

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: P401948

Luminaire Tested: **ENT-SA1F-830-U-T3**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401948
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-13)
Test Lab: INNOVATION CENTER
Issue Date: 5/20/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENT-SA1F-830-U-T3
Description: ENTRI LED LUMINAIRE
(1) 80 CRI, 3000K, 1200mA LIGHTSQUARE WITH 16 LEDS AND TYPE III OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6299 lumens
Efficiency: N/A
Efficacy: 95.3 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G2

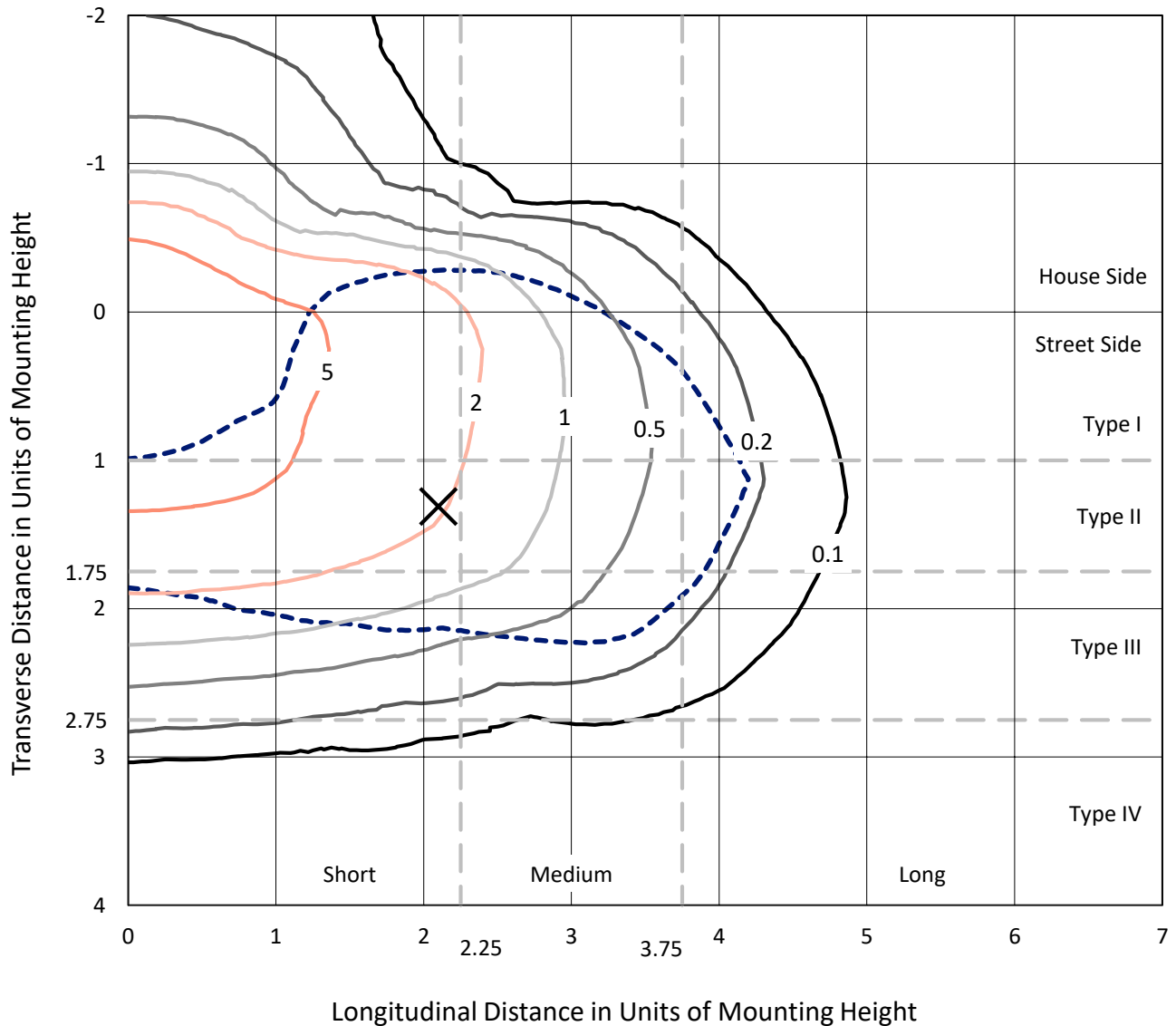
Input Watts (W): 66.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

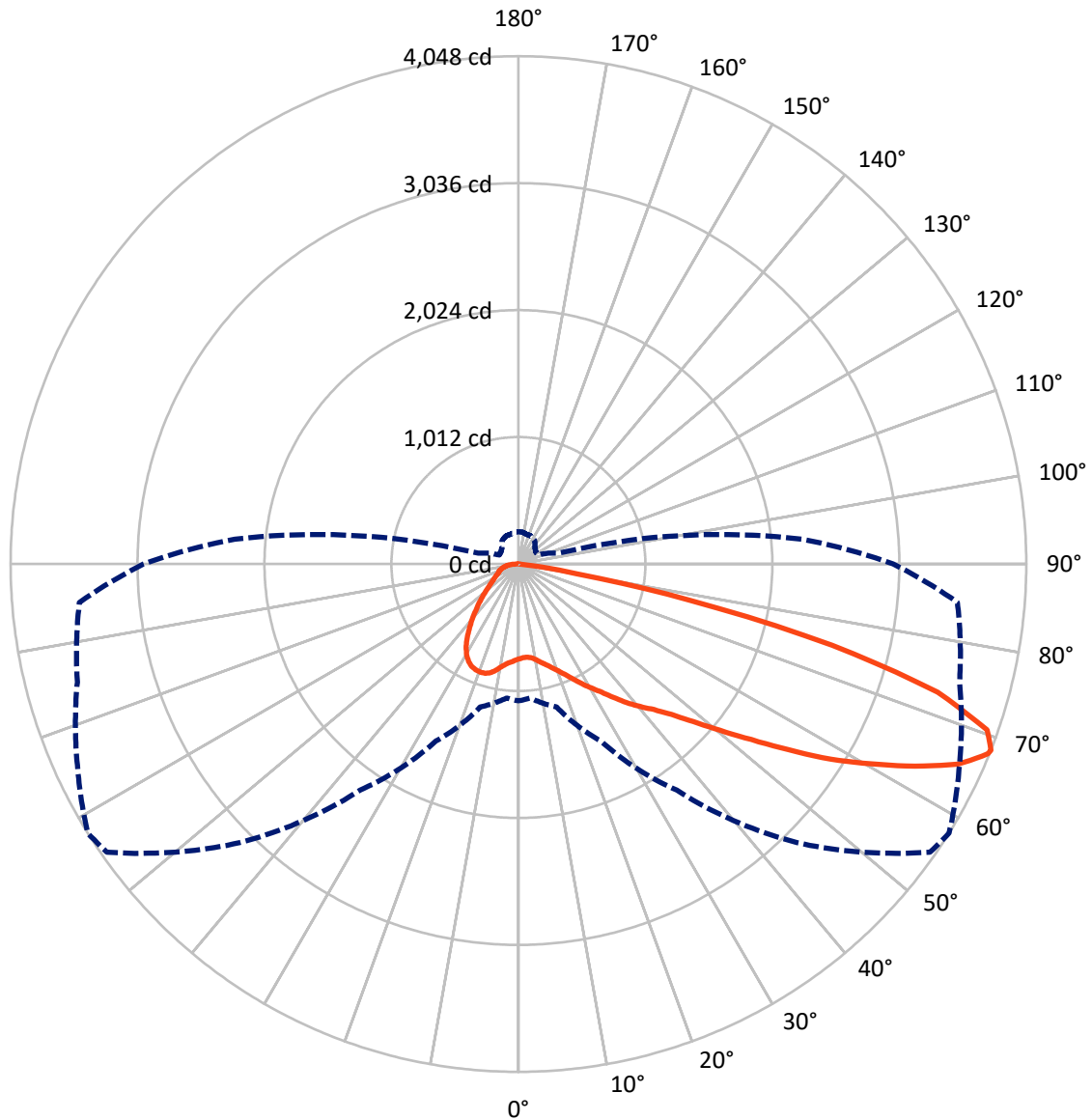
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 8.4 fc
 Type III - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral - - - Horizontal Cone Through 68-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1474.9	0.0	1474.9
	% Fixture	23.4	0.0	23.4
Street Side	Lumens	4824.1	0.0	4824.1
	% Fixture	76.6	0.0	76.6
Total	Lumens	6299.0	0.0	6299.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	74.5	1.2
10°-20°	243.7	3.9
20°-30°	438.2	7.0
30°-40°	643.8	10.2
40°-50°	944.2	15.0
50°-60°	1411.3	22.4
60°-70°	1650.3	26.2
70°-80°	813.6	12.9
80°-90°	79.4	1.3
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°	6299.0	100.0
0°-180°	6299.0	100.0



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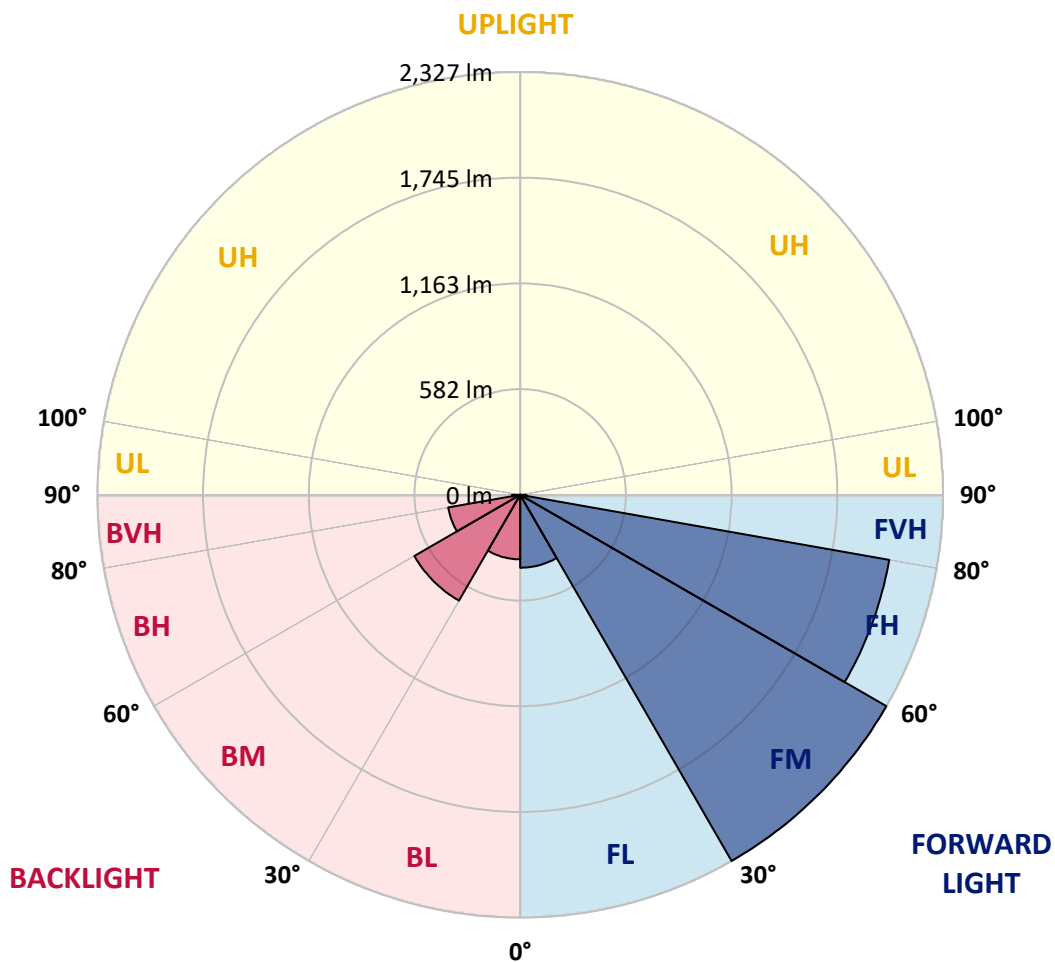
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	401.3	6.4			
FM	(30°-60°)	2326.6	36.9			
FH	(60°-80°)	2062.0	32.7			G2/5000
FVH	(80°-90°)	34.2	0.5			G1/100
BL	(0°-30°)	355.1	5.6	B1/500		
BM	(30°-60°)	672.7	10.7	B1/1000		
BH	(60°-80°)	401.9	6.4	B1/500		G1/500
BVH	(80°-90°)	45.2	0.7			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G2

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	756.4	756.4	756.4	756.4	756.4	756.4	756.4	756.4	756.4	756.4	756.4
2.5°	738.0	738.0	740.6	741.5	743.2	745.0	746.7	747.6	750.3	753.8	755.5
5°	731.8	732.7	734.4	735.3	738.0	741.5	744.1	745.9	750.3	757.3	761.7
7.5°	745.9	748.5	749.4	750.3	751.1	753.8	753.8	754.7	759.1	766.1	772.3
10°	768.7	770.5	773.1	775.8	778.4	780.2	774.9	775.8	777.5	784.6	793.4
12.5°	797.8	797.8	798.6	802.2	804.8	810.1	804.8	804.8	804.8	811.0	821.5
15°	830.3	828.5	828.5	832.1	832.9	836.5	833.8	833.8	837.3	843.5	854.1
17.5°	867.2	869.9	867.2	865.5	862.9	864.6	866.4	868.1	875.2	884.8	891.0
20°	920.9	925.3	923.5	916.5	905.1	899.8	906.0	909.5	923.5	935.0	935.9
22.5°	1006.2	1003.6	1000.9	988.6	965.8	951.7	952.6	957.8	979.8	997.4	988.6
25°	1085.4	1088.0	1088.0	1070.4	1040.5	1011.5	1014.1	1016.8	1038.8	1054.6	1030.8
27.5°	1181.3	1179.5	1178.6	1154.9	1118.8	1090.7	1075.7	1082.7	1098.6	1104.7	1059.0
30°	1280.6	1287.7	1280.6	1247.2	1212.9	1176.9	1147.0	1145.2	1153.1	1152.2	1092.4
32.5°	1400.3	1394.1	1391.5	1352.8	1309.7	1262.2	1224.4	1218.2	1213.8	1207.6	1132.0
35°	1492.6	1500.5	1500.5	1467.1	1416.1	1369.5	1310.5	1305.3	1294.7	1274.5	1183.9
37.5°	1601.7	1599.9	1606.1	1567.4	1516.4	1471.5	1417.0	1402.0	1378.3	1348.4	1245.5
40°	1708.1	1712.5	1726.6	1680.0	1633.3	1598.2	1520.8	1493.5	1457.4	1430.2	1335.2
42.5°	1853.2	1859.4	1864.7	1826.0	1770.6	1738.9	1619.3	1585.0	1564.7	1559.5	1453.9
45°	2029.2	2039.7	2044.1	2008.9	1977.3	1901.6	1743.3	1711.6	1689.6	1712.5	1615.8
47.5°	2198.0	2192.8	2213.0	2212.1	2215.6	2125.0	1921.8	1874.3	1853.2	1911.3	1801.3
50°	2293.0	2300.9	2344.9	2389.8	2452.2	2387.1	2128.5	2081.0	2056.4	2128.5	2019.5
52.5°	2342.3	2352.8	2411.8	2537.5	2670.4	2639.6	2377.5	2324.7	2303.6	2373.9	2253.4
55°	2346.7	2352.8	2432.0	2627.3	2836.6	2846.3	2661.6	2611.4	2582.4	2628.1	2508.5
57.5°	2273.7	2255.2	2391.5	2640.4	2943.0	3061.8	2973.8	2937.7	2855.9	2905.2	2825.2
60°	2143.5	2162.0	2295.7	2585.9	2987.9	3229.8	3286.9	3232.4	3137.4	3157.6	3166.4
62.5°	1946.5	1970.2	2109.2	2459.3	2951.8	3372.2	3576.3	3549.0	3421.5	3410.9	3426.8
65°	1665.9	1651.8	1806.6	2182.2	2781.2	3419.7	3860.4	3849.0	3696.8	3572.8	3578.9
67.5°	1201.5	1188.3	1296.5	1684.4	2319.4	3243.0	4011.7	4037.2	3863.0	3644.0	3549.0
68°	1090.7	1072.2	1180.4	1556.8	2200.7	3140.9	4003.8	4047.8	3875.4	3639.6	3512.1
70°	628.0	598.1	702.8	1015.9	1620.2	2644.0	3841.9	3963.3	3846.3	3554.3	3270.2
72.5°	197.0	197.0	271.8	410.8	795.1	1672.9	3286.9	3493.6	3518.3	3230.6	2717.9
75°	123.1	123.1	141.6	194.4	316.6	709.8	2267.5	2582.4	2795.3	2719.6	1981.7
77.5°	83.6	81.8	94.1	120.5	176.8	227.8	1138.2	1398.5	1709.9	1856.8	1159.3
80°	45.7	46.6	58.1	72.1	100.3	105.5	334.2	472.3	752.9	882.2	439.8
82.5°	26.4	25.5	28.1	31.7	44.0	45.7	95.9	117.9	197.0	182.9	117.9
85°	0.0	0.9	0.9	0.9	1.8	4.4	12.3	18.5	29.9	41.3	29.0
87.5°	0.0	0.0	0.0	0.0	0.9	0.9	1.8	1.8	1.8	1.8	2.6
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°	756.4	756.4	756.4	756.4	756.4	756.4	756.4	756.4	756.4	756.4	756.4
2.5°	757.3	759.9	764.3	767.9	769.6	767.9	774.0	773.1	774.9	774.9	776.7
5°	765.2	768.7	776.7	781.1	785.5	787.2	794.2	796.0	799.5	801.3	800.4
7.5°	776.7	781.1	790.7	798.6	804.8	809.2	820.6	825.9	831.2	832.9	834.7
10°	797.8	803.9	814.5	824.2	832.9	839.1	848.8	855.8	861.1	862.9	864.6
12.5°	825.9	832.9	846.1	859.3	869.0	872.5	871.6	869.9	869.9	869.0	869.9
15°	858.5	865.5	882.2	894.5	895.4	884.0	868.1	860.2	858.5	858.5	859.3
17.5°	896.3	905.1	915.6	922.7	906.0	877.8	859.3	851.4	849.7	848.8	847.0
20°	939.4	944.7	948.2	939.4	902.4	869.9	848.8	837.3	828.5	827.7	824.2
22.5°	985.1	983.4	979.0	947.3	892.8	851.4	822.4	801.3	789.8	789.0	785.5
25°	1018.5	1011.5	998.3	949.0	875.2	821.5	780.2	746.7	731.8	724.8	726.5
27.5°	1040.5	1025.6	1002.7	940.3	844.4	775.8	717.7	673.7	651.8	648.2	650.9
30°	1066.9	1043.2	1006.2	918.3	800.4	711.6	635.9	591.9	579.6	573.5	575.2
32.5°	1098.6	1067.8	1017.7	884.8	745.0	636.8	555.0	524.2	510.1	498.7	502.2
35°	1139.9	1101.2	1036.1	837.3	674.6	557.6	497.0	468.8	443.3	431.0	431.9
37.5°	1188.3	1144.3	1052.0	781.9	598.1	497.8	446.8	413.4	381.7	358.0	353.6
40°	1265.7	1229.6	1065.2	720.4	525.1	448.6	397.6	359.7	329.8	306.1	303.4
42.5°	1395.0	1332.5	1066.0	646.5	462.7	406.4	357.1	315.8	282.3	262.1	261.2
45°	1547.2	1450.4	1047.6	567.3	408.1	364.1	321.0	274.4	255.1	241.9	240.1
47.5°	1727.5	1585.9	1007.1	493.4	361.5	322.8	284.1	256.0	241.9	232.2	232.2
50°	1933.3	1745.1	966.6	430.1	316.6	289.4	263.0	248.0	237.5	228.7	227.8
52.5°	2165.5	1933.3	953.4	365.9	279.7	258.6	256.0	241.9	233.1	226.9	225.2
55°	2442.5	2144.4	965.8	315.8	250.7	246.3	251.6	240.1	234.0	224.3	221.6
57.5°	2762.7	2350.2	952.6	273.5	230.4	234.8	246.3	240.1	234.8	222.5	219.0
60°	3064.4	2534.0	862.9	238.4	211.1	220.8	239.2	232.2	224.3	221.6	219.9
62.5°	3226.2	2593.8	687.8	211.1	196.1	206.7	227.8	219.0	213.7	219.9	220.8
65°	3228.0	2526.1	505.7	190.9	183.8	194.4	216.4	213.7	217.3	231.3	234.0
67.5°	3048.6	2320.3	357.1	172.4	171.5	184.7	221.6	239.2	241.9	256.0	256.0
68°	2987.0	2269.3	331.6	169.8	168.9	184.7	226.0	243.6	245.4	258.6	257.7
70°	2649.2	1918.3	240.1	159.2	164.5	197.9	249.8	256.0	245.4	260.4	259.5
72.5°	2070.5	1418.7	179.4	147.8	156.6	195.3	251.6	245.4	229.6	233.1	228.7
75°	1399.4	904.2	147.8	135.5	139.0	165.4	228.7	231.3	212.9	209.3	204.1
77.5°	732.7	423.9	119.6	120.5	124.0	143.4	204.1	210.2	193.5	182.9	181.2
80°	270.0	168.0	97.6	106.4	108.2	125.8	175.0	184.7	168.9	161.0	159.2
82.5°	98.5	83.6	80.9	93.2	91.5	107.3	153.0	160.1	143.4	135.5	131.1
85°	27.3	30.8	51.0	73.0	71.2	83.6	123.1	129.3	115.2	95.0	92.4
87.5°	1.8	6.2	20.2	43.1	44.9	51.9	88.8	97.6	85.3	70.4	69.5
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)