

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: LUMARK

Report Number: P196387

Luminaire Tested: **NAV-AF-01-D-UNV-T4W-1200**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196387  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24127)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-AF-01-D-UNV-T4W-1200  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(1) 70 CRI, 4000K, 1200mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6775 lumens  
Efficiency: N/A  
Efficacy: 101.1 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

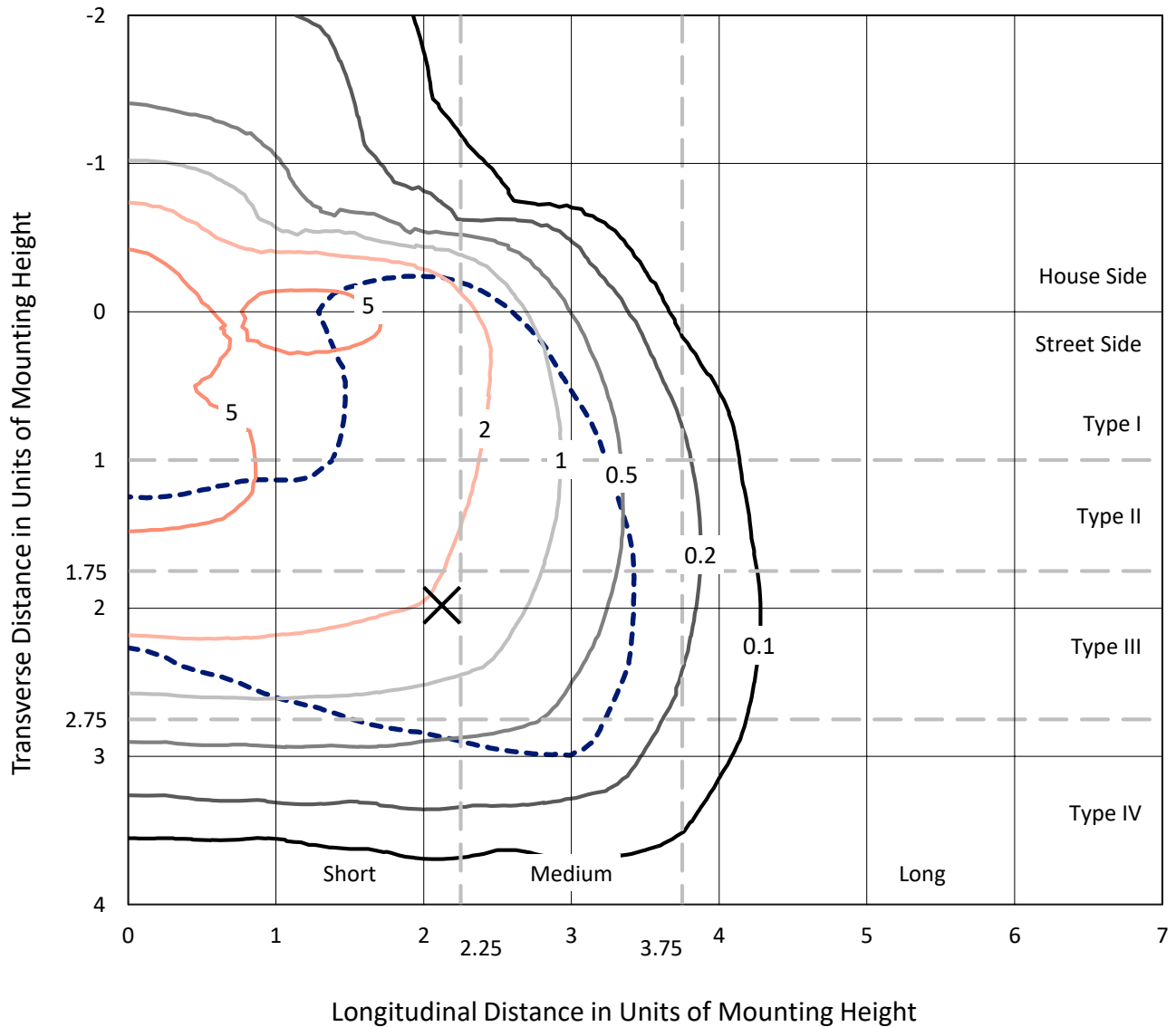
Input Watts (W): 67  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

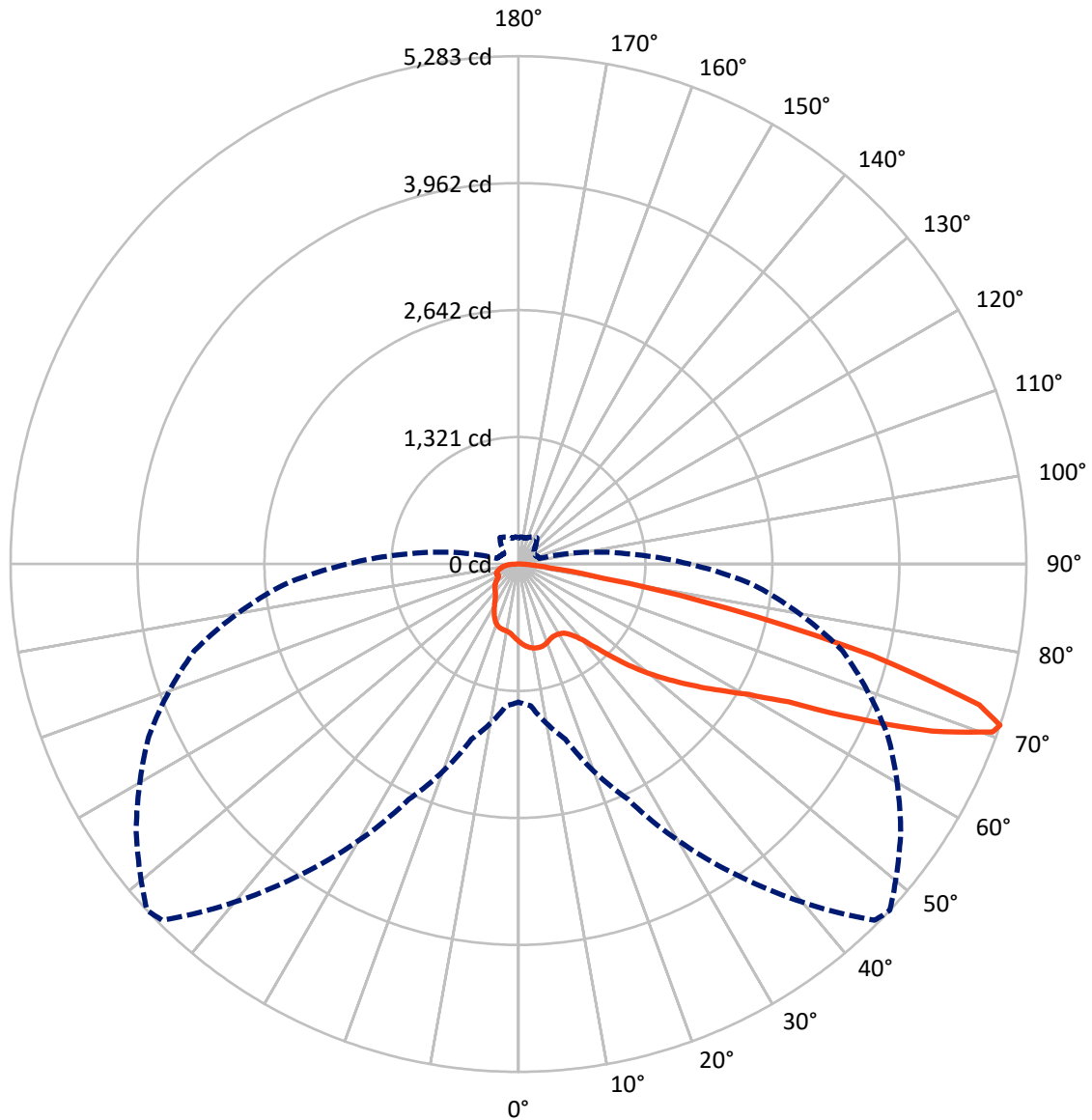
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 9.2 fc  
 Type IV - Short - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 47-Deg Lateral    - - - Horizontal Cone Through 71-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1452.0	0.0	1452.0
	% Fixture	21.4	0.0	21.4
<b>Street Side</b>	Lumens	5323.0	0.0	5323.0
	% Fixture	78.6	0.0	78.6
<b>Total</b>	Lumens	6775.0	0.0	6775.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	76.9	1.1
10°-20°	225.0	3.3
20°-30°	334.4	4.9
30°-40°	480.2	7.1
40°-50°	851.4	12.6
50°-60°	1456.8	21.5
60°-70°	2068.1	30.5
70°-80°	1132.7	16.7
80°-90°	149.5	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°	6775.0	100.0
0°-180°	6775.0	100.0



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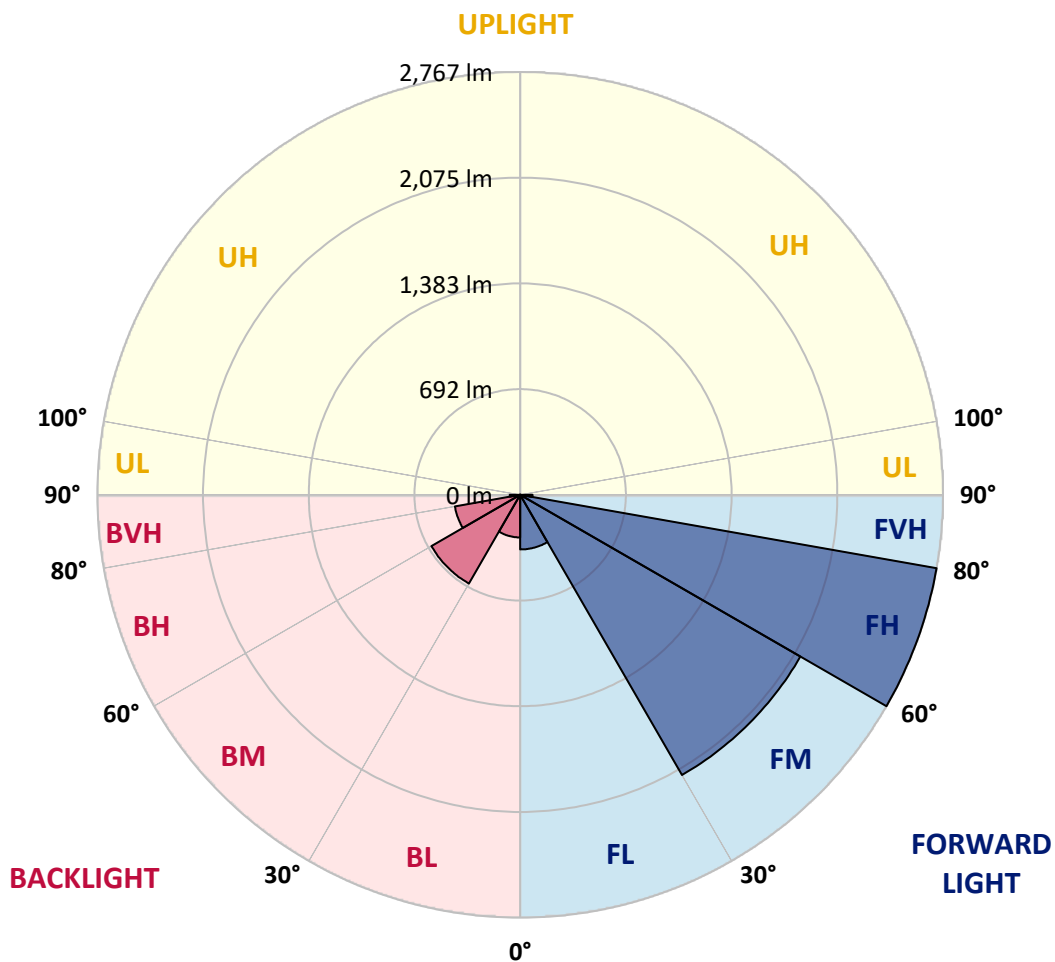
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	357.6	5.3			
FM	(30°-60°)	2117.4	31.3			
FH	(60°-80°)	2767.0	40.8			G2/5000
FVH	(80°-90°)	81.1	1.2			G1/100
BL	(0°-30°)	278.8	4.1	B1/500		
BM	(30°-60°)	670.9	9.9	B1/1000		
BH	(60°-80°)	433.8	6.4	B1/500		G1/500
BVH	(80°-90°)	68.4	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°	47°	55°	65°	75°	85°
0°	805.7	805.7	805.7	805.7	805.7	805.7	805.7	805.7	805.7	805.7	805.7
2.5°	854.9	853.0	854.0	850.9	843.4	835.5	835.5	827.2	818.4	809.6	799.9
5°	908.0	905.3	903.2	893.4	879.0	862.8	860.1	843.4	825.4	807.4	789.8
7.5°	952.3	949.7	943.1	925.6	904.5	880.2	877.2	855.3	831.6	806.5	781.9
10°	983.9	982.1	969.5	947.0	922.5	894.0	888.6	866.2	838.1	807.0	775.8
12.5°	1001.5	998.8	983.5	957.2	928.1	899.2	894.0	872.4	840.4	806.1	769.7
15°	994.4	993.2	978.7	951.9	922.9	897.8	893.4	871.6	839.0	803.0	763.9
17.5°	964.6	967.7	956.3	929.9	906.2	888.6	883.8	863.2	832.5	795.5	755.1
20°	923.3	926.8	921.2	894.4	880.8	869.3	866.6	850.0	821.4	784.6	744.6
22.5°	879.4	882.5	882.9	857.9	853.6	849.2	846.9	835.0	811.8	778.0	737.6
25°	849.2	852.6	853.6	831.6	834.2	835.5	835.0	826.7	810.1	778.0	738.5
27.5°	841.3	843.0	842.1	821.9	826.7	834.2	834.6	832.9	817.0	786.8	750.7
30°	868.5	869.3	858.4	828.1	832.9	842.5	843.0	842.1	832.0	809.6	778.5
32.5°	986.1	985.2	947.5	869.3	852.6	856.1	857.4	865.4	866.2	847.4	818.4
35°	1165.2	1164.8	1120.9	987.5	908.8	890.4	892.1	904.5	915.4	902.7	886.0
37.5°	1362.4	1363.7	1336.9	1156.0	1030.0	953.2	951.4	960.7	980.4	984.8	986.9
40°	1581.1	1587.6	1586.3	1349.7	1199.9	1060.3	1042.8	1032.3	1070.4	1094.6	1125.8
42.5°	1830.9	1829.1	1830.0	1562.1	1394.0	1228.9	1196.4	1147.2	1191.6	1233.3	1301.8
45°	2045.6	2052.6	2057.9	1788.2	1611.4	1421.7	1388.8	1299.1	1339.1	1401.4	1506.0
47.5°	2261.5	2249.3	2258.9	2039.9	1853.3	1641.6	1599.1	1478.3	1515.6	1603.4	1762.3
50°	2513.2	2507.5	2463.6	2368.2	2145.6	1864.6	1808.9	1665.4	1719.8	1837.0	2078.9
52.5°	2738.8	2708.1	2673.8	2626.4	2433.2	2090.3	2019.6	1859.8	1960.0	2105.2	2471.9
55°	2821.4	2800.7	2842.0	2903.4	2737.5	2320.4	2241.4	2086.8	2230.9	2412.1	2934.2
57.5°	2909.2	2916.2	3009.3	3133.5	3025.5	2565.9	2480.2	2355.5	2528.0	2755.5	3450.9
60°	2953.1	2981.2	3166.9	3400.0	3299.5	2835.0	2752.9	2664.2	2857.8	3134.8	3966.4
62.5°	2960.5	2998.3	3261.3	3493.6	3676.6	3247.3	3152.4	3056.3	3269.7	3554.1	4339.6
65°	2823.5	2881.6	3253.0	3608.6	4020.4	3936.1	3876.0	3708.2	3821.0	3923.3	4403.3
67.5°	2420.9	2484.1	2931.2	3561.2	4296.1	4650.8	4639.5	4391.8	4247.0	4066.0	3931.3
70°	1776.9	1827.8	2257.1	3044.4	4175.8	5212.0	5232.2	4834.9	4366.0	3763.1	2923.2
71°	1437.0	1480.9	1885.7	2702.8	3941.3	5241.0	5283.1	4854.6	4242.1	3489.6	2447.3
72.5°	894.4	918.9	1252.2	2039.9	3393.8	4942.4	5013.6	4601.7	3852.2	2949.6	1729.9
75°	337.7	347.3	464.5	899.6	2025.7	3713.1	3799.1	3477.7	2706.3	1683.8	724.0
77.5°	181.4	186.2	230.5	374.1	811.8	2128.6	2239.1	1983.6	1298.3	589.2	295.9
80°	121.6	124.7	159.4	221.7	373.2	810.5	902.7	796.5	486.0	336.3	210.7
82.5°	78.6	80.3	108.4	145.8	241.0	285.0	325.3	339.8	303.4	241.0	127.4
85°	51.8	53.1	71.6	93.1	149.2	140.5	144.0	188.3	206.8	159.0	65.0
87.5°	29.9	30.7	43.1	47.9	67.2	52.7	57.1	89.6	123.0	103.6	37.3
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°	805.7	805.7	805.7	805.7	805.7	805.7	805.7	805.7	805.7	805.7	805.7
2.5°	795.5	792.1	784.2	779.3	777.1	776.2	775.4	777.1	777.1	776.2	774.5
5°	781.1	774.5	761.3	752.1	747.3	745.9	747.7	749.9	751.3	751.3	749.9
7.5°	770.5	760.9	743.3	730.6	723.1	720.9	725.8	733.7	738.9	741.5	742.0
10°	761.8	748.6	729.3	716.1	709.9	709.1	715.2	725.3	736.3	741.1	742.0
12.5°	753.8	738.9	717.8	705.5	701.1	703.4	711.7	720.9	733.7	740.7	741.1
15°	746.3	731.0	708.6	695.9	695.0	698.6	706.4	713.9	723.5	732.3	732.3
17.5°	737.6	720.9	697.7	685.8	685.8	688.9	694.2	698.1	704.2	712.6	712.2
20°	727.1	709.9	686.2	673.9	671.3	669.5	669.5	670.4	675.7	683.1	684.5
22.5°	719.1	701.6	676.6	661.6	649.8	638.4	633.5	631.8	636.6	643.6	645.4
25°	719.1	701.6	673.5	648.4	619.5	597.5	588.3	585.7	590.5	597.1	599.8
27.5°	731.0	713.5	680.6	636.6	583.5	548.4	537.4	535.2	539.6	544.8	547.5
30°	758.7	741.5	700.7	623.0	543.6	497.5	485.2	482.9	485.2	487.3	490.4
32.5°	804.8	790.3	733.7	610.7	503.2	451.3	436.4	432.9	433.8	434.2	436.9
35°	879.8	873.3	777.5	596.3	464.9	413.6	398.2	391.2	390.8	392.9	396.0
37.5°	994.9	998.8	834.2	575.2	433.3	386.8	371.4	364.4	360.9	365.3	368.8
40°	1157.4	1166.6	899.6	546.7	407.4	371.0	354.8	348.2	343.3	342.0	343.8
42.5°	1368.5	1365.8	966.4	510.1	379.3	360.5	343.3	336.3	328.4	318.3	316.1
45°	1618.8	1581.1	1022.1	465.4	347.3	350.4	332.8	323.2	310.9	295.9	294.2
47.5°	1914.2	1810.2	1056.4	417.6	317.4	337.2	320.9	306.1	288.1	278.3	277.0
50°	2270.3	2078.4	1080.5	368.8	290.6	320.5	304.2	284.5	267.0	264.3	263.9
52.5°	2691.8	2395.0	1110.4	324.9	269.5	299.0	287.6	267.4	253.3	254.6	254.6
55°	3140.2	2722.6	1111.2	290.2	251.1	273.9	275.3	259.0	248.1	252.5	253.8
57.5°	3548.8	3008.8	1023.9	265.7	233.5	254.2	271.3	262.1	253.8	269.1	270.5
60°	3905.4	3229.3	836.0	245.4	219.1	246.7	280.1	281.0	279.3	320.9	324.1
62.5°	4035.7	3231.4	593.6	228.3	211.1	251.1	298.6	299.8	299.8	338.5	344.2
65°	3853.1	2962.3	395.2	218.2	205.9	260.8	313.5	307.8	294.2	320.9	314.8
67.5°	3209.5	2305.9	288.9	211.6	198.5	261.3	326.6	312.2	288.9	311.7	301.2
70°	2205.8	1467.3	241.9	205.5	189.7	249.8	333.7	310.9	281.0	290.6	276.6
71°	1775.5	1171.0	229.7	203.3	186.2	243.3	334.6	309.1	277.0	283.2	270.5
72.5°	1169.6	721.4	214.7	198.5	180.9	231.8	332.4	305.1	271.8	272.2	263.9
75°	461.5	299.0	193.1	187.5	165.9	213.4	322.7	296.8	261.7	252.9	249.4
77.5°	233.1	195.4	169.9	172.1	148.4	194.5	309.1	283.2	247.7	235.8	233.1
80°	170.3	148.4	145.4	149.2	128.7	176.0	292.0	264.7	229.7	241.9	236.6
82.5°	103.6	90.4	113.8	123.4	107.6	157.2	271.8	243.3	206.8	190.6	184.4
85°	49.2	53.1	82.1	90.8	79.5	125.6	248.5	219.5	180.4	155.9	158.5
87.5°	24.1	29.5	47.0	54.4	52.3	92.2	187.5	170.3	142.3	117.2	114.6
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)