

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: P401586

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

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401586
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-11)
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
Description: ENTRI LED LUMINAIRE
(1) 80 CRI, 3000K, 800mA LIGHTSQUARE WITH 16 LEDS AND TYPE II OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4465 lumens
Efficiency: N/A
Efficacy: 103.6 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Medium - Non-Cutoff
BUG Rating: B1 - U0 - G1

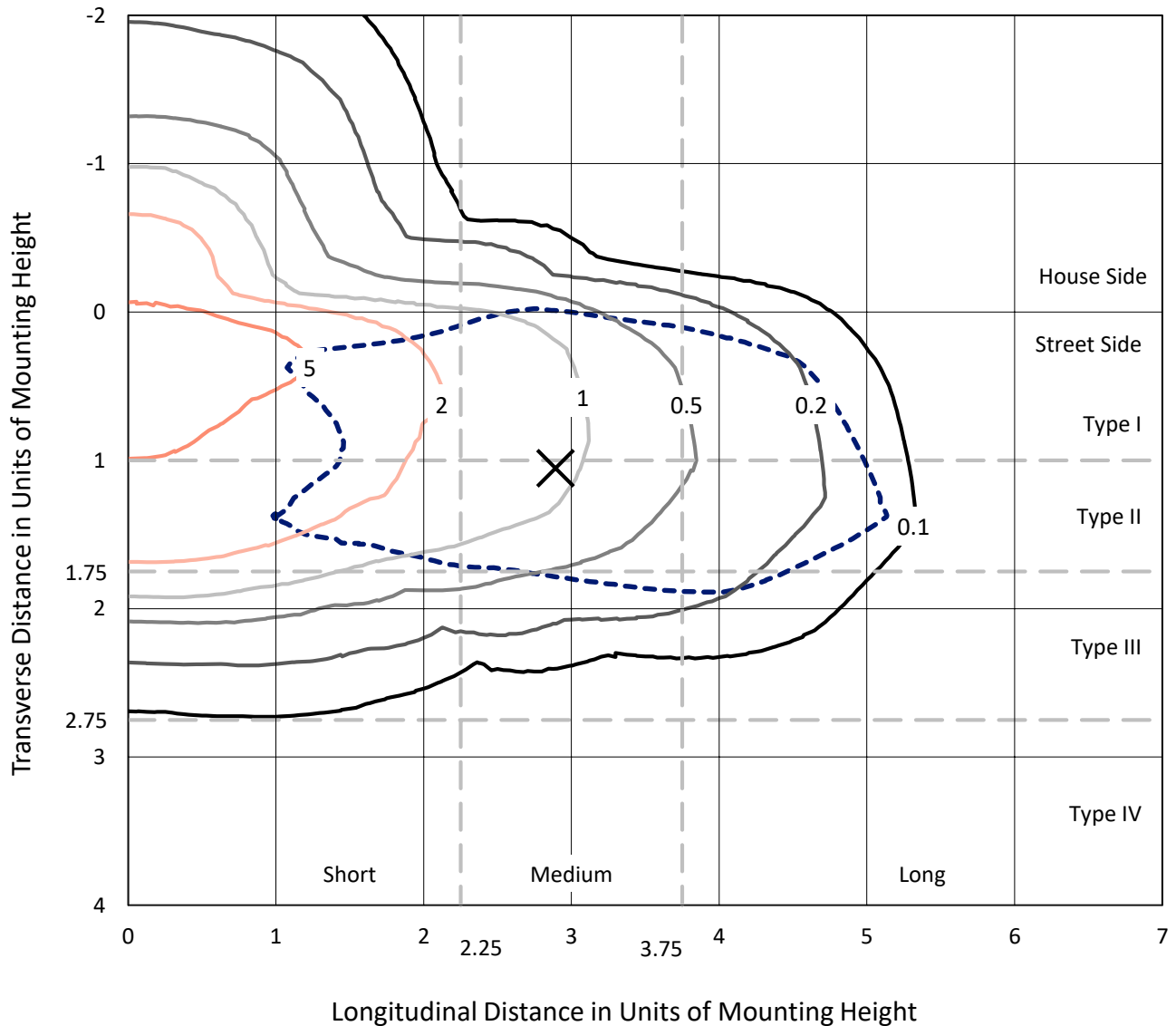
Input Watts (W): 43.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

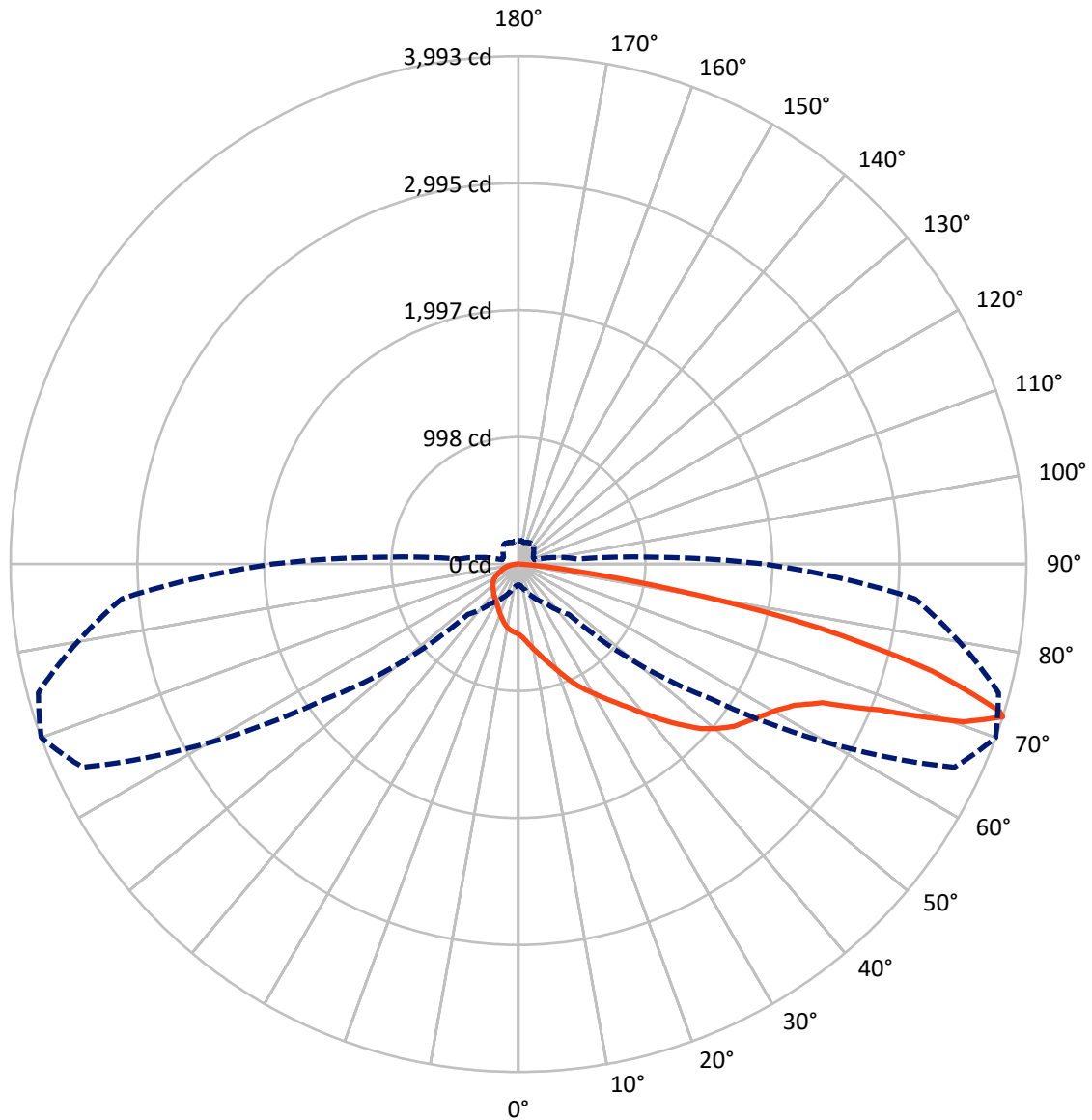
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 7.7 fc
 Type III - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 70-Deg Lateral - - - Horizontal Cone Through 72-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	829.6	0.0	829.6
	% Fixture	18.6	0.0	18.6
Street Side	Lumens	3635.3	0.0	3635.3
	% Fixture	81.4	0.0	81.4
Total	Lumens	4465.0	0.0	4465.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	55.6	1.2
10°-20°	178.3	4.0
20°-30°	315.8	7.1
30°-40°	469.5	10.5
40°-50°	681.1	15.3
50°-60°	930.5	20.8
60°-70°	1018.7	22.8
70°-80°	724.6	16.2
80°-90°	91.0	2.0
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°	4465.0	100.0
0°-180°	4465.0	100.0



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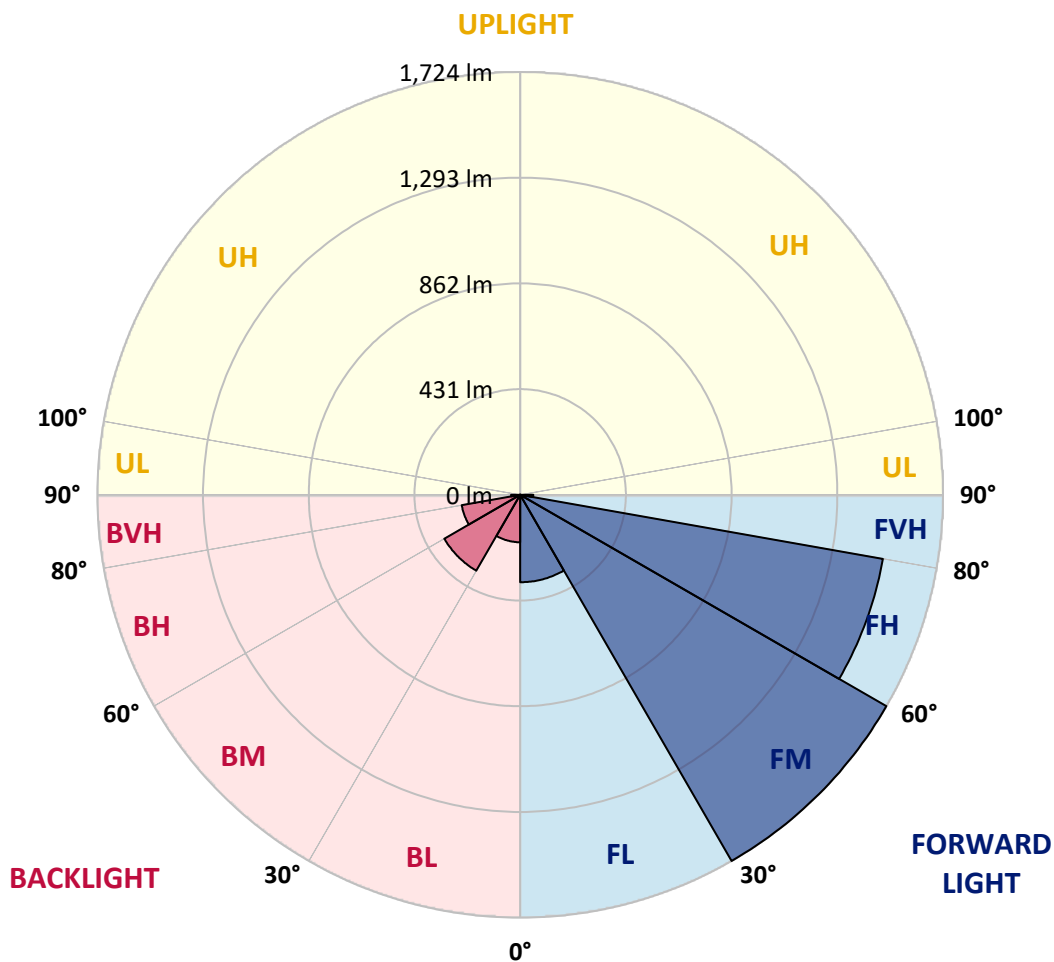
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	356.4	8.0			
FM	(30°-60°)	1723.8	38.6			
FH	(60°-80°)	1501.5	33.6			G1/1800
FVH	(80°-90°)	53.7	1.2			G1/100
BL	(0°-30°)	193.3	4.3	B1/500		
BM	(30°-60°)	357.2	8.0	B1/1000		
BH	(60°-80°)	241.9	5.4	B1/500		G1/500
BVH	(80°-90°)	37.2	0.8			G1/100
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 Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	70°	75°	85°
0°	553.0	553.0	553.0	553.0	553.0	553.0	553.0	553.0	553.0	553.0	553.0
2.5°	614.8	611.6	612.3	606.5	603.3	595.7	587.4	578.5	574.0	570.8	560.0
5°	674.8	674.8	677.3	672.9	660.7	648.0	633.3	613.5	605.3	593.8	572.1
7.5°	724.5	725.8	725.8	724.5	713.7	699.6	680.5	656.3	642.9	626.3	592.5
10°	750.0	753.2	755.8	757.7	756.4	748.1	726.4	701.6	683.1	661.4	616.1
12.5°	762.8	764.1	768.5	778.1	785.7	792.1	776.2	746.8	728.3	702.2	641.6
15°	776.8	776.8	781.3	793.4	808.1	825.3	823.4	800.4	780.6	748.1	674.1
17.5°	785.7	788.3	796.6	809.3	829.8	858.5	873.1	860.4	834.9	800.4	709.2
20°	780.6	782.6	799.1	824.0	850.2	887.2	924.1	924.1	899.9	860.4	748.1
22.5°	790.2	793.4	804.9	828.5	864.2	912.0	972.6	993.7	972.6	929.3	793.4
25°	827.2	825.9	835.5	845.1	875.7	935.0	1014.1	1068.3	1049.2	1001.3	837.4
27.5°	880.8	880.8	885.9	885.2	896.1	954.1	1050.4	1134.0	1118.0	1060.6	873.8
30°	942.6	943.9	942.6	942.0	940.1	980.3	1083.0	1192.7	1184.4	1127.6	906.9
32.5°	1017.9	1021.1	1016.0	1003.2	995.6	1017.9	1110.4	1258.3	1260.9	1193.9	939.5
35°	1112.3	1117.4	1098.3	1079.8	1060.6	1070.8	1142.3	1320.2	1345.7	1269.2	979.0
37.5°	1206.7	1215.0	1211.8	1162.0	1135.3	1134.6	1189.5	1397.4	1440.1	1367.4	1035.1
40°	1286.4	1293.4	1297.3	1252.0	1215.0	1213.7	1259.0	1477.7	1556.2	1480.3	1101.5
42.5°	1339.3	1345.7	1357.2	1330.4	1296.0	1311.9	1335.5	1557.5	1681.2	1618.1	1183.1
45°	1396.7	1401.8	1408.9	1393.6	1375.7	1421.6	1432.5	1646.1	1806.2	1766.0	1278.8
47.5°	1458.0	1463.1	1466.9	1455.4	1449.0	1513.5	1527.5	1736.7	1932.5	1919.1	1371.9
50°	1525.6	1527.5	1531.3	1525.6	1527.5	1597.0	1605.9	1816.4	2032.6	2078.5	1468.8
52.5°	1641.7	1644.2	1645.5	1618.1	1608.5	1649.9	1669.1	1901.2	2120.6	2211.2	1554.3
55°	1733.5	1742.4	1782.6	1764.7	1741.8	1687.6	1721.4	1969.5	2183.1	2334.9	1643.6
57.5°	1658.2	1678.6	1778.8	1863.0	1927.4	1797.9	1783.2	2039.6	2255.2	2441.4	1747.5
60°	1439.5	1469.5	1614.9	1790.3	1998.8	2051.1	1910.2	2127.0	2333.7	2552.4	1859.1
62.5°	998.1	1028.7	1229.6	1509.6	1878.3	2195.9	2257.8	2282.0	2442.7	2665.9	2004.6
65°	478.3	509.6	675.4	970.7	1483.5	2102.8	2662.7	2603.4	2626.4	2810.1	2218.8
67.5°	304.2	320.8	385.9	528.7	862.9	1637.8	2808.2	3243.8	3061.4	3142.4	2645.5
70°	222.6	226.4	282.5	366.1	512.1	956.7	2479.7	3856.7	3713.8	3704.9	3160.2
72°	164.5	170.9	214.3	292.1	378.8	559.3	1845.1	3782.1	3993.2	3908.3	3129.6
72.5°	155.0	160.1	197.7	276.2	357.8	491.1	1653.1	3695.3	3958.7	3914.1	3070.9
75°	112.9	116.7	135.2	196.4	276.8	284.5	882.7	2836.2	3361.8	3736.8	2783.9
77.5°	77.8	80.4	89.9	120.5	189.4	192.6	374.4	1936.3	2426.1	2988.0	2141.0
80°	47.2	48.5	54.2	65.7	120.5	114.2	154.3	1012.2	1266.0	1624.4	993.0
82.5°	19.8	20.4	23.6	26.1	51.0	54.2	62.5	330.4	419.0	507.7	286.4
85°	0.0	0.0	0.6	0.6	1.3	5.7	8.9	40.8	61.9	74.0	51.7
87.5°	0.0	0.0	0.6	0.6	0.6	1.3	1.3	1.9	2.6	2.6	3.8
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°	553.0	553.0	553.0	553.0	553.0	553.0	553.0	553.0	553.0	553.0	553.0
2.5°	554.9	552.3	544.7	538.3	533.2	524.9	524.3	517.9	517.9	516.0	514.7
5°	563.8	555.5	540.2	526.2	516.0	503.8	498.1	491.1	486.6	484.1	484.7
7.5°	575.3	561.2	535.1	511.5	492.4	477.1	468.1	462.4	459.2	457.9	457.9
10°	591.2	569.5	526.8	491.1	466.9	455.4	450.9	450.3	450.9	451.6	452.2
12.5°	609.1	575.3	511.5	466.9	447.7	443.3	445.8	451.6	456.7	458.6	458.6
15°	627.6	579.1	490.5	444.5	433.1	437.5	446.4	457.3	465.6	470.7	472.0
17.5°	646.7	579.7	468.1	424.1	420.3	431.8	447.7	464.9	478.3	486.6	487.9
20°	667.1	578.5	442.0	405.6	407.5	426.7	449.0	472.6	490.5	501.3	502.6
22.5°	689.4	573.4	416.5	387.8	396.7	421.6	447.7	475.1	494.3	507.0	509.6
25°	711.1	563.2	391.0	371.8	389.0	416.5	441.3	464.9	483.4	495.6	498.7
27.5°	722.6	541.5	366.7	359.7	383.3	408.8	426.7	442.6	452.8	460.5	463.7
30°	724.5	510.9	347.0	351.4	376.9	398.0	408.2	410.7	408.8	411.4	408.2
32.5°	720.7	477.7	331.0	345.0	366.7	382.7	385.2	377.6	366.1	350.1	350.8
35°	718.1	441.3	318.3	336.1	353.3	363.5	359.1	347.0	325.3	306.1	304.9
37.5°	722.6	408.2	307.4	324.6	336.1	340.6	334.2	318.3	299.1	282.5	280.6
40°	735.4	383.9	297.2	311.9	317.6	320.8	313.2	299.1	291.5	279.3	277.4
42.5°	760.2	367.4	287.6	297.8	300.4	303.6	295.9	286.4	293.4	290.8	290.8
45°	794.7	359.7	279.3	284.5	287.0	292.1	287.6	279.3	287.0	272.3	269.8
47.5°	839.3	362.3	273.6	271.1	278.7	287.6	282.5	272.3	269.8	243.6	239.2
50°	886.5	375.7	267.9	260.2	269.8	281.9	275.5	259.6	244.3	230.9	228.3
52.5°	942.0	398.0	262.8	248.1	259.6	275.5	271.1	253.8	237.9	228.3	226.4
55°	1003.2	419.7	256.4	234.1	246.2	273.6	272.3	250.0	229.0	224.5	223.2
57.5°	1072.1	437.5	248.7	218.1	232.8	267.9	266.6	241.1	226.4	222.6	221.9
60°	1158.2	458.6	235.3	199.6	219.4	257.0	255.8	236.6	220.7	217.5	216.2
62.5°	1275.6	497.5	212.4	182.4	205.4	237.9	245.5	227.7	212.4	211.7	211.7
65°	1468.8	572.7	188.8	167.7	189.4	219.4	232.2	217.5	204.7	207.9	207.9
67.5°	1834.3	674.1	164.5	153.7	174.1	201.5	220.7	207.3	196.4	202.8	202.8
70°	2116.2	636.5	145.4	140.3	158.8	185.6	206.0	196.4	186.2	197.1	195.8
72°	1930.6	466.2	132.7	129.5	146.1	172.2	193.2	186.2	175.4	184.3	181.8
72.5°	1853.4	423.5	128.8	126.3	142.2	169.7	190.7	183.7	172.2	181.1	177.3
75°	1616.8	357.2	112.2	111.0	126.3	152.4	174.1	170.3	158.8	163.9	160.1
77.5°	1338.1	301.0	94.4	96.9	107.8	135.8	156.9	153.1	142.2	141.6	141.0
80°	627.6	167.7	77.8	79.7	90.6	116.1	135.2	132.7	122.5	121.2	119.3
82.5°	181.8	80.4	60.0	61.2	72.7	95.0	116.1	114.8	107.1	105.2	100.8
85°	33.8	26.1	32.5	38.3	52.9	79.1	105.9	103.3	91.8	83.5	77.2
87.5°	1.9	5.1	10.8	18.5	33.8	59.3	85.5	83.5	73.3	63.1	63.8
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)