

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: P195421

Luminaire Tested: **NAV-AF-01-D-UNV-T4W-7060**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195421
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-7060
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 5700K, 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6038 lumens
Efficiency: N/A
Efficacy: 102.3 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

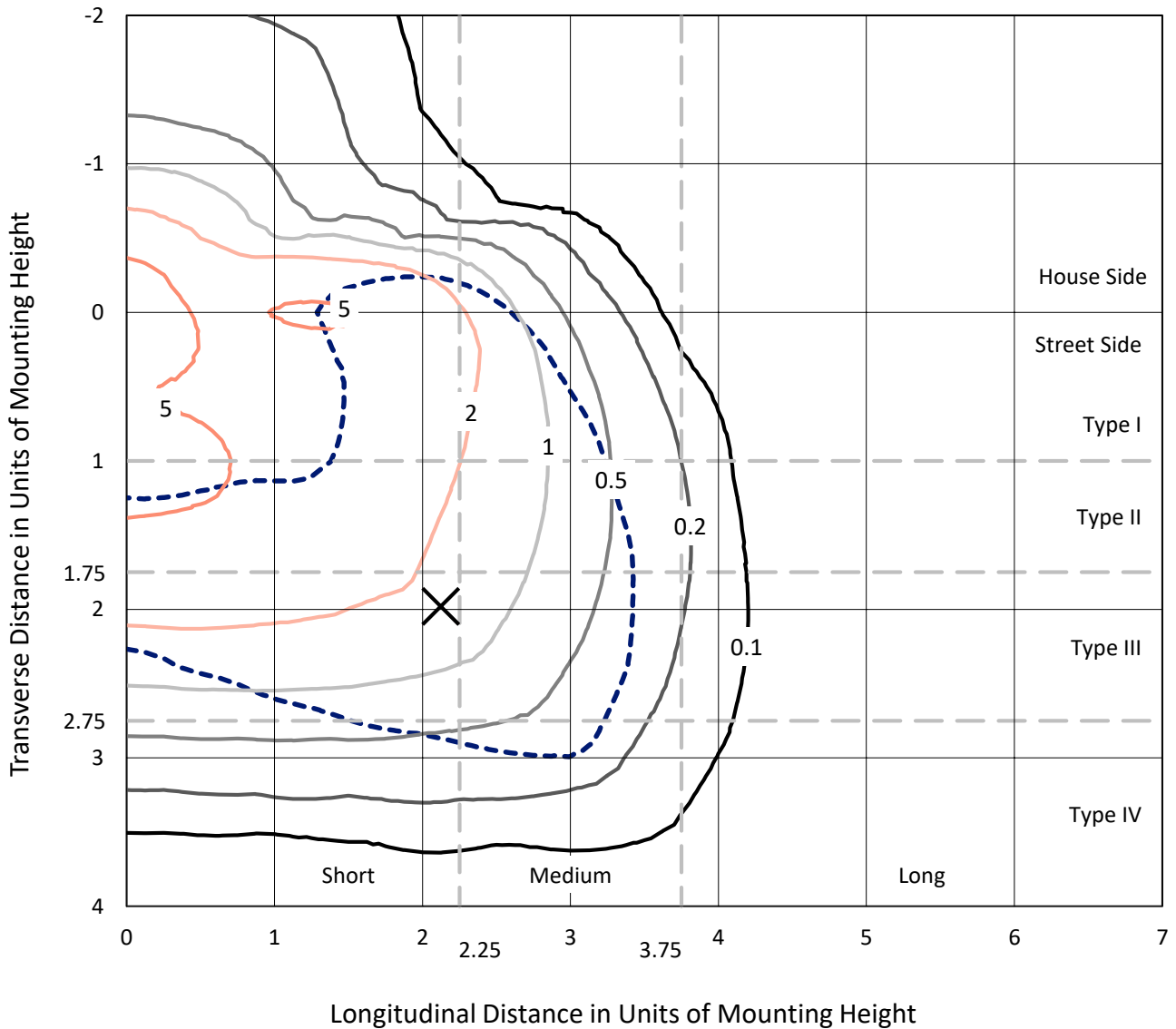
Input Watts (W): 59
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

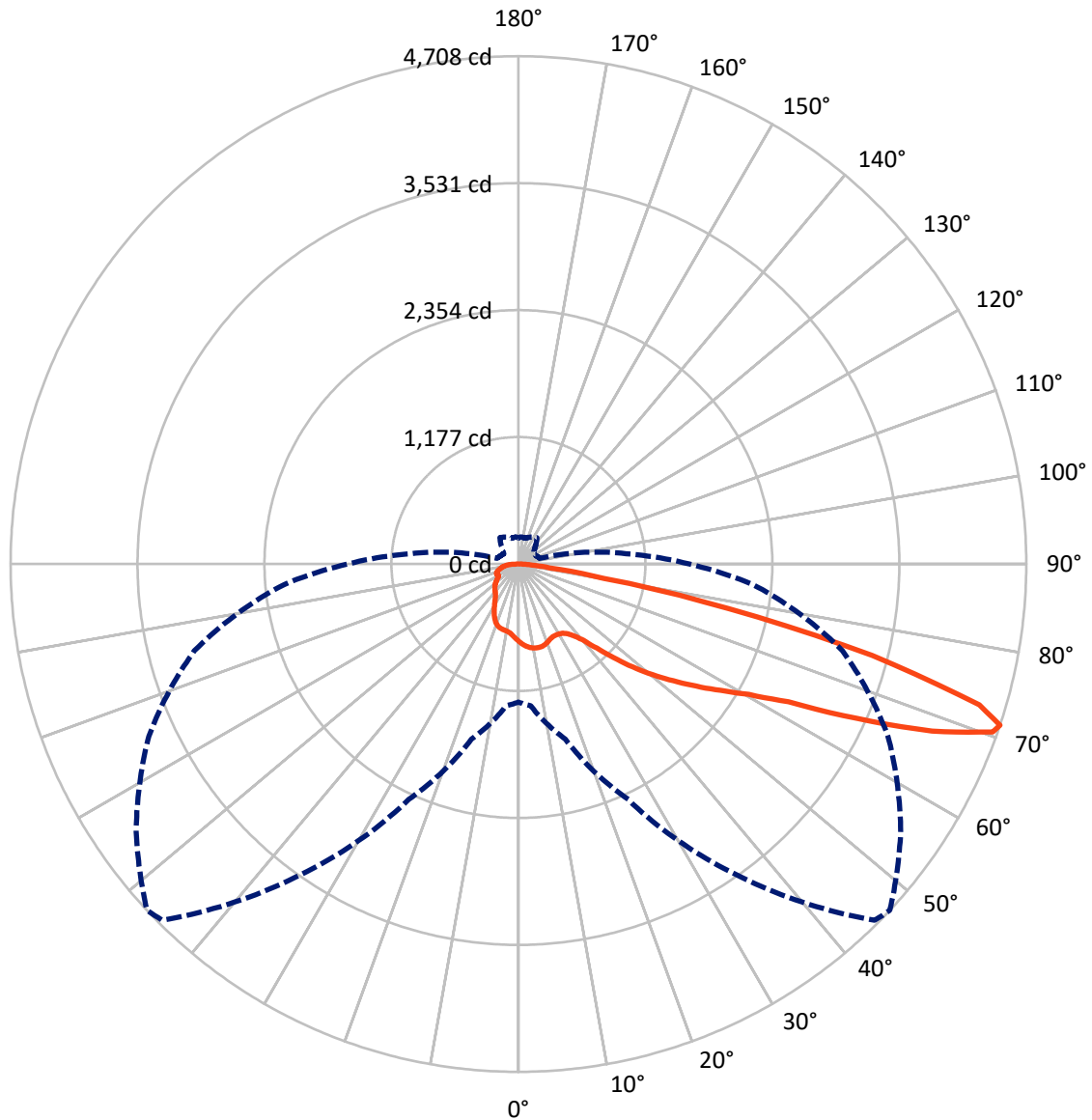
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 8.2 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
House Side	Lumens	1294.0	0.0	1294.0
	% Fixture	21.4	0.0	21.4
Street Side	Lumens	4744.0	0.0	4744.0
	% Fixture	78.6	0.0	78.6
Total	Lumens	6038.0	0.0	6038.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	68.6	1.1
10°-20°	200.6	3.3
20°-30°	298.0	4.9
30°-40°	427.9	7.1
40°-50°	758.7	12.6
50°-60°	1298.3	21.5
60°-70°	1843.1	30.5
70°-80°	1009.5	16.7
80°-90°	133.3	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°	6038.0	100.0
0°-180°	6038.0	100.0



REPORT NUMBER: P195421

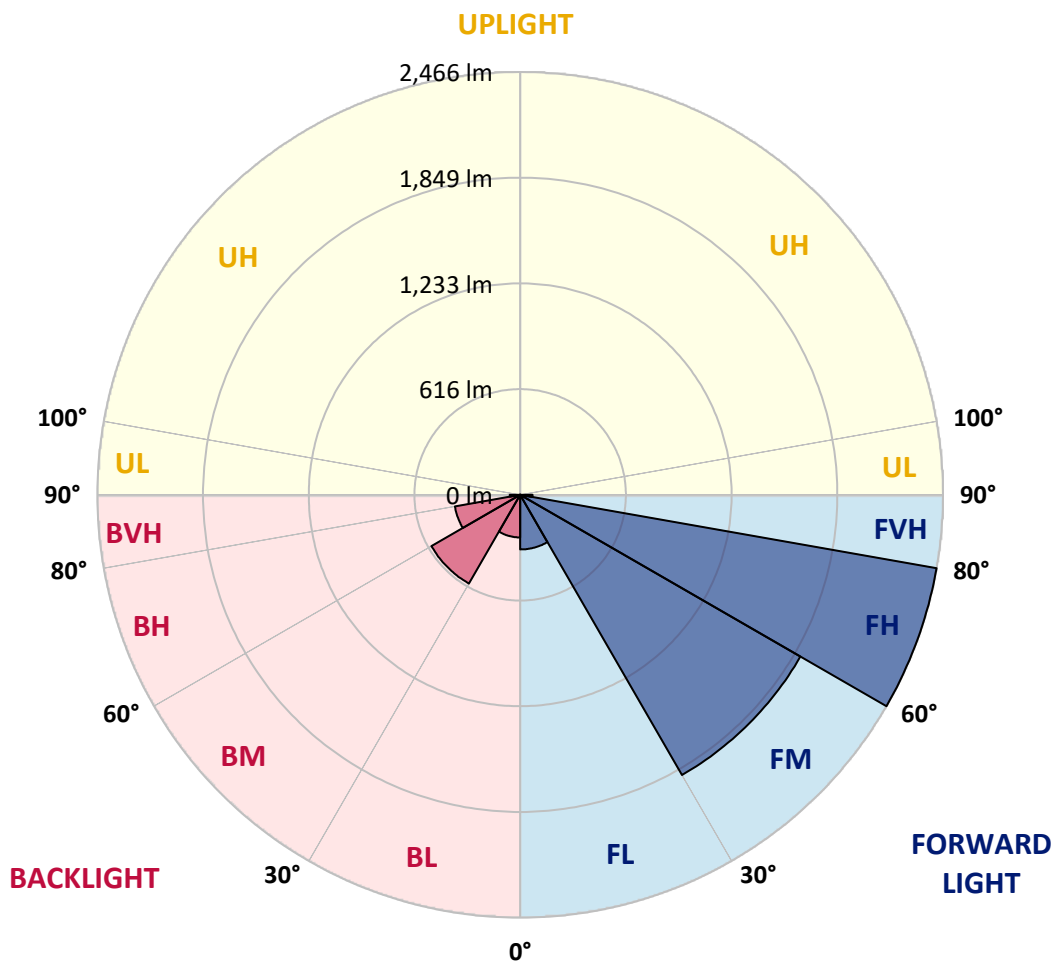
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	318.7	5.3			
FM	(30°-60°)	1887.1	31.3			
FH	(60°-80°)	2466.0	40.8			G2/5000
FVH	(80°-90°)	72.3	1.2			G1/100
BL	(0°-30°)	248.5	4.1	B1/500		
BM	(30°-60°)	597.9	9.9	B1/1000		
BH	(60°-80°)	386.6	6.4	B1/500		G1/500
BVH	(80°-90°)	61.0	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





REPORT NUMBER: P195421
 CATALOG NUMBER: NAV-AF-01-D-UNV-T4W-7060

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	47°	55°	65°	75°	85°
0°	718.0	718.0	718.0	718.0	718.0	718.0	718.0	718.0	718.0	718.0	718.0
2.5°	761.8	760.3	761.1	758.3	751.7	744.6	744.6	737.2	729.4	721.5	712.9
5°	809.2	806.8	804.9	796.3	783.4	768.9	766.5	751.7	735.6	719.6	703.9
7.5°	848.7	846.4	840.5	824.8	806.1	784.5	781.8	762.2	741.1	718.8	696.9
10°	876.9	875.3	864.0	844.0	822.1	796.7	792.0	772.0	747.0	719.2	691.4
12.5°	892.5	890.2	876.5	853.0	827.2	801.4	796.7	777.5	748.9	718.4	685.9
15°	886.3	885.1	872.2	848.3	822.5	800.2	796.3	776.7	747.8	715.7	680.8
17.5°	859.7	862.4	852.2	828.8	807.6	792.0	787.7	769.3	741.9	709.0	673.0
20°	822.9	826.0	820.9	797.1	784.9	774.8	772.4	757.5	732.1	699.2	663.6
22.5°	783.8	786.5	786.9	764.6	760.7	756.8	754.8	744.2	723.5	693.4	657.4
25°	756.8	759.9	760.7	741.1	743.5	744.6	744.2	736.8	721.9	693.4	658.2
27.5°	749.7	751.3	750.5	732.5	736.8	743.5	743.8	742.3	728.2	701.2	669.1
30°	774.0	774.8	765.0	738.0	742.3	750.9	751.3	750.5	741.5	721.5	693.8
32.5°	878.8	878.1	844.4	774.8	759.9	763.0	764.2	771.2	772.0	755.2	729.4
35°	1038.5	1038.1	999.0	880.0	810.0	793.5	795.1	806.1	815.8	804.5	789.6
37.5°	1214.2	1215.4	1191.5	1030.3	918.0	849.5	847.9	856.1	873.8	877.7	879.6
40°	1409.0	1414.9	1413.7	1202.8	1069.4	945.0	929.3	919.9	954.0	975.5	1003.3
42.5°	1631.7	1630.1	1630.9	1392.2	1242.3	1095.2	1066.3	1022.4	1062.0	1099.1	1160.2
45°	1823.0	1829.3	1834.0	1593.7	1436.0	1267.0	1237.7	1157.8	1193.4	1249.0	1342.1
47.5°	2015.5	2004.6	2013.2	1817.9	1651.6	1463.0	1425.1	1317.5	1350.7	1429.0	1570.6
50°	2239.8	2234.7	2195.5	2110.6	1912.2	1661.8	1612.1	1484.2	1532.7	1637.2	1852.8
52.5°	2440.9	2413.5	2383.0	2340.7	2168.5	1862.9	1799.9	1657.5	1746.7	1876.2	2203.0
55°	2514.4	2496.0	2532.8	2587.6	2439.7	2068.0	1997.5	1859.8	1988.2	2149.8	2615.0
57.5°	2592.7	2599.0	2681.9	2792.6	2696.4	2286.7	2210.4	2099.3	2253.1	2455.7	3075.5
60°	2631.8	2656.9	2822.4	3030.2	2940.6	2526.6	2453.4	2374.4	2546.9	2793.8	3534.9
62.5°	2638.5	2672.1	2906.5	3113.5	3276.7	2894.0	2809.5	2723.8	2913.9	3167.5	3867.5
65°	2516.4	2568.0	2899.1	3216.0	3583.1	3507.9	3454.3	3304.8	3405.4	3496.6	3924.3
67.5°	2157.6	2213.9	2612.3	3173.8	3828.8	4144.9	4134.8	3914.1	3785.0	3623.7	3503.6
70°	1583.6	1628.9	2011.6	2713.2	3721.6	4645.0	4663.0	4308.9	3891.0	3353.8	2605.2
71°	1280.7	1319.8	1680.6	2408.8	3512.6	4670.8	4708.4	4326.5	3780.7	3110.0	2181.1
72.5°	797.1	819.0	1116.0	1817.9	3024.7	4404.8	4468.2	4101.1	3433.2	2628.7	1541.7
75°	300.9	309.5	414.0	801.8	1805.4	3309.1	3385.8	3099.4	2411.9	1500.6	645.2
77.5°	161.6	165.9	205.4	333.4	723.5	1897.0	1995.6	1767.9	1157.0	525.1	263.7
80°	108.4	111.1	142.0	197.6	332.6	722.3	804.5	709.8	433.2	299.7	187.8
82.5°	70.0	71.6	96.6	129.9	214.8	253.9	289.9	302.9	270.4	214.8	113.5
85°	46.2	47.3	63.8	83.0	133.0	125.2	128.3	167.9	184.3	141.6	57.9
87.5°	26.6	27.4	38.3	42.7	59.9	47.0	50.9	79.8	109.6	92.3	33.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P195421

CATALOG NUMBER: NAV-AF-01-D-UNV-T4W-7060

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	718.0	718.0	718.0	718.0	718.0	718.0	718.0	718.0	718.0	718.0	718.0
2.5°	709.0	705.9	698.8	694.5	692.6	691.8	691.0	692.6	692.6	691.8	690.2
5°	696.1	690.2	678.5	670.3	666.0	664.8	666.4	668.3	669.5	669.5	668.3
7.5°	686.7	678.1	662.5	651.1	644.5	642.5	646.8	653.8	658.5	660.9	661.3
10°	678.9	667.2	649.9	638.2	632.7	631.9	637.4	646.4	656.2	660.5	661.3
12.5°	671.8	658.5	639.8	628.8	624.9	626.8	634.3	642.5	653.8	660.1	660.5
15°	665.2	651.5	631.5	620.2	619.4	622.5	629.6	636.2	644.8	652.7	652.7
17.5°	657.4	642.5	621.8	611.2	611.2	613.9	618.6	622.2	627.6	635.1	634.7
20°	648.0	632.7	611.6	600.6	598.3	596.7	596.7	597.5	602.2	608.8	610.0
22.5°	640.9	625.3	603.0	589.7	579.1	568.9	564.6	563.1	567.4	573.6	575.2
25°	640.9	625.3	600.2	577.9	552.1	532.5	524.3	522.0	526.3	532.2	534.5
27.5°	651.5	635.8	606.5	567.4	520.0	488.7	478.9	477.0	480.9	485.6	487.9
30°	676.2	660.9	624.5	555.2	484.4	443.3	432.4	430.4	432.4	434.3	437.1
32.5°	717.2	704.3	653.8	544.3	448.4	402.2	388.9	385.8	386.6	387.0	389.3
35°	784.1	778.3	693.0	531.4	414.4	368.6	354.9	348.6	348.2	350.2	352.9
37.5°	886.7	890.2	743.5	512.6	386.2	344.7	331.0	324.8	321.6	325.6	328.7
40°	1031.4	1039.7	801.8	487.2	363.1	330.6	316.2	310.3	306.0	304.8	306.4
42.5°	1219.7	1217.3	861.2	454.7	338.1	321.3	306.0	299.7	292.7	283.7	281.7
45°	1442.7	1409.0	910.9	414.8	309.5	312.3	296.6	288.0	277.0	263.7	262.2
47.5°	1706.0	1613.3	941.4	372.1	282.9	300.5	286.0	272.7	256.7	248.1	246.9
50°	2023.4	1852.4	963.0	328.7	259.0	285.6	271.2	253.6	237.9	235.6	235.2
52.5°	2399.0	2134.5	989.6	289.6	240.3	266.5	256.3	238.3	225.8	226.9	226.9
55°	2798.5	2426.4	990.4	258.6	223.8	244.2	245.3	230.9	221.1	225.0	226.2
57.5°	3162.8	2681.5	912.5	236.7	208.2	226.6	241.8	233.6	226.2	239.9	241.0
60°	3480.5	2877.9	745.0	218.7	195.3	219.9	249.6	250.4	248.9	286.0	288.8
62.5°	3596.7	2879.9	529.0	203.5	188.2	223.8	266.1	267.3	267.3	301.7	306.8
65°	3434.0	2640.0	352.2	194.5	183.5	232.4	279.4	274.3	262.2	286.0	280.6
67.5°	2860.3	2055.1	257.5	188.6	176.9	232.8	291.1	278.2	257.5	277.8	268.4
70°	1965.8	1307.7	215.6	183.1	169.0	222.6	297.4	277.0	250.4	259.0	246.5
71°	1582.4	1043.6	204.6	181.2	165.9	216.8	298.2	275.5	246.9	252.4	241.0
72.5°	1042.4	642.9	191.3	176.9	161.2	206.6	296.2	271.9	242.2	242.6	235.2
75°	411.2	266.5	172.2	167.1	147.9	190.2	287.6	264.5	233.2	225.4	222.3
77.5°	207.8	174.1	151.4	153.4	132.3	173.3	275.5	252.4	220.7	210.1	207.8
80°	151.8	132.3	129.5	133.0	114.6	156.9	260.2	235.9	204.6	215.6	210.9
82.5°	92.3	80.6	101.3	110.0	95.9	140.1	242.2	216.8	184.3	169.8	164.3
85°	43.8	47.3	73.2	81.0	70.8	111.9	221.5	195.6	160.8	138.9	141.3
87.5°	21.5	26.2	41.9	48.5	46.6	82.2	167.1	151.8	126.8	104.5	102.1
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)