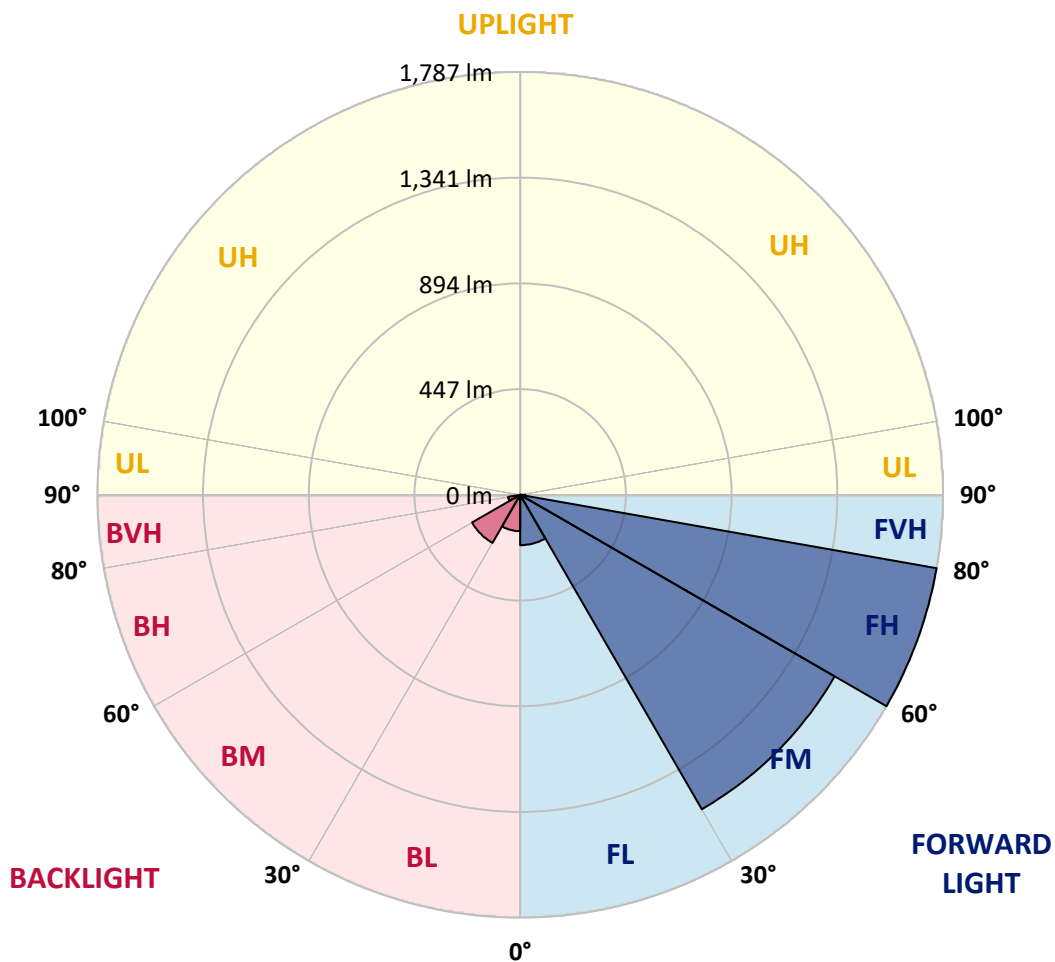
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	212.8	5.3			
FM	(30°-60°)	1535.1	38.4			
FH	(60°-80°)	1787.5	44.7			G1/1800
FVH	(80°-90°)	21.4	0.5			G1/100
BL	(0°-30°)	153.8	3.8	B1/500		
BM	(30°-60°)	234.6	5.9	B1/1000		
BH	(60°-80°)	51.6	1.3	B0/110		G0/110
BVH	(80°-90°)	2.1	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°	619.6	619.6	619.6	619.6	619.6	619.6	619.6	619.6	619.6	619.6	619.6
2.5°	564.2	557.0	563.4	566.7	569.1	572.3	577.1	585.9	595.5	606.8	613.2
5°	492.0	496.0	498.4	507.3	516.1	517.7	532.9	550.6	573.1	595.5	614.8
7.5°	433.4	433.4	440.6	454.3	468.7	470.3	496.8	520.1	552.2	586.7	618.0
10°	386.9	388.5	394.1	407.7	426.2	430.2	459.9	492.0	532.1	577.1	621.2
12.5°	371.6	370.8	370.0	379.6	394.9	398.9	431.8	470.3	517.7	572.3	629.3
15°	381.2	378.8	373.2	374.8	384.5	388.5	417.4	455.9	508.9	571.5	642.9
17.5°	396.5	393.3	382.9	379.6	390.1	394.1	418.2	451.9	505.7	575.5	659.0
20°	415.0	411.7	395.7	391.7	402.1	405.3	430.2	459.1	507.3	583.5	680.6
22.5°	441.4	437.4	414.2	409.3	419.8	423.0	449.5	476.0	516.9	598.0	710.3
25°	473.5	468.7	439.0	432.6	445.5	448.7	475.2	500.0	532.9	617.2	748.0
27.5°	508.9	503.2	471.9	459.1	473.5	478.4	503.2	530.5	556.2	641.3	797.8
30°	541.0	534.5	504.0	489.6	504.0	506.5	536.2	566.7	593.9	682.2	870.8
32.5°	630.1	614.0	566.7	524.9	534.5	539.4	575.5	623.6	664.6	731.2	964.8
35°	763.3	750.5	692.7	620.4	586.7	588.3	634.9	695.9	714.3	788.2	1081.1
37.5°	891.7	880.5	829.9	763.3	699.1	701.5	709.5	768.1	789.8	886.9	1223.2
40°	1032.2	1014.5	974.4	911.0	866.8	856.4	817.1	858.0	905.4	1011.3	1378.1
42.5°	1097.2	1080.3	1038.6	1042.6	1037.8	1019.3	941.5	998.5	1051.4	1191.9	1549.1
45°	1204.7	1171.8	1085.9	1092.4	1085.9	1087.6	1106.8	1189.5	1235.2	1382.9	1742.5
47.5°	1304.3	1266.5	1176.6	1170.2	1198.3	1212.8	1316.3	1416.6	1420.6	1549.1	1894.2
50°	1395.0	1367.7	1285.0	1285.8	1337.2	1353.2	1560.3	1651.8	1570.7	1676.7	2013.0
52.5°	1515.3	1476.8	1403.0	1429.5	1509.7	1524.2	1803.5	1858.1	1679.1	1792.3	2106.1
55°	1626.9	1606.0	1551.5	1590.8	1713.6	1751.3	2050.7	2017.0	1755.3	1895.0	2151.0
57.5°	1809.9	1789.8	1775.4	1795.5	1960.0	2007.4	2301.1	2129.4	1814.7	1963.2	2130.2
60°	2114.9	2094.8	2051.5	2070.0	2284.3	2308.3	2497.8	2243.3	1838.0	1982.5	2048.3
62.5°	2491.3	2466.5	2396.6	2481.7	2696.8	2696.0	2701.6	2303.5	1808.3	1925.5	1832.4
65°	2830.8	2796.3	2760.2	2933.6	3195.2	3159.1	2918.3	2310.7	1714.4	1650.2	1417.4
67.5°	3078.1	3064.4	3084.5	3355.0	3636.7	3600.6	3128.6	2211.2	1427.1	1191.1	875.7
70°	3068.4	3040.3	3167.9	3599.8	3855.8	3826.1	3119.8	1817.1	951.9	630.9	366.8
71°	2902.3	2870.2	3064.4	3575.7	3868.6	3840.5	3007.4	1554.7	752.9	445.5	241.6
72.5°	2242.5	2339.6	2648.7	3318.0	3745.0	3708.9	2701.6	1190.3	476.8	257.6	121.2
75°	948.7	1001.7	1572.3	2368.5	2809.2	2790.7	1821.1	549.8	219.1	116.4	46.6
77.5°	244.0	240.8	481.6	1016.1	1635.7	1664.6	839.5	188.6	114.0	82.7	26.5
80°	47.4	51.4	137.2	353.2	624.4	641.3	273.7	82.7	76.2	65.0	13.6
82.5°	4.8	5.6	24.1	109.2	209.5	202.3	60.2	31.3	46.6	44.1	6.4
85°	0.0	0.0	0.8	0.8	0.8	0.8	0.8	3.2	11.2	12.0	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



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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	619.6	619.6	619.6	619.6	619.6	619.6	619.6	619.6	619.6	619.6	619.6
2.5°	618.0	625.2	633.3	638.9	644.5	645.3	653.3	651.7	654.1	654.9	654.1
5°	625.2	634.9	650.1	658.1	661.4	655.7	654.1	645.3	642.1	638.1	634.1
7.5°	633.3	645.3	663.0	667.0	655.7	634.9	618.0	596.3	576.3	563.4	565.0
10°	642.1	657.3	671.8	661.4	632.5	591.5	544.2	496.0	453.5	437.4	443.0
12.5°	653.3	671.8	678.2	649.3	593.1	510.5	424.6	351.5	307.4	280.9	277.7
15°	670.2	688.6	681.4	630.1	530.5	401.3	294.6	220.7	178.2	164.5	157.3
17.5°	691.1	708.7	681.4	595.5	441.4	287.3	179.0	134.0	120.4	117.2	118.0
20°	716.7	733.6	678.2	543.4	340.3	176.6	119.6	110.8	110.8	110.8	110.0
22.5°	751.3	760.1	673.4	474.3	234.4	119.6	105.9	105.1	105.9	105.9	105.9
25°	793.0	791.4	664.6	391.7	147.7	101.9	101.1	101.1	101.9	102.7	102.7
27.5°	848.4	831.5	649.3	293.0	104.3	94.7	96.3	97.9	99.5	101.1	101.1
30°	925.4	884.5	624.4	198.2	88.3	87.5	90.7	95.5	97.9	99.5	99.5
32.5°	1008.1	939.1	581.9	126.8	81.1	80.3	83.5	90.7	97.1	98.7	98.7
35°	1112.4	997.7	518.5	91.5	76.2	74.6	77.9	84.3	93.9	98.7	98.7
37.5°	1222.4	1060.3	426.2	77.1	71.4	69.8	72.2	77.1	88.3	97.1	97.9
40°	1339.6	1115.6	320.2	71.4	66.6	65.8	66.6	71.4	80.3	92.3	94.7
42.5°	1457.6	1162.2	223.9	65.8	62.6	61.0	62.6	65.8	73.8	84.3	85.9
45°	1587.6	1213.6	149.3	61.0	59.4	57.8	59.4	61.8	67.4	73.0	73.8
47.5°	1682.3	1232.0	102.7	55.4	54.6	55.4	56.2	57.8	61.0	61.8	61.0
50°	1744.9	1222.4	73.8	49.8	50.6	53.0	53.0	53.8	53.8	51.4	50.6
52.5°	1790.6	1187.1	57.0	42.5	47.4	49.8	49.8	48.2	46.6	43.3	42.5
55°	1795.5	1107.6	44.9	36.9	42.5	46.6	45.7	42.5	39.3	36.1	36.1
57.5°	1734.5	987.2	36.9	31.3	36.9	40.9	39.3	36.1	32.1	29.7	29.7
60°	1635.7	863.6	31.3	26.5	30.5	34.5	32.1	29.7	25.7	23.3	23.3
62.5°	1453.5	741.6	25.7	21.7	24.9	27.3	26.5	24.1	20.1	18.5	17.7
65°	1114.0	564.2	19.3	16.9	19.3	22.5	20.9	18.5	16.1	13.6	12.8
67.5°	669.4	339.5	15.2	12.8	15.2	17.7	16.1	13.6	11.2	9.6	9.6
70°	283.3	145.3	12.0	9.6	11.2	13.6	12.8	11.2	8.8	8.0	8.0
71°	192.6	103.5	10.4	8.8	10.4	12.8	12.0	10.4	8.8	8.0	8.0
72.5°	98.7	53.0	8.8	7.2	9.6	11.2	11.2	9.6	8.0	8.0	8.0
75°	35.3	22.5	7.2	6.4	8.0	8.0	8.8	8.8	8.8	8.8	8.0
77.5°	20.1	13.6	6.4	6.4	6.4	7.2	8.8	9.6	10.4	10.4	9.6
80°	11.2	7.2	4.0	4.8	6.4	7.2	8.8	9.6	11.2	11.2	10.4
82.5°	5.6	2.4	0.8	2.4	4.0	6.4	7.2	8.0	9.6	8.8	8.8
85°	0.8	0.0	0.0	0.8	2.4	3.2	4.8	6.4	8.0	8.0	7.2
87.5°	0.0	0.0	0.0	0.0	0.8	1.6	2.4	4.0	5.6	6.4	5.6
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)