

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: P270320

Luminaire Tested: **NAV-AF-01-D-UNV-T4W-7027-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270320
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-7027-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 2700K, 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: 5754.4 lumens
Efficiency: N/A
Efficacy: 85.9 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

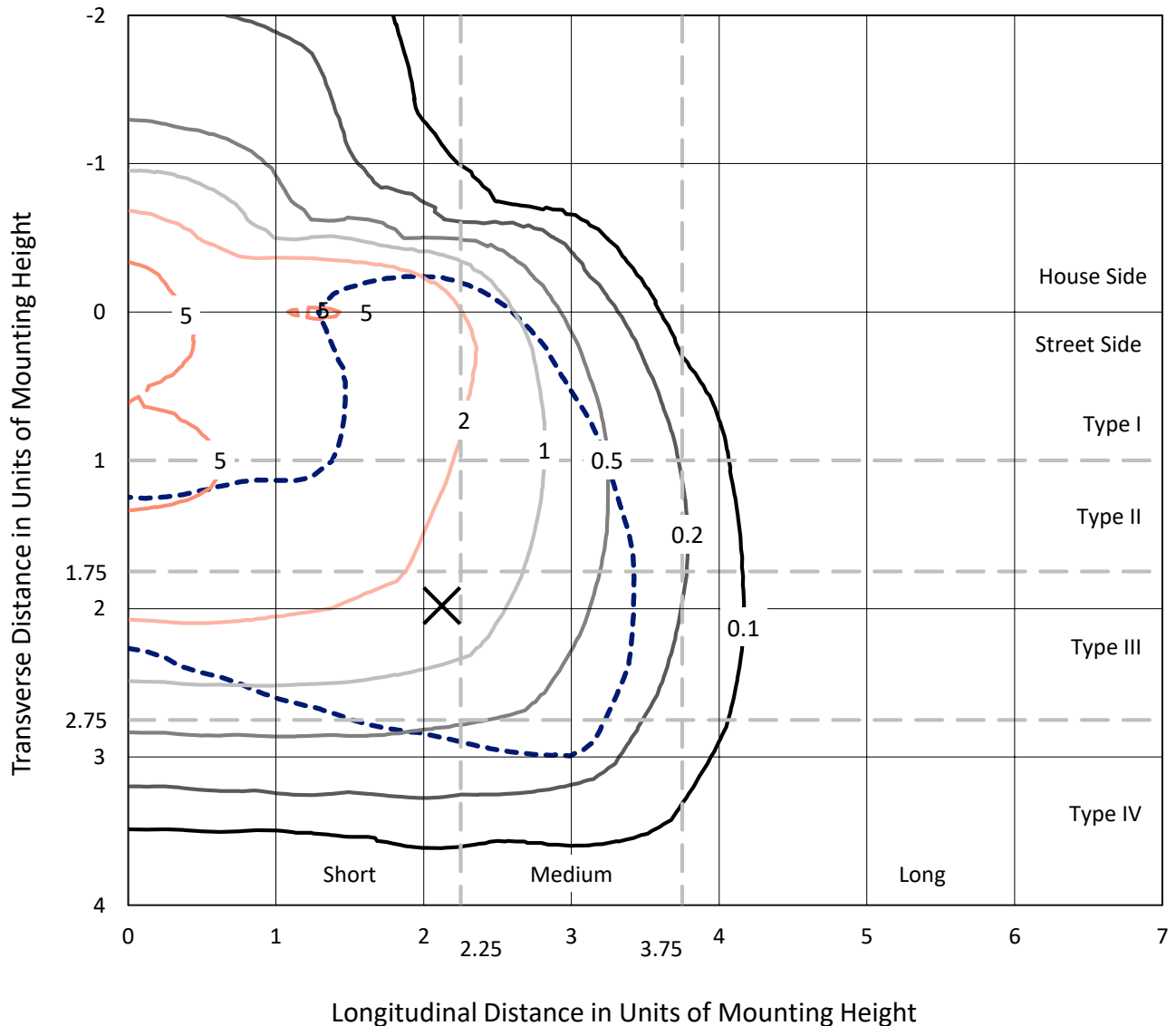


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Iso-Footcandle Lines of Horizontal Illumination

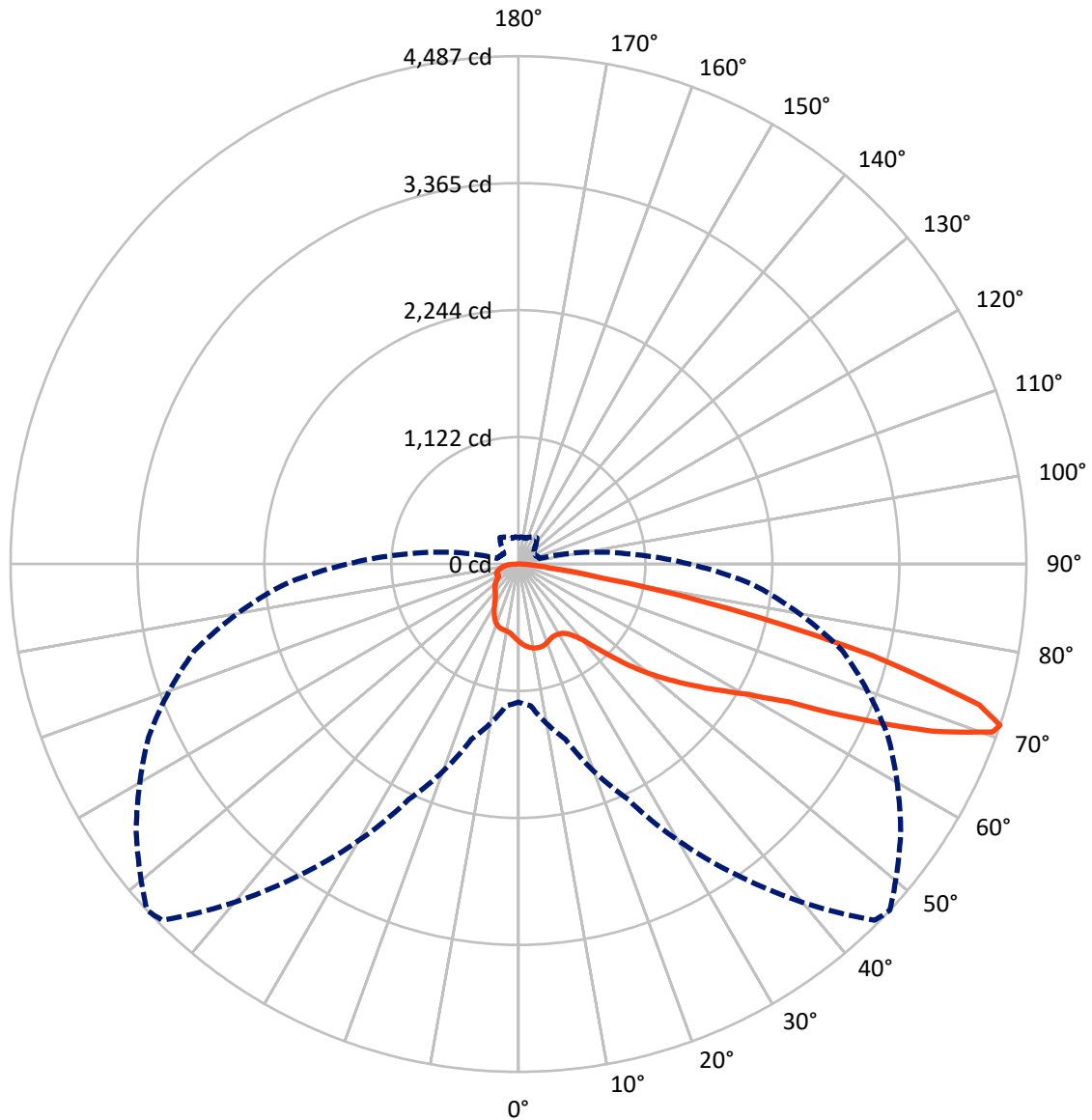
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 7.8 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
House Side	Lumens	1233.2	0.0	1233.2
	% Fixture	21.4	0.0	21.4
Street Side	Lumens	4521.2	0.0	4521.2
	% Fixture	78.6	0.0	78.6
Total	Lumens	5754.4	0.0	5754.4
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	65.3	1.1
10°-20°	191.1	3.3
20°-30°	284.0	4.9
30°-40°	407.8	7.1
40°-50°	723.1	12.6
50°-60°	1237.3	21.5
60°-70°	1756.6	30.5
70°-80°	962.1	16.7
80°-90°	127.0	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°	5754.4	100.0
0°-180°	5754.4	100.0



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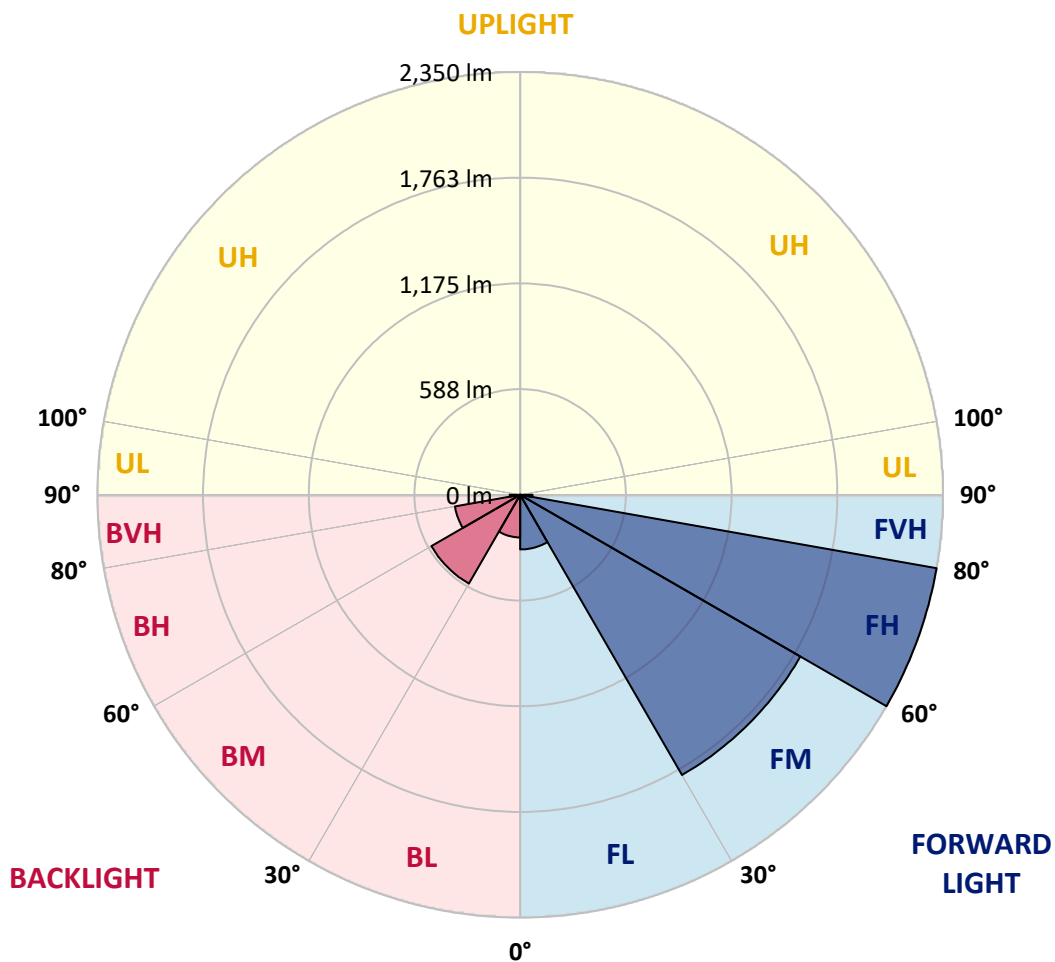
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	303.7	5.3			
FM	(30°-60°)	1798.4	31.3			
FH	(60°-80°)	2350.2	40.8			G2/5000
FVH	(80°-90°)	68.9	1.2			G1/100
BL	(0°-30°)	236.8	4.1	B1/500		
BM	(30°-60°)	569.8	9.9	B1/1000		
BH	(60°-80°)	368.5	6.4	B1/500		G1/500
BVH	(80°-90°)	58.1	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°	684.2	684.2	684.2	684.2	684.2	684.2	684.2	684.2	684.2	684.2	684.2
2.5°	726.1	724.6	725.3	722.6	716.4	709.7	709.7	702.6	695.1	687.7	679.5
5°	771.1	768.9	767.2	758.9	746.6	732.7	730.5	716.4	701.0	685.8	670.9
7.5°	808.8	806.6	801.0	786.0	768.2	747.7	745.1	726.4	706.2	685.0	664.1
10°	835.8	834.2	823.3	804.4	783.5	759.2	754.8	735.7	711.8	685.3	658.9
12.5°	850.7	848.4	835.3	813.0	788.4	763.6	759.2	741.0	713.8	684.7	653.7
15°	844.6	843.5	831.2	808.5	784.0	762.7	758.9	740.3	712.6	682.1	648.8
17.5°	819.3	821.9	812.2	789.8	769.7	754.8	750.7	733.1	707.1	675.7	641.4
20°	784.2	787.3	782.3	759.6	748.1	738.3	736.2	722.0	697.8	666.5	632.4
22.5°	746.9	749.5	749.9	728.6	724.9	721.2	719.4	709.3	689.4	660.9	626.5
25°	721.2	724.3	724.9	706.2	708.6	709.7	709.3	702.1	688.0	660.9	627.2
27.5°	714.5	715.9	715.2	698.2	702.1	708.6	708.9	707.4	694.0	668.2	637.6
30°	737.6	738.3	729.1	703.4	707.4	715.6	715.9	715.2	706.6	687.7	661.2
32.5°	837.6	836.9	804.7	738.3	724.3	727.2	728.3	735.1	735.7	719.7	695.1
35°	989.8	989.4	952.1	838.7	772.0	756.3	757.8	768.2	777.6	766.8	752.5
37.5°	1157.1	1158.3	1135.5	981.8	874.9	809.6	808.1	815.9	832.6	836.4	838.3
40°	1342.8	1348.4	1347.4	1146.3	1019.1	900.6	885.6	876.7	909.2	929.7	956.2
42.5°	1555.1	1553.6	1554.2	1326.8	1184.0	1043.8	1016.3	974.4	1012.1	1047.6	1105.8
45°	1737.4	1743.4	1747.8	1518.9	1368.6	1207.5	1179.6	1103.5	1137.3	1190.3	1279.0
47.5°	1920.8	1910.4	1918.6	1732.6	1574.1	1394.3	1358.1	1255.7	1287.4	1361.9	1496.8
50°	2134.6	2129.7	2092.4	2011.6	1822.4	1583.7	1536.5	1414.6	1460.7	1560.3	1765.8
52.5°	2326.3	2300.1	2271.1	2230.9	2066.7	1775.4	1715.5	1579.7	1664.6	1788.2	2099.5
55°	2396.4	2378.8	2413.8	2466.0	2325.2	1970.8	1903.7	1772.4	1894.7	2048.8	2492.2
57.5°	2471.0	2476.8	2555.9	2661.5	2569.7	2179.3	2106.5	2000.6	2147.3	2340.4	2931.1
60°	2508.2	2532.1	2689.9	2887.8	2802.4	2407.8	2338.2	2262.8	2427.3	2662.5	3369.0
62.5°	2514.5	2546.7	2770.1	2967.3	3122.8	2758.1	2677.5	2595.8	2777.1	3018.8	3685.8
65°	2398.3	2447.4	2762.9	3064.9	3414.7	3343.2	3292.1	3149.6	3245.4	3332.4	3740.0
67.5°	2056.2	2109.9	2489.6	3024.8	3648.9	3950.2	3940.5	3730.2	3607.2	3453.5	3339.1
70°	1509.2	1552.5	1917.2	2585.9	3546.8	4426.8	4444.1	4106.5	3708.3	3196.3	2482.8
71°	1220.5	1257.8	1601.7	2295.7	3347.7	4451.6	4487.3	4123.3	3603.1	2963.9	2078.6
72.5°	759.6	780.4	1063.6	1732.6	2882.7	4197.9	4258.3	3908.5	3271.9	2505.3	1469.3
75°	286.7	295.0	394.5	764.1	1720.7	3153.7	3226.8	2953.8	2298.7	1430.1	614.9
77.5°	154.0	158.1	195.8	317.7	689.4	1807.8	1901.8	1684.9	1102.7	500.4	251.3
80°	103.2	105.9	135.4	188.4	317.0	688.5	766.8	676.5	412.9	285.7	179.0
82.5°	66.7	68.2	92.0	123.7	204.8	242.1	276.3	288.6	257.6	204.8	108.2
85°	43.9	45.2	60.7	79.1	126.8	119.4	122.3	160.0	175.7	134.9	55.2
87.5°	25.3	26.1	36.6	40.7	57.0	44.7	48.5	76.0	104.5	88.0	31.7
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°	684.2	684.2	684.2	684.2	684.2	684.2	684.2	684.2	684.2	684.2	684.2
2.5°	675.7	672.7	666.1	662.0	660.1	659.4	658.5	660.1	660.1	659.4	657.7
5°	663.4	657.7	646.6	638.9	634.7	633.6	635.1	637.0	638.1	638.1	637.0
7.5°	654.4	646.3	631.4	620.5	614.3	612.4	616.4	623.2	627.6	629.8	630.3
10°	647.0	635.8	619.4	608.2	603.0	602.3	607.4	616.1	625.4	629.5	630.3
12.5°	640.3	627.6	609.7	599.3	595.5	597.5	604.5	612.4	623.2	629.2	629.5
15°	633.9	620.9	601.9	591.1	590.4	593.3	600.0	606.4	614.6	622.0	622.0
17.5°	626.5	612.4	592.5	582.6	582.6	585.1	589.6	592.9	598.1	605.3	604.9
20°	617.6	603.0	582.9	572.4	570.2	568.6	568.6	569.4	573.8	580.2	581.4
22.5°	610.8	595.9	574.6	562.0	551.9	542.1	538.2	536.6	540.7	546.7	548.1
25°	610.8	595.9	572.0	550.8	526.1	507.5	499.6	497.5	501.6	507.2	509.3
27.5°	620.9	605.9	578.0	540.7	495.7	465.9	456.5	454.6	458.3	462.7	465.1
30°	644.4	629.8	595.1	529.1	461.6	422.6	412.1	410.2	412.1	413.8	416.5
32.5°	683.5	671.3	623.2	518.7	427.4	383.3	370.7	367.6	368.5	368.8	371.1
35°	747.3	741.7	660.4	506.5	395.0	351.2	338.2	332.3	332.0	333.8	336.3
37.5°	845.0	848.4	708.6	488.5	368.0	328.5	315.5	309.6	306.5	310.3	313.2
40°	982.9	990.8	764.1	464.2	346.0	315.1	301.3	295.7	291.6	290.5	291.9
42.5°	1162.3	1160.2	820.8	433.3	322.2	306.1	291.6	285.7	279.0	270.4	268.6
45°	1374.9	1342.8	868.1	395.3	295.0	297.6	282.6	274.4	264.0	251.3	249.9
47.5°	1625.9	1537.4	897.2	354.7	269.6	286.4	272.5	259.9	244.6	236.4	235.3
50°	1928.3	1765.3	917.8	313.2	246.9	272.2	258.4	241.6	226.7	224.4	224.1
52.5°	2286.4	2034.2	943.1	276.0	229.0	254.0	244.2	227.1	215.1	216.3	216.3
55°	2667.1	2312.4	943.8	246.4	213.3	232.8	233.7	220.1	210.7	214.4	215.6
57.5°	3014.3	2555.6	869.6	225.7	198.3	216.0	230.4	222.6	215.6	228.6	229.6
60°	3317.1	2742.7	710.0	208.4	186.0	209.6	238.0	238.7	237.2	272.5	275.2
62.5°	3427.8	2744.6	504.2	193.9	179.4	213.3	253.6	254.7	254.7	287.5	292.4
65°	3272.6	2516.1	335.6	185.3	174.9	221.5	266.3	261.3	249.9	272.5	267.3
67.5°	2725.9	1958.6	245.3	179.8	168.5	221.9	277.4	265.1	245.3	264.8	255.7
70°	1873.5	1246.3	205.5	174.5	161.1	212.2	283.4	264.0	238.7	246.9	234.9
71°	1508.1	994.6	195.0	172.7	158.1	206.6	284.1	262.6	235.3	240.6	229.6
72.5°	993.4	612.7	182.4	168.5	153.6	196.9	282.2	259.3	230.9	231.3	224.1
75°	391.9	254.0	164.1	159.2	140.9	181.3	274.2	252.1	222.3	214.9	211.8
77.5°	198.0	165.9	144.3	146.2	126.0	165.2	262.6	240.6	210.4	200.2	198.0
80°	144.6	126.0	123.4	126.8	109.2	149.6	248.0	224.8	195.0	205.5	201.0
82.5°	88.0	76.8	96.6	104.8	91.4	133.5	230.9	206.6	175.7	161.9	156.7
85°	41.9	45.2	69.8	77.2	67.6	106.7	211.1	186.5	153.3	132.4	134.7
87.5°	20.5	25.1	40.0	46.3	44.3	78.3	159.2	144.6	120.8	99.5	97.3
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)