

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: P401952

Luminaire Tested: **ENT-SA1F-830-U-T4W**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401952
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-17)
Test Lab: INNOVATION CENTER
Issue Date: 5/20/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENT-SA1F-830-U-T4W
Description: ENTRI LED LUMINAIRE
(1) 80 CRI, 3000K, 1200mA LIGHTSQUARE WITH 16 LEDS AND TYPE IV WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6187 lumens
Efficiency: N/A
Efficacy: 93.6 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - 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

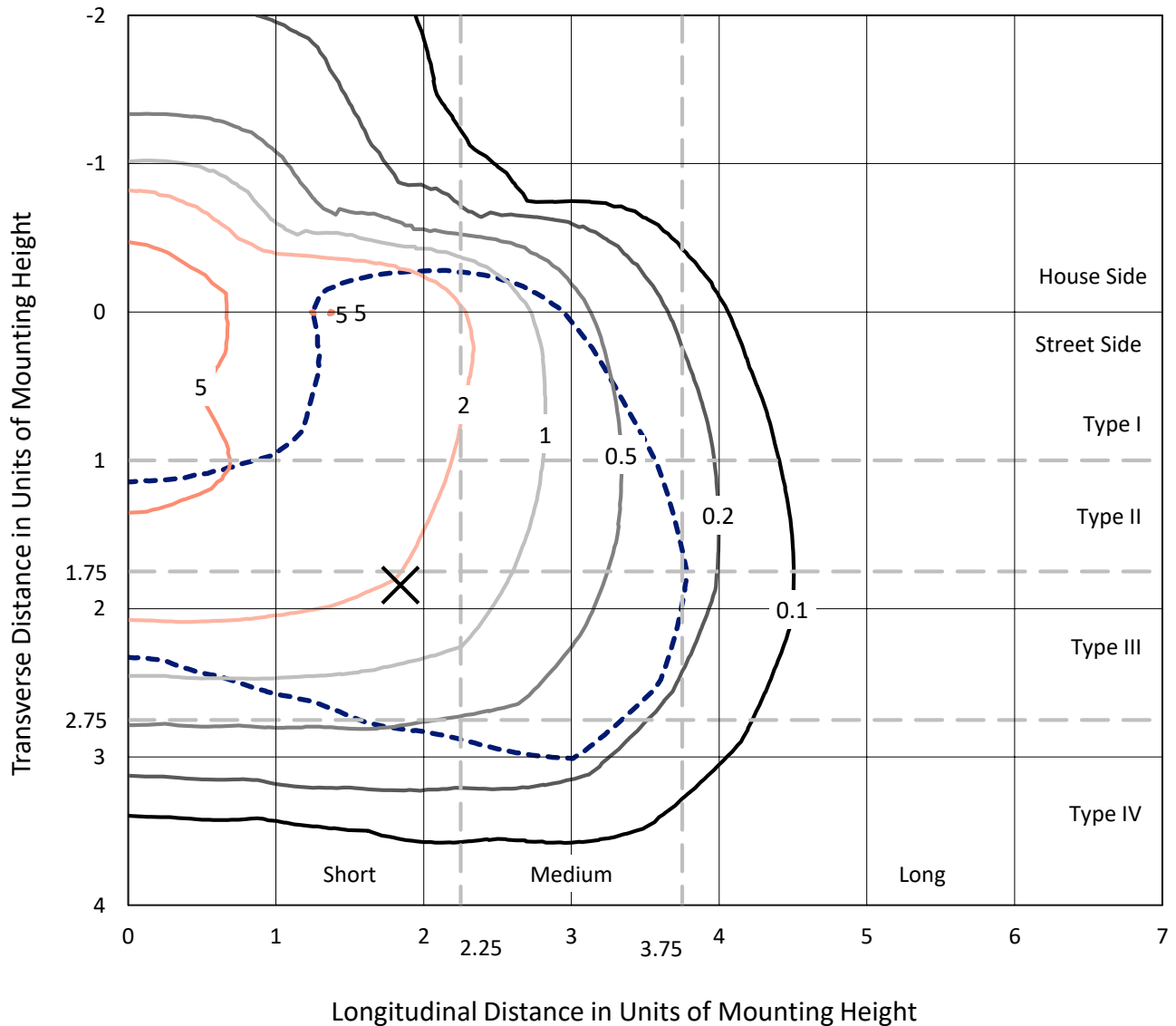


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

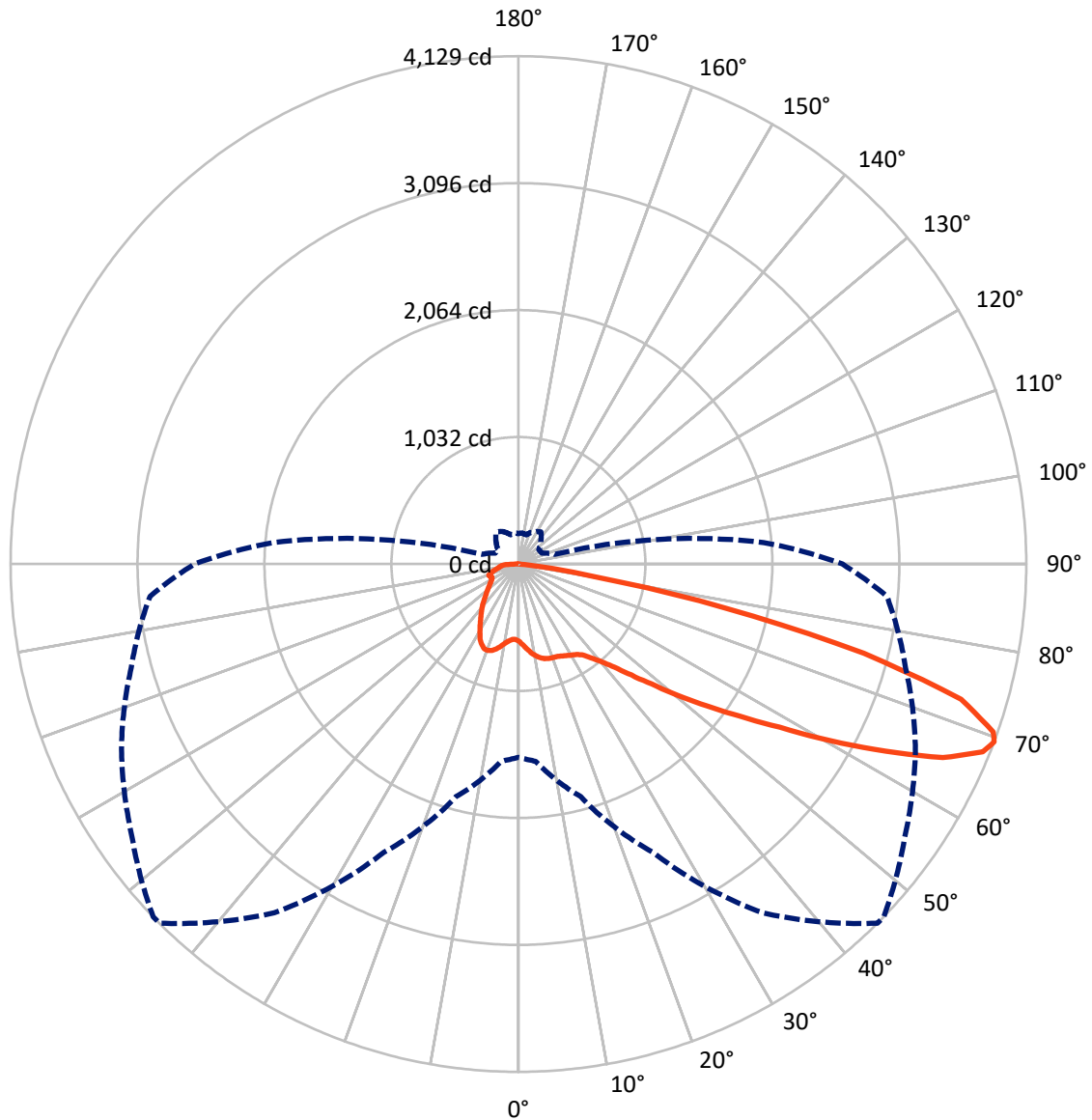


Based on 10 foot mounting height. Maximum calculated value = 7.7 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1456.7	0.0	1456.7
	% Fixture	23.5	0.0	23.5
Street Side	Lumens	4730.4	0.0	4730.4
	% Fixture	76.5	0.0	76.5
Total	Lumens	6187.0	0.0	6187.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	63.9	1.0
10°-20°	212.0	3.4
20°-30°	358.3	5.8
30°-40°	518.4	8.4
40°-50°	782.8	12.7
50°-60°	1319.9	21.3
60°-70°	1815.8	29.3
70°-80°	1006.2	16.3
80°-90°	109.5	1.8
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°	6187.0	100.0
0°-180°	6187.0	100.0



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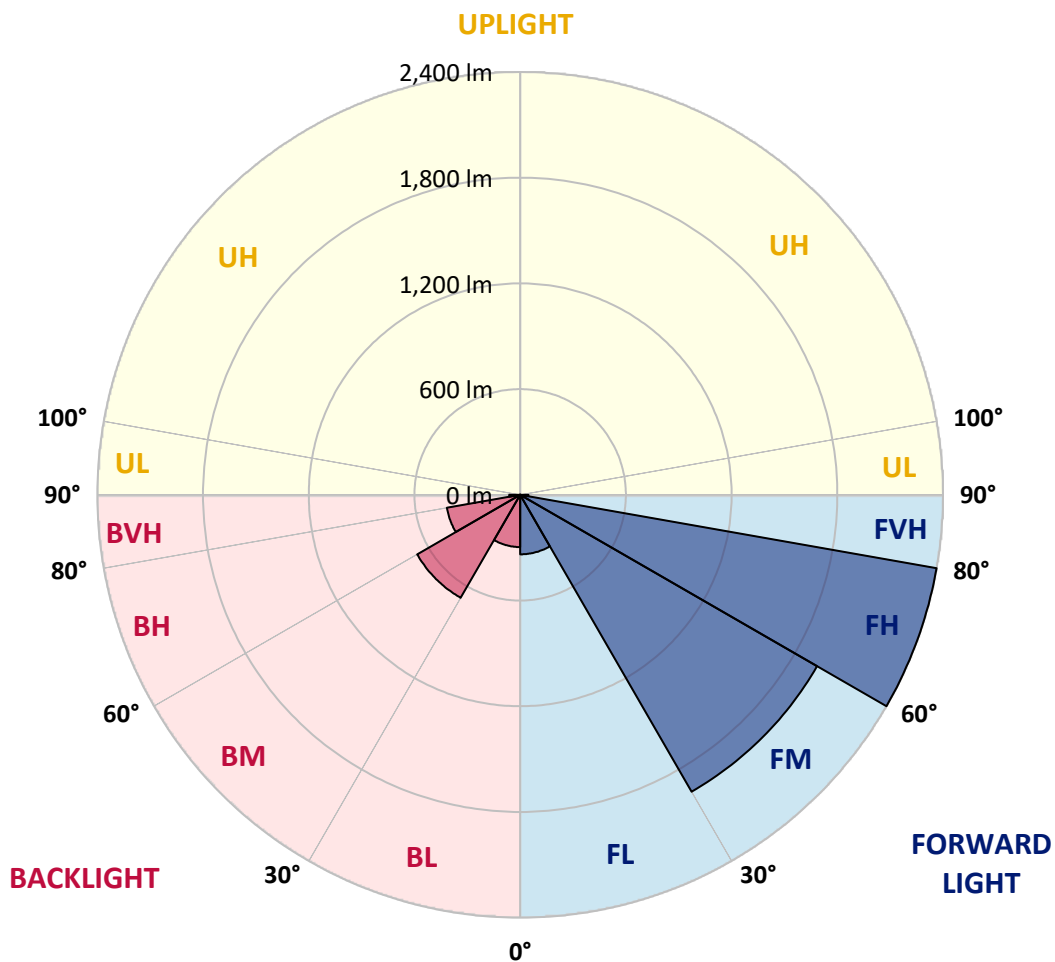
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	337.7	5.5			
FM	(30°-60°)	1945.9	31.5			
FH	(60°-80°)	2399.9	38.8			G2/5000
FVH	(80°-90°)	46.9	0.8			G1/100
BL	(0°-30°)	296.6	4.8	B1/500		
BM	(30°-60°)	675.2	10.9	B1/1000		
BH	(60°-80°)	422.2	6.8	B1/500		G1/500
BVH	(80°-90°)	62.6	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-G2

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	46°	55°	65°	75°	85°
0°	628.0	628.0	628.0	628.0	628.0	628.0	628.0	628.0	628.0	628.0	628.0
2.5°	667.6	666.7	667.6	664.1	660.5	655.3	653.5	647.3	642.9	636.8	631.5
5°	716.8	719.5	718.6	714.2	700.1	689.6	689.6	676.4	662.3	649.1	636.8
7.5°	770.5	770.5	765.2	756.4	742.3	726.5	724.7	707.2	686.9	668.5	649.1
10°	809.2	810.9	803.0	790.7	773.1	756.4	754.6	734.4	715.1	691.3	667.6
12.5°	836.4	836.4	829.4	818.0	796.9	781.0	779.3	760.8	740.6	715.9	688.7
15°	850.5	848.8	842.6	830.3	811.8	798.6	796.0	780.2	763.4	738.8	709.8
17.5°	847.9	847.9	842.6	830.3	817.1	806.5	804.8	793.3	781.0	757.3	728.3
20°	836.4	835.6	833.8	824.1	815.3	810.9	809.2	803.9	796.0	775.8	748.5
22.5°	825.9	825.0	822.4	816.2	812.7	815.3	815.3	814.5	813.6	797.7	771.4
25°	832.0	831.2	825.9	817.1	816.2	828.5	829.4	832.0	833.8	820.6	793.3
27.5°	875.1	872.5	857.6	834.7	826.8	842.6	844.4	852.3	850.5	836.4	812.7
30°	959.6	960.5	927.0	877.8	851.4	858.4	859.3	868.1	865.5	854.0	834.7
32.5°	1087.1	1087.1	1032.6	957.8	891.0	876.9	874.3	882.2	892.7	877.8	858.4
35°	1249.0	1244.6	1178.6	1063.4	958.7	908.6	906.8	903.3	921.8	907.7	879.5
37.5°	1411.7	1395.8	1331.6	1205.0	1053.7	970.1	963.1	952.5	963.1	933.2	908.6
40°	1542.7	1540.1	1487.3	1358.9	1166.3	1044.9	1039.6	993.0	1000.0	976.3	966.6
42.5°	1687.0	1688.7	1653.5	1524.3	1300.8	1146.0	1132.0	1059.9	1080.1	1071.3	1066.9
45°	1845.3	1843.5	1817.1	1681.7	1465.3	1286.8	1269.2	1180.3	1221.7	1216.4	1241.0
47.5°	1966.7	1976.3	1961.4	1865.5	1660.6	1457.4	1444.2	1336.0	1398.5	1440.7	1487.3
50°	2132.0	2131.1	2090.7	2051.1	1887.5	1675.5	1662.3	1541.8	1631.6	1693.1	1778.4
52.5°	2337.0	2329.9	2246.4	2232.3	2163.7	1913.9	1902.5	1776.7	1905.1	1958.7	2132.0
55°	2465.4	2464.5	2421.4	2446.0	2447.8	2179.5	2165.4	2053.7	2198.9	2260.4	2522.5
57.5°	2572.7	2573.5	2609.6	2695.8	2753.9	2502.3	2497.0	2360.7	2507.6	2593.8	2903.4
60°	2655.3	2672.9	2774.1	2971.1	3067.9	2913.9	2891.1	2746.8	2845.3	2879.6	3194.5
62.5°	2621.9	2644.8	2843.6	3133.8	3382.7	3350.2	3342.3	3133.8	3132.9	3115.3	3411.8
65°	2358.1	2407.3	2720.4	3127.7	3590.3	3793.5	3782.0	3498.8	3400.3	3312.4	3476.8
67.5°	1929.7	1940.3	2317.6	2888.4	3588.5	4072.3	4060.0	3764.5	3566.6	3351.1	3286.0
69°	1570.9	1609.6	1958.7	2585.9	3461.9	4128.6	4128.6	3838.3	3560.4	3258.7	3006.3
70°	1358.9	1360.7	1697.5	2344.9	3289.5	4095.2	4103.1	3838.3	3510.3	3138.2	2758.3
72.5°	636.8	676.4	889.2	1530.4	2657.1	3764.5	3783.8	3585.0	3219.1	2703.7	2069.6
75°	190.9	197.9	296.4	725.6	1522.5	2899.9	2943.0	2982.5	2621.9	1990.4	1274.5
77.5°	113.5	112.6	143.4	246.3	704.5	1719.5	1738.9	1907.7	1701.0	1106.5	578.7
80°	55.4	57.2	76.5	119.6	263.9	624.5	686.9	891.9	753.8	432.7	212.0
82.5°	18.5	20.2	31.7	48.4	111.7	201.4	222.5	279.7	241.0	157.4	90.6
85°	0.0	0.0	0.9	1.8	6.2	15.0	15.0	33.4	50.1	55.4	29.9
87.5°	0.0	0.0	0.9	0.9	1.8	1.8	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°	628.0	628.0	628.0	628.0	628.0	628.0	628.0	628.0	628.0	628.0	628.0
2.5°	628.9	627.1	623.6	620.1	618.3	613.9	614.8	613.0	612.2	612.2	613.0
5°	630.6	628.0	622.7	619.2	615.7	613.9	618.3	620.1	621.8	621.8	622.7
7.5°	641.2	635.9	629.8	625.4	626.2	628.9	635.9	641.2	643.8	645.6	647.3
10°	658.8	652.6	643.8	642.9	644.7	651.7	661.4	669.3	676.4	680.8	680.8
12.5°	677.2	669.3	662.3	664.1	672.0	682.5	692.2	701.0	707.2	711.6	712.4
15°	697.5	689.6	682.5	686.9	700.1	712.4	721.2	724.7	727.4	731.8	732.7
17.5°	715.9	708.9	702.8	714.2	725.6	735.3	737.9	736.2	732.7	735.3	737.1
20°	735.3	729.1	725.6	737.9	745.9	746.7	739.7	731.8	723.0	723.0	723.9
22.5°	759.0	751.1	749.4	755.5	752.9	742.3	724.7	712.4	700.1	698.4	701.0
25°	781.9	774.0	773.1	768.7	745.9	718.6	694.8	680.8	671.1	672.0	677.2
27.5°	804.8	799.5	800.4	776.6	725.6	684.3	652.6	641.2	643.8	645.6	650.9
30°	827.7	827.7	831.2	776.6	697.5	635.9	606.0	605.1	612.2	617.4	623.6
32.5°	854.0	862.0	855.8	767.0	659.7	586.7	562.9	564.7	572.6	581.4	586.7
35°	879.5	898.0	880.4	745.0	607.8	541.8	522.4	519.8	526.0	533.9	536.5
37.5°	920.0	949.9	901.5	710.7	554.1	502.2	482.9	475.8	469.7	475.8	475.0
40°	990.4	1026.4	917.4	653.5	502.2	465.3	445.0	431.9	416.9	403.7	403.7
42.5°	1102.9	1126.7	926.2	584.0	450.3	428.3	408.1	388.8	365.9	342.1	342.1
45°	1286.8	1292.1	929.7	510.1	402.8	391.4	370.3	351.8	321.9	298.2	292.9
47.5°	1532.2	1509.3	938.5	438.9	361.5	358.9	341.3	320.2	287.6	265.6	263.0
50°	1862.0	1763.5	977.2	381.7	328.1	330.7	317.5	292.9	262.1	246.3	242.8
52.5°	2233.2	2084.5	1007.1	336.0	299.0	307.0	297.3	273.5	247.2	234.0	231.3
55°	2638.6	2393.2	1000.0	305.2	277.1	285.9	282.3	262.1	238.4	226.9	224.3
57.5°	2969.3	2610.5	938.5	277.9	255.1	267.4	270.9	255.1	233.1	222.5	219.9
60°	3217.4	2729.2	811.8	255.1	237.5	252.4	262.1	250.7	232.2	226.0	223.4
62.5°	3330.0	2718.7	647.3	237.5	224.3	241.9	263.0	257.7	245.4	249.8	250.7
65°	3266.6	2585.9	485.5	224.3	216.4	243.6	277.9	277.9	259.5	267.4	268.3
67.5°	2942.1	2238.4	353.6	214.6	208.5	252.4	306.1	288.5	253.3	259.5	256.8
69°	2633.4	2002.7	303.4	209.3	202.3	256.8	318.4	290.2	246.3	253.3	246.3
70°	2406.4	1789.9	272.7	204.9	199.7	256.8	321.9	288.5	242.8	248.0	240.1
72.5°	1712.5	1242.8	224.3	196.1	190.0	237.5	315.8	278.8	233.1	226.9	212.0
75°	995.6	686.9	190.9	186.5	168.0	208.5	299.9	268.3	223.4	212.0	201.4
77.5°	417.8	307.0	162.7	169.8	148.6	185.6	280.6	257.7	212.0	196.1	190.9
80°	169.8	153.0	135.4	146.9	129.3	163.6	258.6	240.1	195.3	179.4	171.5
82.5°	88.8	84.4	103.8	118.7	107.3	150.4	243.6	227.8	181.2	165.4	155.7
85°	26.4	35.2	58.9	80.9	81.8	135.4	236.6	211.1	157.4	136.3	134.6
87.5°	1.8	7.0	20.2	42.2	53.7	103.8	191.7	173.3	127.5	107.3	108.2
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)