

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: P401590

Luminaire Tested: **ENT-SA1D-830-U-T4FT**

Issue Date: 5/20/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P401590  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-15)  
Test Lab: INNOVATION CENTER  
Issue Date: 5/20/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: ENT-SA1D-830-U-T4FT  
Description: ENTRI LED LUMINAIRE  
(1) 80 CRI, 3000K, 800mA LIGHTSQUARE WITH 16 LEDS AND TYPE IV FORWARD  
THROW OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4296 lumens  
Efficiency: N/A  
Efficacy: 99.7 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type IV - Short - Non-Cutoff  
BUG Rating: B1 - U0 - G1

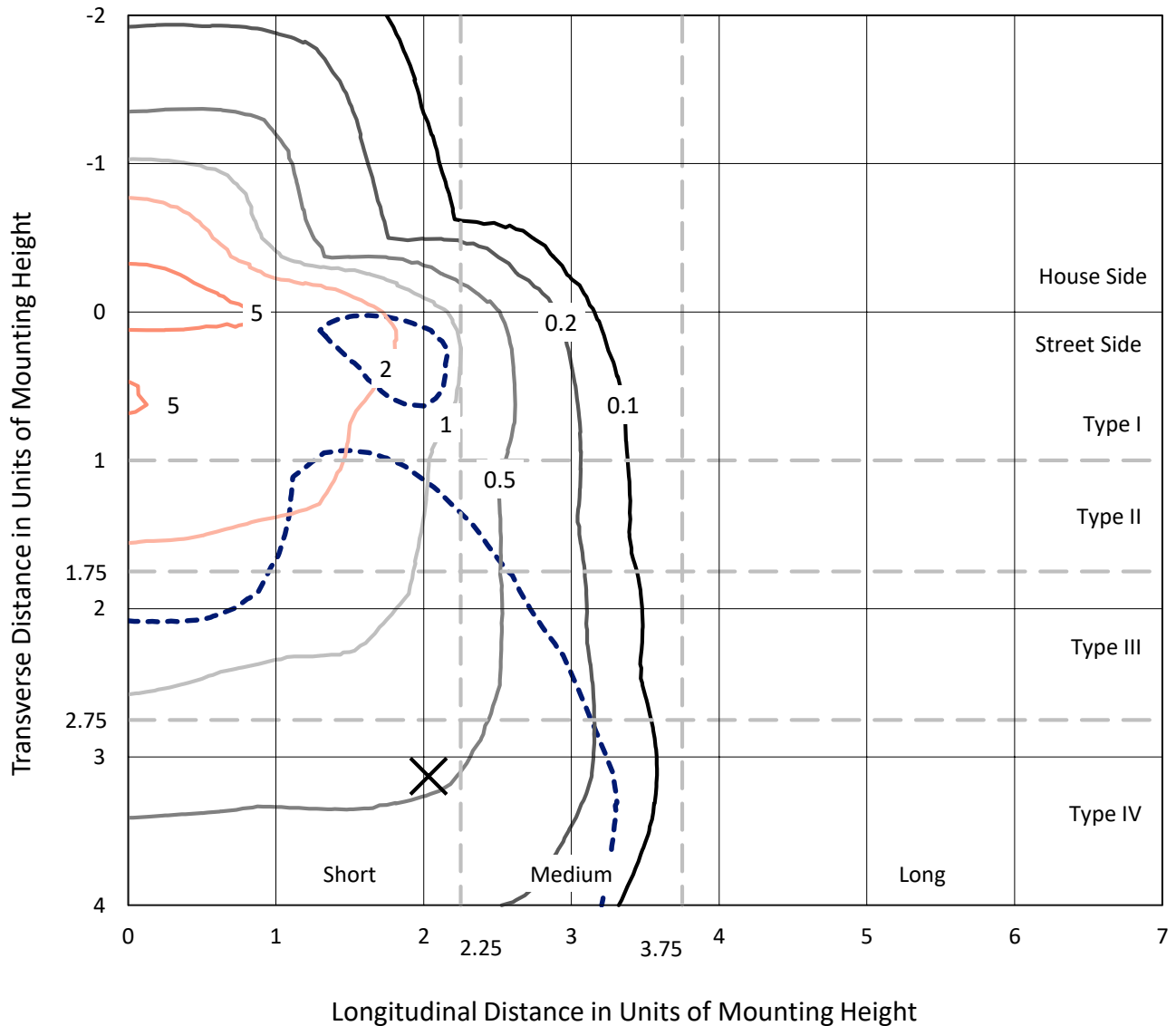
Input Watts (W): 43.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

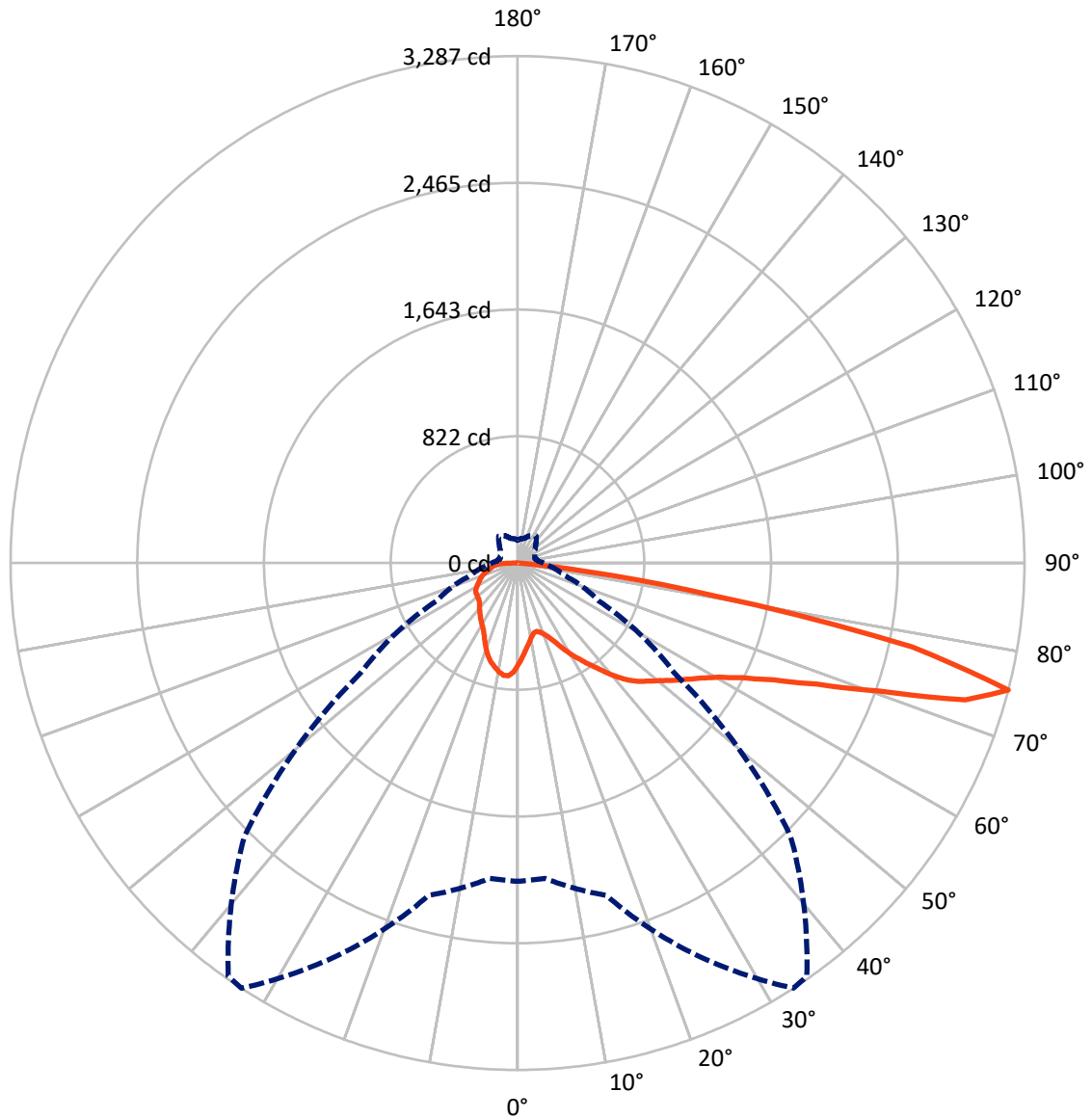
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 7 fc  
 Type IV - Short - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 33-Deg Lateral    - - - Horizontal Cone Through 75-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1043.6	0.0	1043.6
	% Fixture	24.3	0.0	24.3
<b>Street Side</b>	Lumens	3252.4	0.0	3252.4
	% Fixture	75.7	0.0	75.7
<b>Total</b>	Lumens	4296.0	0.0	4296.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	61.5	1.4
10°-20°	173.0	4.0
20°-30°	287.6	6.7
30°-40°	429.0	10.0
40°-50°	599.3	14.0
50°-60°	800.0	18.6
60°-70°	992.0	23.1
70°-80°	857.7	20.0
80°-90°	95.9	2.2
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°	4296.0	100.0
0°-180°	4296.0	100.0



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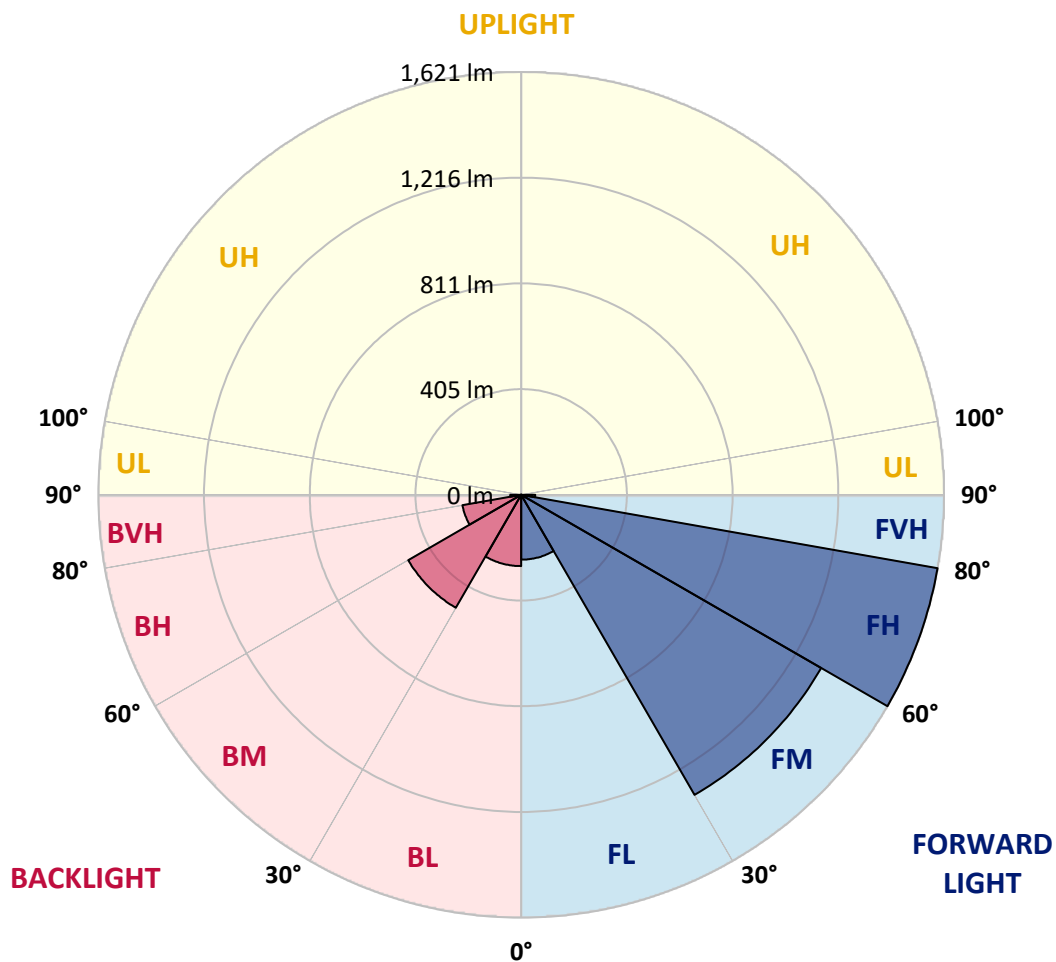
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	248.7	5.8			
FM	(30°-60°)	1328.3	30.9			
FH	(60°-80°)	1621.1	37.7			G1/1800
FVH	(80°-90°)	54.2	1.3			G1/100
BL	(0°-30°)	273.3	6.4	B1/500		
BM	(30°-60°)	500.1	11.6	B1/1000		
BH	(60°-80°)	228.5	5.3	B1/500		G1/500
BVH	(80°-90°)	41.7	1.0			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 IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	33°	35°	45°	55°	65°	75°	85°
0°	658.3	658.3	658.3	658.3	658.3	658.3	658.3	658.3	658.3	658.3	658.3
2.5°	597.0	598.3	602.1	606.6	609.2	609.2	616.2	624.5	634.7	643.6	653.2
5°	547.3	549.2	552.4	558.1	565.1	566.4	580.5	595.1	613.6	633.4	652.5
7.5°	498.2	502.0	508.4	516.0	526.9	529.4	549.2	569.0	594.5	624.5	655.7
10°	460.5	463.1	466.3	477.1	490.5	495.0	521.1	546.0	581.1	618.1	659.6
12.5°	450.3	450.3	450.3	455.4	466.3	470.1	497.5	529.4	569.0	613.6	665.3
15°	465.0	464.4	457.3	453.5	459.9	463.1	486.7	517.9	562.6	614.9	676.1
17.5°	498.2	496.3	479.7	466.9	471.4	473.3	488.6	515.4	560.7	620.0	692.1
20°	541.5	537.1	511.6	492.4	491.8	493.1	504.6	523.0	563.9	628.9	709.3
22.5°	599.0	596.4	558.8	529.4	524.3	524.3	529.4	540.9	572.2	639.1	732.9
25°	672.9	665.9	620.6	581.1	569.6	566.4	565.8	565.8	586.8	654.4	762.2
27.5°	748.9	740.6	694.6	641.1	625.7	620.0	609.8	602.1	606.0	671.0	797.3
30°	817.1	805.6	766.7	711.2	688.3	679.3	660.8	644.9	634.7	694.0	843.9
32.5°	854.7	850.3	823.5	773.1	746.9	743.1	712.5	691.4	673.6	724.0	906.4
35°	905.1	899.4	882.2	840.7	809.4	799.9	776.9	752.0	723.3	764.2	985.5
37.5°	951.7	948.5	942.1	913.4	880.3	870.7	849.6	823.5	784.6	823.5	1074.2
40°	998.9	995.1	992.5	982.3	958.7	952.3	942.1	911.5	859.2	888.5	1161.6
42.5°	1067.8	1059.5	1032.7	1032.1	1034.0	1039.1	1039.7	1005.9	940.8	969.6	1238.1
45°	1157.7	1134.8	1074.8	1072.9	1095.2	1108.6	1141.1	1112.4	1025.7	1052.5	1323.6
47.5°	1203.6	1180.0	1118.2	1114.3	1143.7	1163.5	1243.8	1215.8	1113.7	1145.6	1412.2
50°	1226.0	1210.7	1156.4	1168.6	1198.5	1217.7	1341.4	1319.1	1204.9	1246.4	1523.9
52.5°	1257.2	1231.7	1193.4	1219.0	1263.6	1283.4	1428.8	1425.0	1282.1	1356.1	1646.3
55°	1246.4	1233.0	1240.0	1274.5	1330.6	1359.9	1516.8	1516.8	1360.6	1473.5	1767.5
57.5°	1255.3	1246.4	1304.4	1335.0	1405.9	1448.0	1622.7	1594.7	1426.9	1571.7	1849.2
60°	1331.2	1305.7	1351.0	1411.6	1502.8	1543.6	1743.9	1676.3	1481.1	1656.5	1863.8
62.5°	1465.2	1444.8	1449.2	1518.8	1636.8	1684.0	1863.8	1748.4	1517.5	1692.3	1809.0
65°	1687.2	1677.6	1622.7	1664.8	1827.5	1870.2	2013.7	1810.9	1507.3	1665.5	1664.2
67.5°	1985.7	1947.4	1873.4	1911.0	2098.6	2141.9	2194.3	1834.5	1440.9	1505.4	1337.6
70°	2233.2	2201.3	2167.5	2266.3	2481.9	2505.5	2382.4	1812.2	1279.6	1178.1	896.8
72.5°	2390.7	2367.8	2399.0	2689.9	3035.0	2990.3	2568.0	1655.9	998.3	721.4	448.4
75°	2063.5	2052.6	2231.2	2821.3	3286.9	3270.3	2503.6	1239.4	579.2	317.7	204.1
77.5°	1037.8	1155.8	1344.0	2001.6	2615.2	2618.4	1824.3	595.8	243.7	178.0	140.3
80°	292.1	296.0	448.4	825.4	1305.7	1391.2	690.2	202.2	139.1	132.7	104.6
82.5°	69.5	64.4	114.8	244.3	438.2	456.1	207.3	72.7	77.8	82.9	64.4
85°	0.6	0.6	0.6	0.6	0.6	1.3	7.7	7.7	18.5	23.6	18.5
87.5°	0.0	0.0	0.0	0.6	0.6	0.6	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°	658.3	658.3	658.3	658.3	658.3	658.3	658.3	658.3	658.3	658.3	658.3
2.5°	657.6	664.0	674.2	683.2	690.8	696.5	705.5	706.8	709.3	710.6	711.9
5°	663.4	675.5	694.6	711.2	722.7	725.9	733.5	732.9	733.5	733.5	732.9
7.5°	671.0	687.6	714.4	732.9	739.3	737.4	735.5	728.4	722.7	720.1	717.0
10°	680.6	699.7	731.0	744.4	741.2	731.0	718.9	706.1	695.9	690.8	689.5
12.5°	690.2	715.0	744.4	748.2	735.5	717.0	696.5	682.5	669.1	662.1	662.1
15°	706.1	733.5	755.2	747.6	724.6	701.0	672.9	653.8	638.5	628.9	628.3
17.5°	725.3	754.6	766.7	744.4	711.2	678.0	644.2	619.4	599.6	590.0	584.3
20°	748.9	776.3	772.5	734.2	691.4	650.6	608.5	578.5	558.1	547.9	546.0
22.5°	775.6	798.6	774.4	717.6	664.7	612.3	566.4	536.4	523.0	515.4	516.0
25°	808.2	826.0	775.0	697.8	626.4	562.0	521.8	507.7	505.8	502.6	503.9
27.5°	849.0	854.7	772.5	671.0	577.3	509.0	485.4	491.2	496.3	494.3	495.6
30°	897.5	889.2	766.7	632.1	516.7	460.5	461.8	474.6	481.6	479.7	480.3
32.5°	954.2	923.6	755.9	584.9	459.3	431.2	441.4	454.2	461.2	461.2	461.8
35°	1018.0	965.1	734.8	523.7	419.1	413.3	422.3	432.5	436.9	434.4	436.3
37.5°	1085.0	1000.8	701.0	455.4	389.1	399.3	404.4	407.0	406.3	402.5	400.6
40°	1147.5	1028.9	640.4	387.8	364.2	384.6	387.2	380.2	371.9	364.9	360.4
42.5°	1195.4	1043.5	556.2	338.7	340.6	368.0	370.0	355.9	340.0	329.1	326.6
45°	1244.5	1048.6	472.7	299.2	315.1	351.5	356.6	337.4	315.7	303.0	301.1
47.5°	1300.6	1061.4	390.4	271.7	293.4	340.0	348.3	324.7	300.4	281.3	278.1
50°	1375.9	1085.6	328.5	250.7	278.1	334.2	345.7	314.5	283.8	262.8	260.2
52.5°	1471.6	1121.4	271.1	234.1	266.0	325.3	341.9	304.3	271.7	246.2	242.4
55°	1553.8	1134.8	234.1	220.1	253.2	314.5	338.7	300.4	258.3	229.6	225.2
57.5°	1591.5	1096.5	207.9	206.0	239.8	301.1	332.3	287.7	243.7	221.3	217.5
60°	1574.2	1001.4	188.2	193.3	224.5	283.8	315.7	274.9	233.5	215.0	211.1
62.5°	1497.7	891.7	173.5	181.2	207.3	262.2	296.6	263.4	224.5	207.9	202.8
65°	1363.1	771.2	162.7	170.3	192.0	241.1	281.3	250.0	214.3	197.7	193.3
67.5°	1112.4	613.6	151.2	159.5	179.2	223.9	267.3	239.2	202.8	192.0	188.2
70°	736.1	412.7	140.3	148.6	166.5	207.3	252.6	227.7	192.0	185.0	179.9
72.5°	338.1	222.0	128.8	137.1	151.8	188.8	234.1	210.5	177.3	172.9	165.2
75°	167.1	136.5	114.8	122.5	134.0	166.5	212.4	195.8	163.9	156.3	147.3
77.5°	121.8	102.1	98.9	106.5	116.1	147.3	189.4	180.5	150.5	139.7	134.6
80°	90.6	79.1	82.9	90.6	99.5	133.3	177.3	169.0	139.1	128.2	124.4
82.5°	55.5	52.9	63.8	72.7	83.6	122.5	169.0	154.4	125.0	114.8	110.4
85°	15.9	19.1	32.5	47.2	59.3	98.9	157.6	135.2	105.2	88.0	84.8
87.5°	0.0	1.9	10.2	21.7	35.1	65.7	121.2	105.9	80.4	65.1	62.5
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)