

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: P401587

Luminaire Tested: **ENT-SA1D-830-U-T3-HSS**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401587
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-14)
Test Lab: INNOVATION CENTER
Issue Date: 5/20/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENT-SA1D-830-U-T3-HSS
Description: ENTRI LED LUMINAIRE
(1) 80 CRI, 3000K, 800mA LIGHTSQUARE WITH 16 LEDS AND TYPE III OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3447 lumens
Efficiency: N/A
Efficacy: 80.0 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Short - Full 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

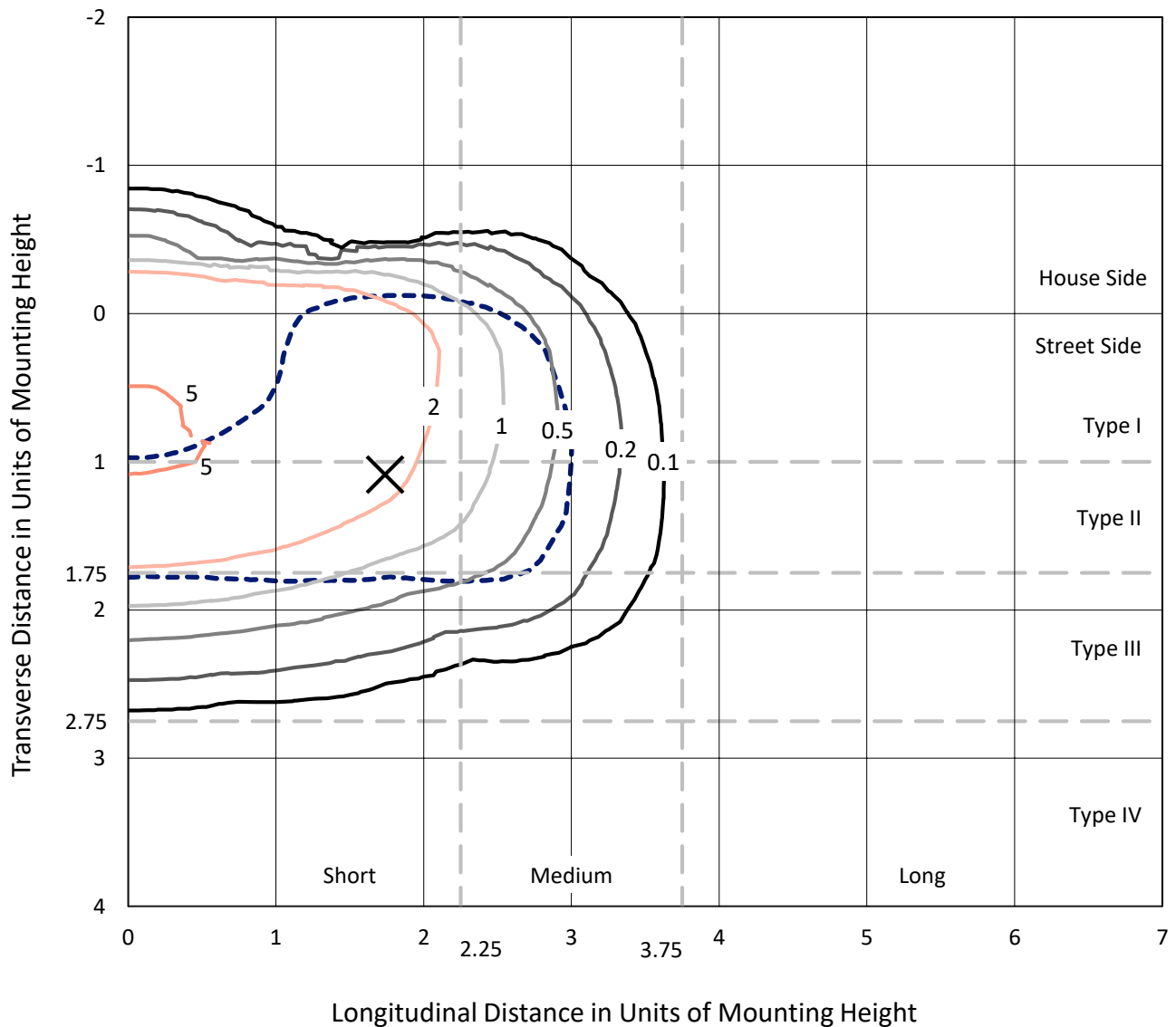


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

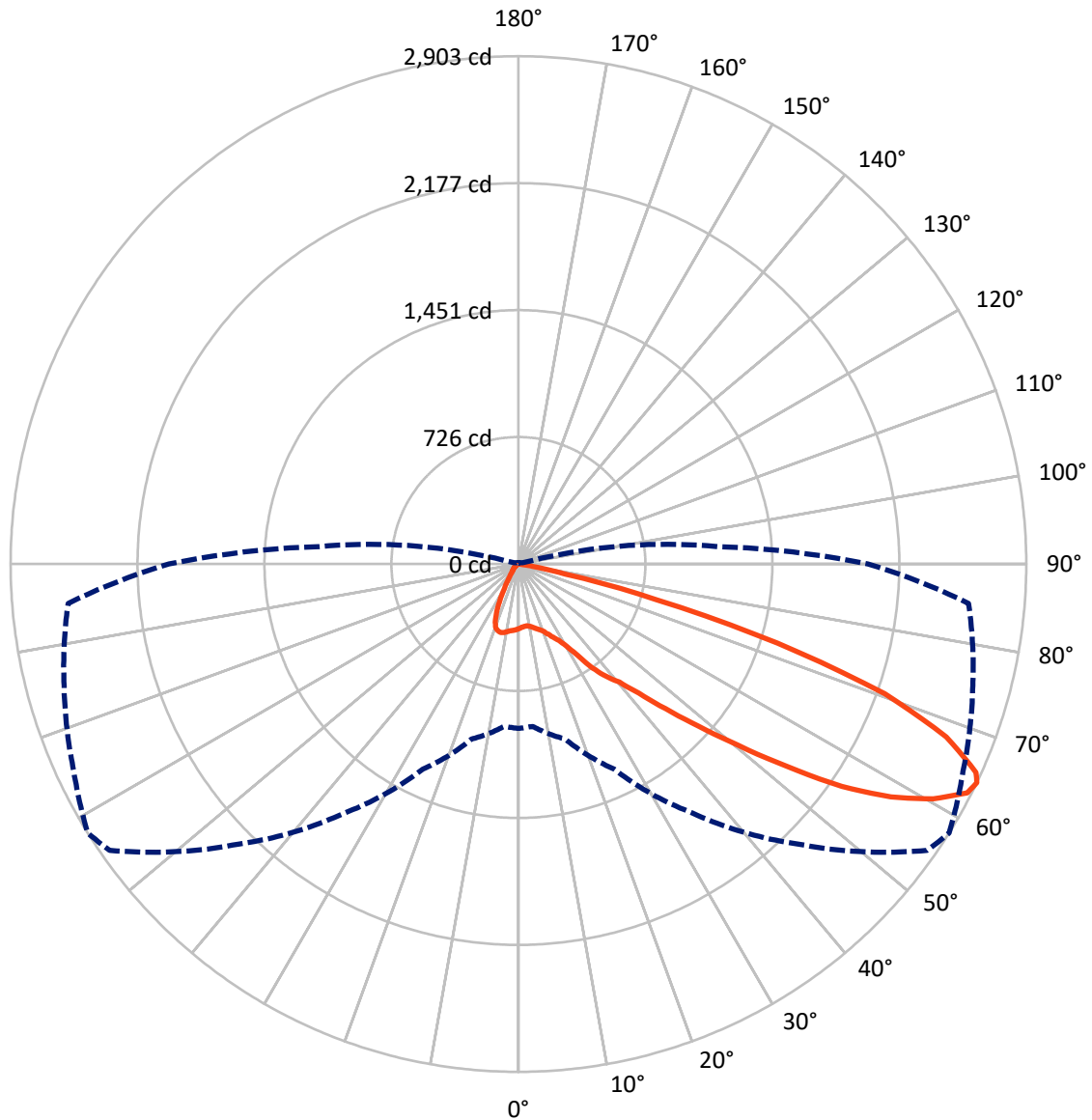


Based on 10 foot mounting height. Maximum calculated value = 5.5 fc
 Type III - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral - - - Horizontal Cone Through 64-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	411.0	0.0	411.0
	% Fixture	11.9	0.0	11.9
Street Side	Lumens	3036.0	0.0	3036.0
	% Fixture	88.1	0.0	88.1
Total	Lumens	3447.0	0.0	3447.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	34.9	1.0
10°-20°	101.7	3.0
20°-30°	182.8	5.3
30°-40°	320.3	9.3
40°-50°	585.7	17.0
50°-60°	1002.0	29.1
60°-70°	972.0	28.2
70°-80°	240.8	7.0
80°-90°	6.9	0.2
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°	3447.0	100.0
0°-180°	3447.0	100.0



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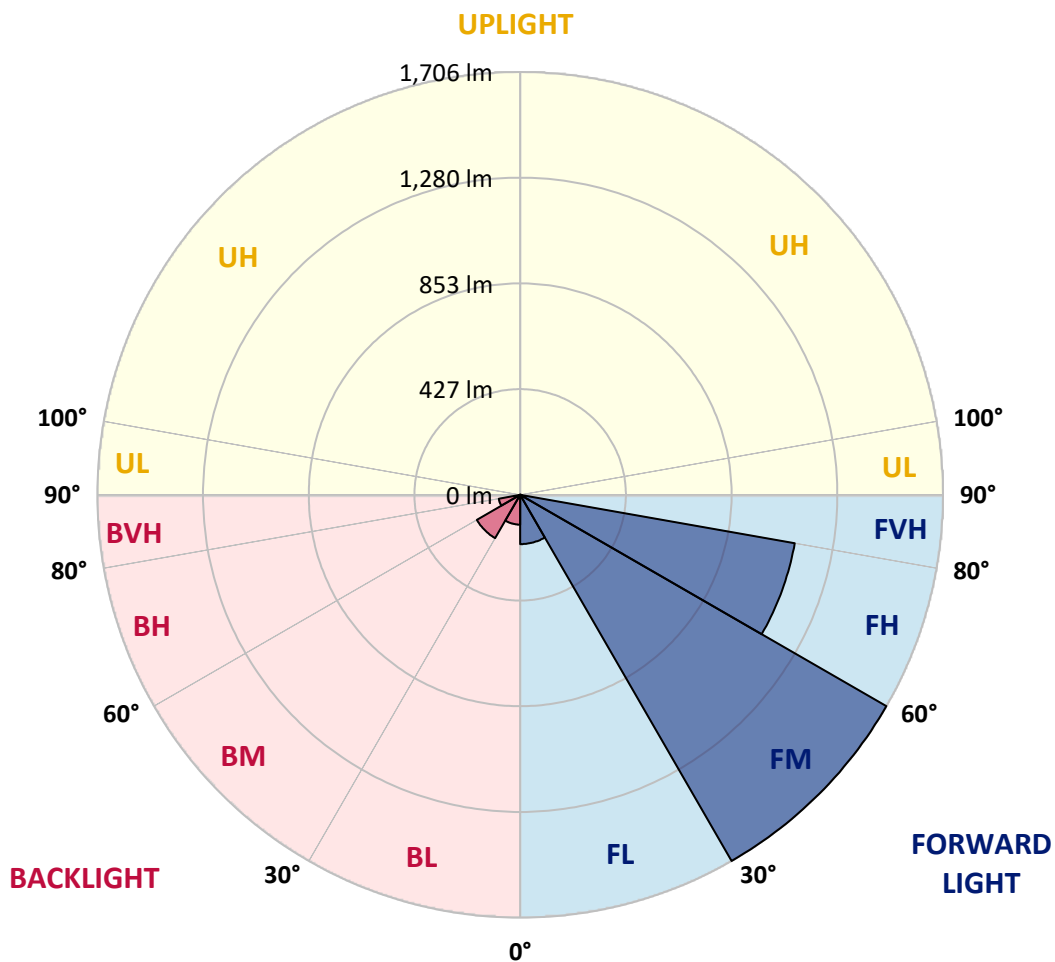
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	199.0	5.8			
FM (30°-60°)	1706.2	49.5			
FH (60°-80°)	1125.0	32.6			G1/1800
FVH (80°-90°)	5.8	0.2			G0/10
BL (0°-30°)	120.3	3.5	B1/500		
BM (30°-60°)	201.8	5.9	B0/220		
BH (60°-80°)	87.8	2.5	B0/110		G0/110
BVH (80°-90°)	1.0	0.0			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 III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	369.2	369.2	369.2	369.2	369.2	369.2	369.2	369.2	369.2	369.2	369.2
2.5°	353.9	353.9	355.2	355.8	357.8	359.7	362.2	362.9	364.1	367.3	368.6
5°	334.8	335.4	336.7	339.9	344.4	349.5	355.8	357.8	362.9	369.2	373.7
7.5°	327.1	327.8	329.7	333.5	339.3	346.9	354.6	357.1	364.1	374.3	380.7
10°	325.9	325.9	328.4	334.2	341.2	350.7	359.0	362.2	371.8	383.9	394.1
12.5°	325.9	325.9	329.1	336.1	344.4	356.5	368.0	372.4	383.3	398.6	411.3
15°	331.6	332.9	334.8	339.3	348.8	362.2	378.2	383.3	396.7	415.1	431.1
17.5°	372.4	371.1	364.8	359.0	357.1	368.6	387.7	394.7	414.5	438.1	455.3
20°	451.5	450.9	439.4	411.3	386.4	380.1	402.4	410.7	439.4	470.6	483.4
22.5°	547.2	550.3	532.5	494.9	443.8	411.3	424.1	435.6	472.5	510.2	517.8
25°	642.2	646.0	629.4	582.2	519.7	463.0	454.0	464.2	506.3	544.0	540.8
27.5°	754.4	751.2	734.6	681.1	608.4	532.5	494.2	496.1	528.7	570.7	560.5
30°	836.7	832.2	816.3	779.9	711.7	625.0	551.6	545.9	555.4	602.0	591.2
32.5°	911.9	915.1	903.0	854.5	790.1	720.0	637.7	622.4	618.6	658.1	640.3
35°	986.5	985.9	981.4	938.7	875.6	809.2	740.4	729.5	728.3	766.5	718.1
37.5°	1075.8	1071.3	1063.1	1019.7	969.3	906.2	832.8	815.6	812.4	820.1	763.3
40°	1171.5	1177.2	1163.8	1118.5	1063.7	1016.5	913.8	887.7	866.0	888.3	852.0
42.5°	1313.7	1318.1	1294.5	1263.3	1192.5	1148.5	1044.6	1008.8	998.6	1032.4	991.6
45°	1492.2	1483.9	1468.0	1446.3	1387.6	1320.7	1212.3	1178.5	1167.6	1225.7	1158.7
47.5°	1631.2	1630.0	1630.6	1626.1	1617.2	1536.9	1408.1	1385.1	1374.3	1457.8	1383.8
50°	1719.3	1724.4	1746.0	1801.5	1842.3	1808.5	1657.4	1629.3	1621.0	1707.8	1607.7
52.5°	1785.6	1797.7	1834.0	1943.7	2074.5	2085.9	1960.9	1921.4	1902.3	1926.5	1787.5
55°	1819.4	1825.1	1880.6	2042.6	2247.3	2329.5	2277.2	2244.1	2166.9	2121.0	1998.6
57.5°	1740.3	1731.4	1827.0	2033.0	2336.5	2525.9	2548.3	2510.6	2386.9	2351.2	2254.9
60°	1533.0	1529.2	1637.0	1884.4	2258.7	2571.9	2749.1	2725.5	2612.0	2527.2	2436.7
62.5°	1169.5	1175.9	1290.1	1542.0	1981.3	2439.9	2860.7	2879.9	2759.3	2633.1	2571.2
64°	939.3	931.7	1036.3	1292.6	1738.4	2263.9	2852.5	2902.8	2804.0	2688.6	2583.3
65°	788.8	772.3	872.4	1104.5	1533.0	2136.3	2793.8	2874.8	2807.2	2702.0	2539.3
67.5°	415.1	424.1	466.8	670.9	1035.0	1615.3	2515.7	2638.2	2665.6	2518.9	2212.8
70°	186.2	187.5	214.9	342.4	572.7	1047.7	2023.4	2221.8	2237.1	2069.4	1603.2
72.5°	61.9	62.5	95.0	137.1	240.4	485.3	1366.6	1547.1	1580.2	1341.7	869.8
75°	38.3	39.5	50.4	74.0	111.6	169.6	692.5	815.0	822.0	595.0	316.3
77.5°	24.2	25.5	30.6	44.0	61.2	64.4	227.0	274.9	311.2	214.3	98.2
80°	15.3	15.3	19.8	26.8	31.9	27.4	61.9	81.6	98.2	72.1	33.2
82.5°	5.7	5.7	10.2	14.7	13.4	9.6	16.6	21.7	37.6	35.7	15.9
85°	0.0	0.0	0.6	1.3	0.6	1.3	3.2	4.5	7.0	10.2	5.1
87.5°	0.0	0.0	0.0	0.0	0.6	0.6	1.3	1.3	1.3	1.3	1.3
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°	369.2	369.2	369.2	369.2	369.2	369.2	369.2	369.2	369.2	369.2	369.2
2.5°	370.5	371.8	374.3	375.0	375.6	373.7	375.6	373.7	375.0	375.0	375.0
5°	376.2	378.2	380.1	380.7	380.1	375.6	376.9	373.7	373.1	373.1	373.1
7.5°	383.9	385.8	389.0	387.1	383.3	376.9	376.2	371.8	369.9	369.9	370.5
10°	397.9	399.8	401.1	397.3	389.6	380.1	373.1	363.5	359.0	357.1	357.1
12.5°	415.8	417.7	417.1	410.7	396.7	376.9	357.1	338.6	325.2	320.1	315.0
15°	434.9	437.5	436.2	422.8	396.0	360.9	322.7	279.3	252.5	235.3	232.1
17.5°	457.2	459.8	453.4	429.2	386.4	327.1	254.4	195.8	156.9	142.2	141.6
20°	484.7	483.4	468.1	429.8	369.2	264.6	170.3	122.4	105.9	102.0	101.4
22.5°	515.9	510.2	482.1	426.0	322.0	179.8	109.7	96.9	95.0	93.7	93.7
25°	533.8	523.6	487.2	415.1	248.1	114.8	93.1	90.6	88.0	85.5	84.8
27.5°	547.8	532.5	489.1	379.4	165.2	88.0	84.2	81.6	77.8	74.0	73.3
30°	573.3	550.3	492.3	316.9	101.4	75.2	73.3	68.9	63.1	59.3	58.0
32.5°	619.2	586.1	505.1	237.2	74.0	66.3	61.2	55.5	49.1	45.3	45.3
35°	668.3	619.8	511.4	156.2	64.4	58.0	50.4	43.4	37.6	34.4	33.8
37.5°	713.6	668.3	509.5	95.7	57.4	49.7	41.5	34.4	29.3	26.8	26.8
40°	806.1	753.1	483.4	65.7	50.4	42.1	33.8	26.8	23.6	21.7	21.7
42.5°	938.1	846.2	425.3	56.1	44.0	35.1	26.8	22.3	19.8	17.9	17.9
45°	1086.0	948.9	339.3	50.4	38.3	29.3	22.3	18.5	15.9	15.3	15.3
47.5°	1279.9	1073.3	249.3	45.3	33.2	24.9	18.5	15.3	14.0	13.4	13.4
50°	1449.5	1174.0	170.3	39.5	29.3	21.0	15.9	14.0	12.8	12.1	12.1
52.5°	1603.8	1244.2	112.2	34.4	26.1	17.2	14.7	12.8	12.1	11.5	11.5
55°	1785.6	1297.7	75.9	30.0	23.0	15.9	14.0	12.8	11.5	11.5	10.8
57.5°	1939.9	1329.6	54.2	25.5	20.4	14.7	13.4	12.1	10.8	10.2	10.2
60°	2029.8	1292.0	39.5	22.3	17.9	13.4	12.1	10.8	10.2	9.6	9.6
62.5°	2054.7	1219.3	30.6	19.1	15.3	12.1	10.8	9.6	8.9	8.3	8.3
64°	1997.3	1141.5	26.1	16.6	13.4	10.8	10.2	8.9	7.7	6.4	6.4
65°	1916.3	1069.4	23.6	15.3	12.1	10.2	9.6	8.3	6.4	5.1	5.1
67.5°	1596.8	852.6	19.1	12.8	9.6	8.9	7.7	6.4	4.5	3.2	3.2
70°	1133.8	596.3	14.7	10.2	8.3	8.3	7.0	5.1	2.6	1.3	1.3
72.5°	600.1	309.9	12.1	8.3	6.4	6.4	5.7	3.2	1.9	1.3	0.6
75°	209.8	102.0	10.2	7.0	5.7	4.5	3.8	2.6	1.9	1.3	0.6
77.5°	63.8	33.8	8.9	7.0	5.1	3.8	4.5	3.8	3.8	2.6	1.9
80°	20.4	12.1	5.1	4.5	5.1	5.1	4.5	3.8	4.5	3.2	2.6
82.5°	7.7	4.5	1.9	2.6	2.6	3.2	3.2	2.6	1.9	0.6	0.0
85°	2.6	1.9	1.3	1.9	1.9	1.9	1.3	1.3	0.6	0.0	0.0
87.5°	1.3	1.3	1.3	1.3	1.3	1.3	0.6	0.6	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

(END OF REPORT)