

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: P401585

Luminaire Tested: **ENT-SA1D-830-U-T2-HSS**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401585
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-12)
Test Lab: INNOVATION CENTER
Issue Date: 5/20/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENT-SA1D-830-U-T2-HSS
Description: ENTRI LED LUMINAIRE
(1) 80 CRI, 3000K, 800mA LIGHTSQUARE WITH 16 LEDS AND TYPE II OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3395 lumens
Efficiency: N/A
Efficacy: 78.8 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type II - Medium - Semi-Cutoff
BUG Rating: B0 - 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

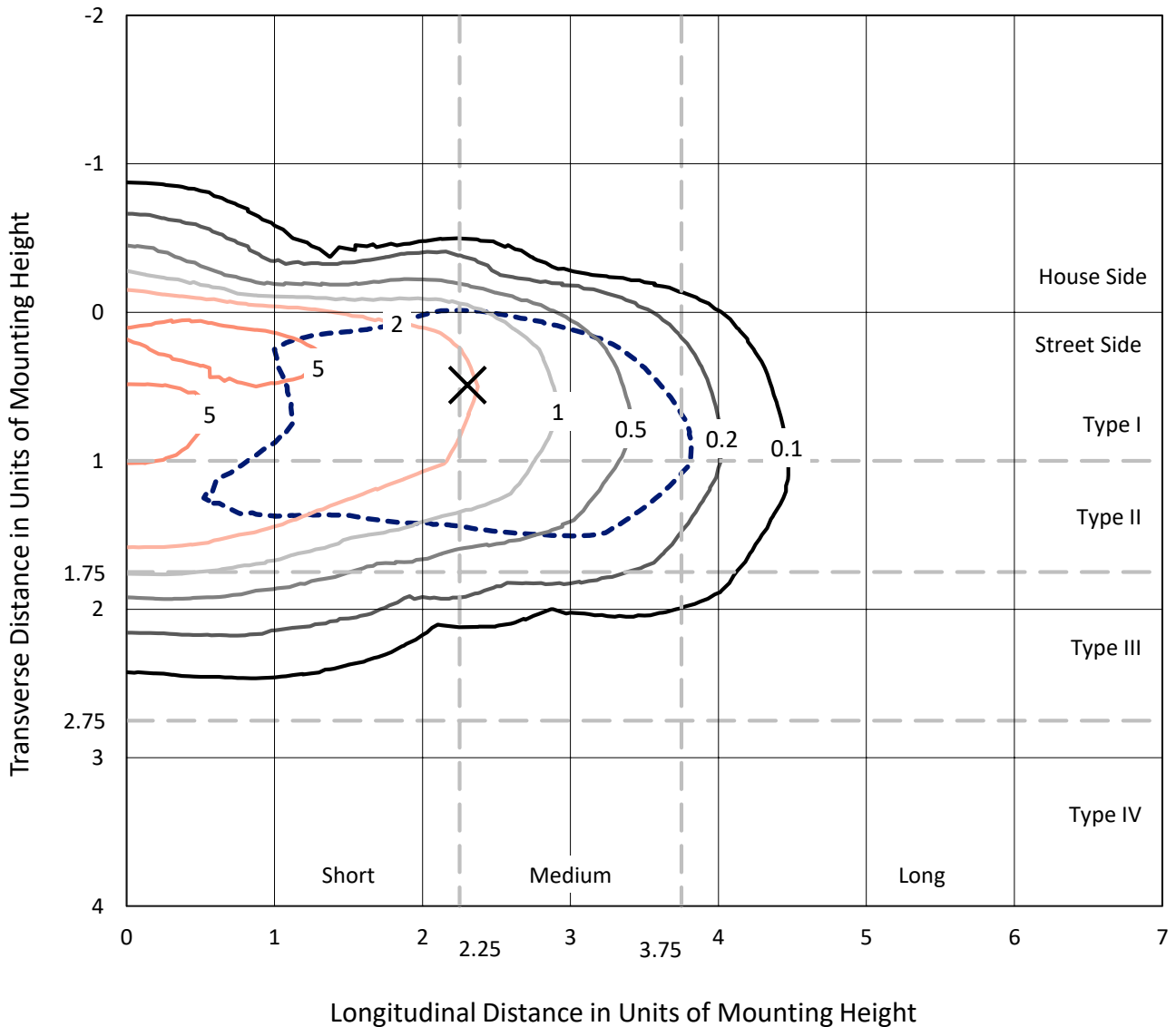


REPORT NUMBER: P401585

CATALOG NUMBER: ENT-SA1D-830-U-T2-HSS

Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

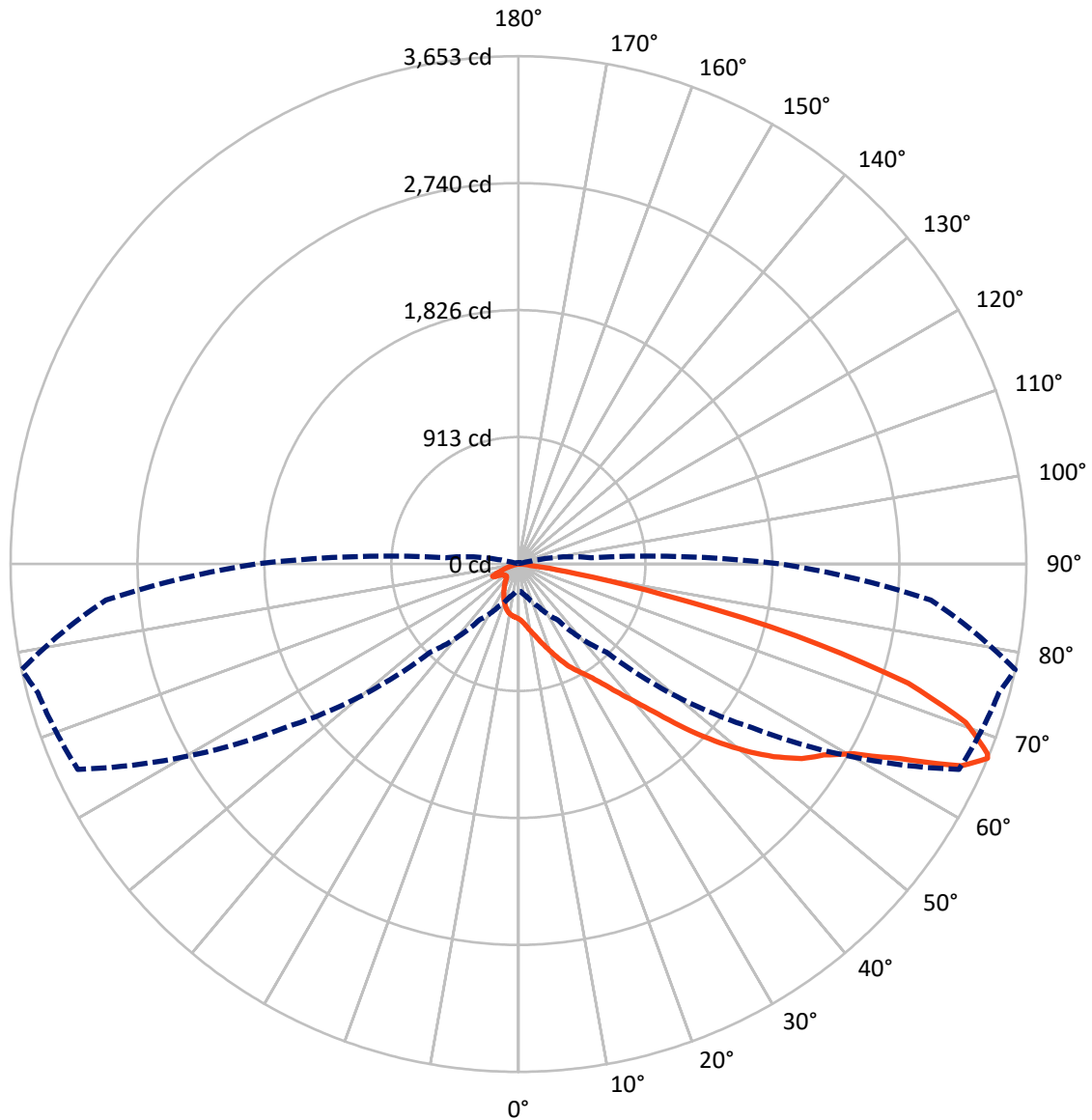


Based on 10 foot mounting height. Maximum calculated value = 6.2 fc
 Type II - Medium - Semi-Cutoff

REPORT NUMBER: P401585

CATALOG NUMBER: ENT-SA1D-830-U-T2-HSS

Luminous Intensity Polar Plot



— Vertical Plane Through 78-Deg Lateral - - - Horizontal Cone Through 67-Deg Vertical

REPORT NUMBER: P401585

CATALOG NUMBER: ENT-SA1D-830-U-T2-HSS

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	239.5	0.0	239.5
	% Fixture	7.1	0.0	7.1
Street Side	Lumens	3155.5	0.0	3155.5
	% Fixture	92.9	0.0	92.9
Total	Lumens	3395.0	0.0	3395.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	38.0	1.1
10°-20°	108.8	3.2
20°-30°	192.3	5.7
30°-40°	339.0	10.0
40°-50°	582.7	17.2
50°-60°	877.1	25.8
60°-70°	863.2	25.4
70°-80°	377.2	11.1
80°-90°	16.7	0.5
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°	3395.0	100.0
0°-180°	3395.0	100.0



REPORT NUMBER: P401585

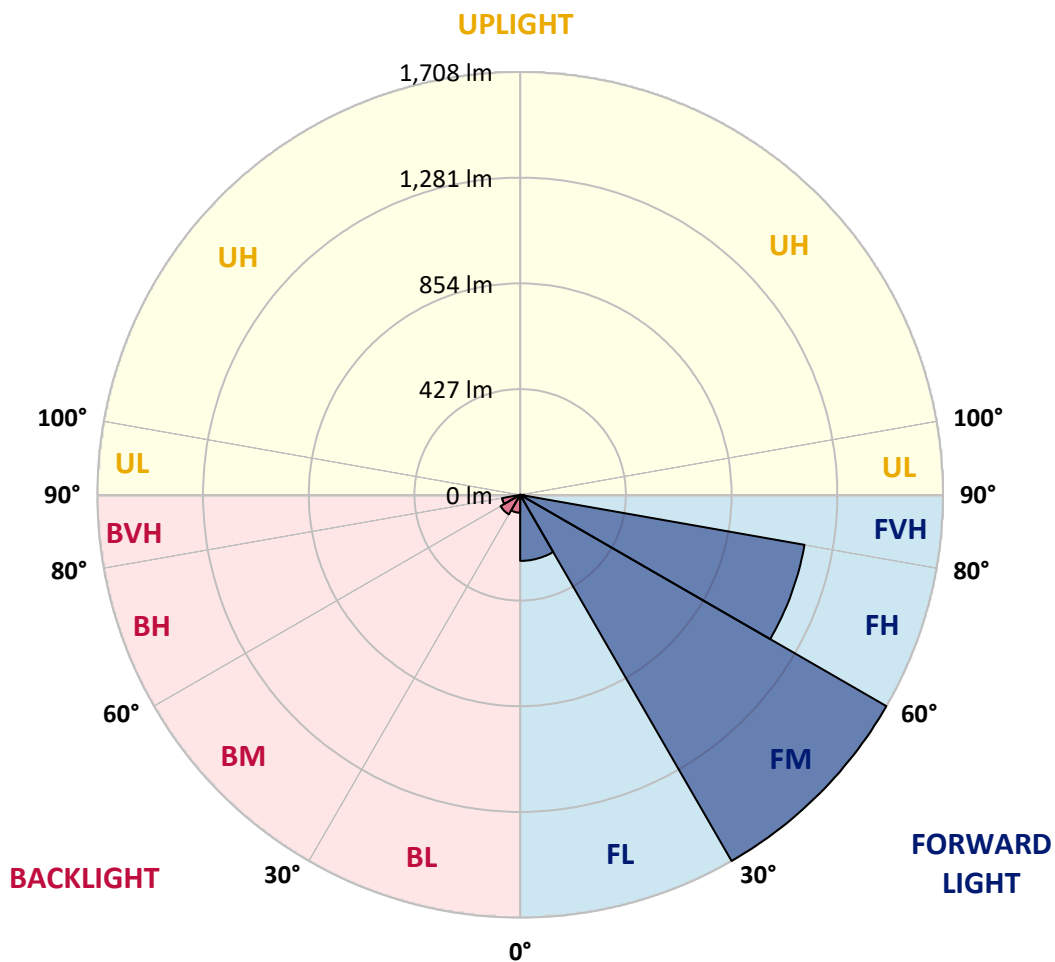
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	266.7	7.9			
FM (30°-60°)	1707.7	50.3			
FH (60°-80°)	1166.0	34.3			G1/1800
FVH (80°-90°)	15.0	0.4			G1/100
BL (0°-30°)	72.4	2.1	B0/110		
BM (30°-60°)	91.1	2.7	B0/220		
BH (60°-80°)	74.3	2.2	B0/110		G0/110
BVH (80°-90°)	1.7	0.1			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B0-U0-G1

Type II Medium





REPORT NUMBER: P401585

CATALOG NUMBER: ENT-SA1D-830-U-T2-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	78°	85°
0°	394.2	394.2	394.2	394.2	394.2	394.2	394.2	394.2	394.2	394.2	394.2
2.5°	452.2	454.1	451.6	449.7	444.6	438.2	431.8	422.2	412.0	408.2	401.8
5°	507.7	507.7	507.7	502.6	498.1	486.0	471.4	456.7	437.6	430.5	415.9
7.5°	537.1	537.7	539.6	539.6	537.1	528.8	512.8	496.2	467.5	458.0	434.4
10°	540.2	542.8	547.9	555.5	561.3	565.8	556.2	538.3	503.9	492.4	458.0
12.5°	532.0	533.2	541.5	555.5	574.0	592.5	593.2	582.3	544.1	528.1	486.7
15°	512.8	514.7	526.8	549.2	577.9	611.0	630.2	627.0	591.3	572.8	518.6
17.5°	482.2	484.1	499.4	532.6	574.7	623.2	664.0	679.9	637.8	620.0	551.1
20°	480.9	481.6	487.3	512.2	561.9	630.2	697.1	734.8	694.6	675.5	589.4
22.5°	562.6	557.5	544.7	528.8	550.4	628.3	727.1	792.8	764.8	734.8	633.4
25°	653.8	655.7	641.7	604.0	576.6	625.1	750.1	858.5	830.5	800.5	678.7
27.5°	749.5	746.3	734.1	699.7	653.8	648.0	766.7	911.5	893.6	857.2	718.8
30°	842.6	840.0	831.1	796.0	746.3	707.4	779.4	959.3	953.6	913.4	751.4
32.5°	949.1	953.6	942.1	896.2	835.6	787.7	806.9	1009.7	1026.3	977.2	785.2
35°	1072.8	1072.8	1049.2	1007.1	944.6	877.7	861.7	1065.2	1118.8	1065.8	838.7
37.5°	1174.9	1183.2	1169.1	1108.5	1049.9	979.7	945.3	1133.4	1232.9	1179.3	910.8
40°	1255.2	1269.3	1269.9	1210.0	1155.7	1109.8	1062.0	1229.7	1376.4	1307.6	996.9
42.5°	1329.9	1332.4	1343.3	1308.8	1254.6	1242.5	1193.4	1343.9	1555.7	1474.7	1111.7
45°	1424.9	1430.0	1423.6	1398.1	1351.6	1367.5	1340.1	1488.7	1757.2	1689.0	1247.0
47.5°	1564.6	1576.7	1567.1	1521.2	1464.5	1494.4	1474.7	1632.8	1984.9	1902.0	1393.7
50°	1695.4	1704.9	1715.1	1700.5	1643.7	1615.0	1590.7	1785.3	2180.1	2109.9	1537.8
52.5°	1709.4	1718.3	1774.4	1826.1	1863.7	1788.5	1712.6	1939.6	2360.6	2301.9	1669.8
55°	1618.2	1623.9	1717.7	1819.7	1992.6	2018.1	1891.8	2092.1	2511.8	2471.6	1758.5
57.5°	1364.3	1388.6	1521.9	1678.1	1960.7	2154.6	2146.3	2269.4	2610.0	2591.5	1872.7
60°	896.2	922.9	1082.4	1319.0	1726.0	2118.2	2425.7	2535.4	2747.8	2768.2	2072.9
62.5°	464.3	495.6	635.9	845.8	1250.8	1844.6	2520.7	2972.3	3011.8	3081.4	2430.1
65°	265.3	271.7	341.9	495.6	774.3	1320.9	2406.5	3404.7	3359.4	3500.4	2886.2
67°	197.1	197.1	246.2	336.8	490.5	898.1	2052.5	3495.9	3578.2	3652.9	2978.0
67.5°	176.7	186.2	228.3	310.6	440.1	796.6	1920.5	3471.7	3592.3	3638.8	2946.1
70°	121.2	127.6	163.9	222.6	296.6	414.6	1259.1	3070.5	3460.9	3413.7	2670.0
72.5°	72.7	75.3	108.4	160.1	221.3	222.0	686.9	2330.6	2932.7	2932.1	2180.7
75°	45.3	47.8	63.8	107.2	155.0	139.0	317.6	1585.6	2106.1	2065.3	1461.3
77.5°	25.5	29.3	38.3	58.7	98.2	88.7	133.9	888.5	1137.9	1067.7	725.9
80°	10.2	12.1	21.7	28.1	55.5	52.9	54.9	312.5	460.5	415.2	243.0
82.5°	2.6	3.2	7.7	13.4	21.7	21.7	17.2	85.5	109.1	101.4	62.5
85°	0.0	0.0	0.6	0.6	0.6	1.3	4.5	9.6	11.5	13.4	10.2
87.5°	0.0	0.0	0.0	0.6	0.6	0.6	1.3	1.9	1.9	1.9	1.9
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: P401585

CATALOG NUMBER: ENT-SA1D-830-U-T2-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	394.2	394.2	394.2	394.2	394.2	394.2	394.2	394.2	394.2	394.2	394.2
2.5°	396.7	392.3	383.3	373.8	364.2	356.5	350.2	341.2	340.0	340.0	340.0
5°	405.0	394.8	374.4	354.0	333.6	315.1	301.7	290.9	281.3	278.1	280.6
7.5°	417.1	398.6	362.9	327.2	295.3	269.2	250.0	234.7	227.7	223.9	220.7
10°	433.1	404.4	347.6	295.3	255.1	223.9	203.5	188.8	181.8	177.3	178.0
12.5°	450.3	408.8	328.5	260.9	216.2	187.5	170.3	158.2	146.7	139.7	141.6
15°	467.5	412.0	304.9	229.0	186.2	160.7	136.5	114.8	107.2	105.9	105.2
17.5°	486.7	411.4	278.7	199.0	160.7	125.0	100.8	98.2	97.6	97.6	97.0
20°	506.4	408.2	248.8	174.1	135.2	95.0	91.2	89.9	88.0	87.4	86.7
22.5°	528.1	402.5	221.3	152.4	100.8	86.7	81.6	77.8	74.6	72.7	73.4
25°	547.9	391.6	194.5	132.0	86.1	77.8	70.8	65.1	61.9	59.3	60.0
27.5°	561.3	372.5	171.6	106.5	79.1	68.9	60.6	54.9	50.4	48.5	48.5
30°	562.6	345.1	151.2	87.4	72.1	60.6	51.7	45.3	42.7	41.5	40.8
32.5°	561.3	317.0	135.9	80.4	65.7	52.9	44.0	39.5	37.0	35.7	35.7
35°	567.7	288.3	121.8	74.0	58.7	46.6	38.9	34.4	32.5	31.3	31.3
37.5°	586.8	268.5	107.2	67.6	52.3	40.8	35.1	31.3	29.3	28.1	28.1
40°	613.0	251.9	89.3	61.2	45.9	37.0	31.9	28.7	26.2	24.9	24.9
42.5°	658.9	245.6	74.6	54.9	40.2	33.2	29.3	25.5	23.0	21.7	21.7
45°	727.1	248.8	68.2	49.1	36.4	30.0	26.2	22.3	19.8	19.1	19.1
47.5°	802.4	262.1	63.8	44.0	33.2	28.1	23.6	19.8	17.2	16.6	16.6
50°	886.6	283.2	60.0	38.9	30.0	25.5	21.0	17.2	15.3	14.7	14.7
52.5°	967.0	310.0	56.1	35.1	28.1	23.0	18.5	15.3	14.0	13.4	13.4
55°	1028.2	327.2	52.9	32.5	26.2	21.0	16.6	14.7	12.8	12.1	12.1
57.5°	1113.7	355.9	49.1	29.3	23.6	19.1	15.3	13.4	11.5	11.5	11.5
60°	1287.1	433.1	43.4	26.8	21.0	17.2	14.7	12.1	10.8	10.2	10.2
62.5°	1599.7	560.7	37.6	24.9	18.5	15.3	12.8	10.8	9.6	8.3	8.3
65°	1900.7	613.6	31.9	21.7	16.6	13.4	11.5	9.6	7.0	5.7	5.7
67°	1884.1	524.9	26.8	18.5	14.0	12.1	9.6	7.7	5.1	3.2	3.2
67.5°	1839.5	488.6	26.2	17.9	13.4	11.5	9.6	7.0	4.5	2.6	2.6
70°	1563.3	341.9	20.4	14.0	11.5	10.2	7.7	5.1	2.6	1.3	1.3
72.5°	1269.9	271.1	15.9	11.5	9.6	7.7	6.4	3.2	1.9	0.6	0.6
75°	898.1	166.5	14.0	10.2	7.7	5.7	5.1	3.2	1.9	1.3	0.6
77.5°	443.3	76.5	11.5	8.9	7.0	5.7	4.5	3.8	3.2	2.6	1.3
80°	130.1	24.9	7.7	6.4	6.4	5.7	5.1	4.5	3.8	3.2	1.9
82.5°	29.3	8.9	2.6	3.2	4.5	4.5	4.5	3.2	2.6	1.3	0.6
85°	3.8	1.9	1.9	1.9	2.6	2.6	1.9	1.3	1.3	0.0	0.0
87.5°	1.3	1.3	1.3	1.9	1.9	1.9	1.3	0.6	0.6	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

(END OF REPORT)