

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: P196481

Luminaire Tested: **NAV-AF-05-D-UNV-AFL-7030-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196481  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24283)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-AF-05-D-UNV-AFL-7030-HSS  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(5) 70 CRI, 3000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND AUTOMOTIVE FRONTLINE OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 24410.7 lumens  
Efficiency: N/A  
Efficacy: 87.5 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')  
IES Classification: Type II - Short - Full Cutoff  
BUG Rating: B2 - U0 - G2

Input Watts (W): 279  
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

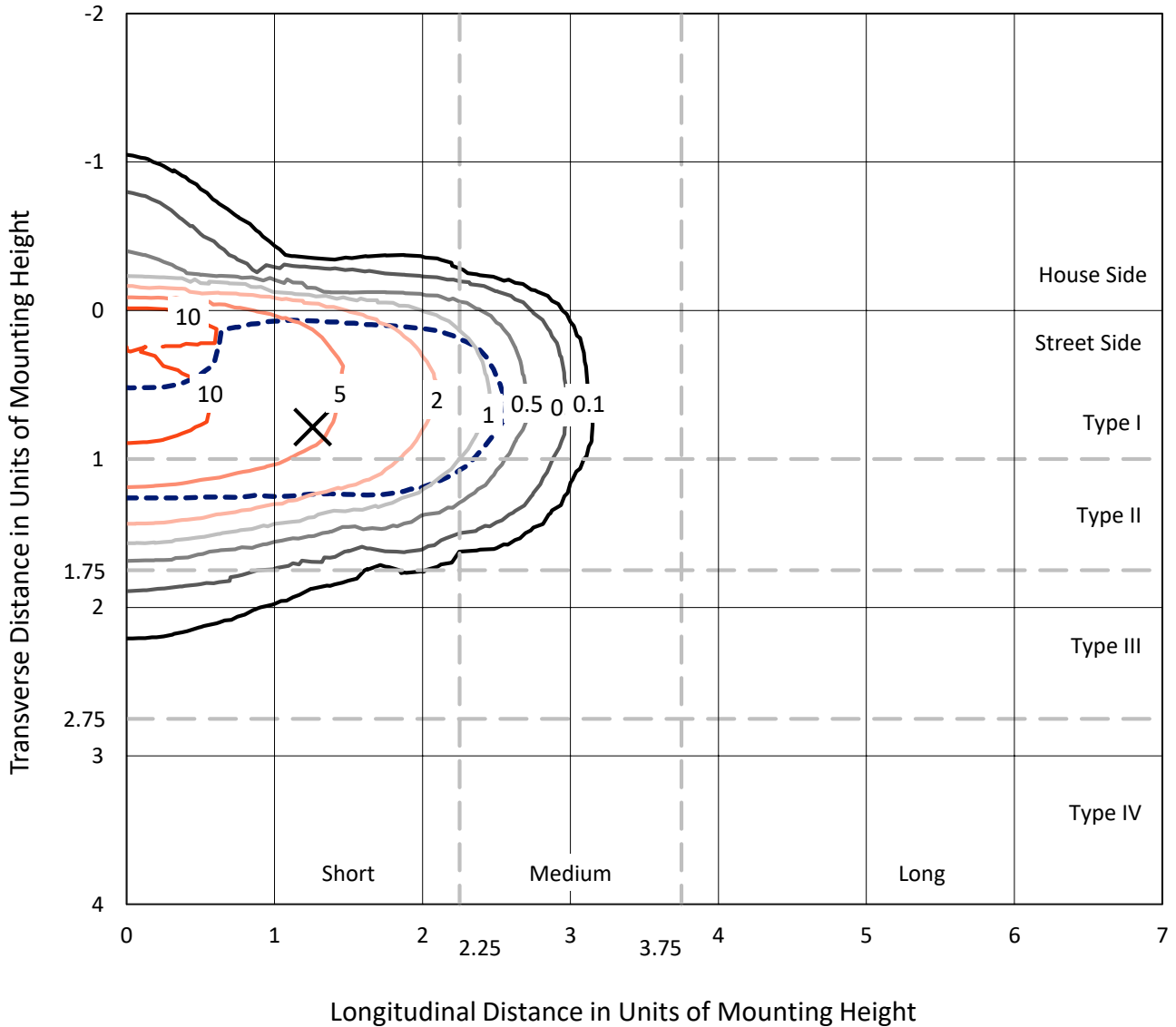


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### Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd  
 - - - 1/2 Max cd

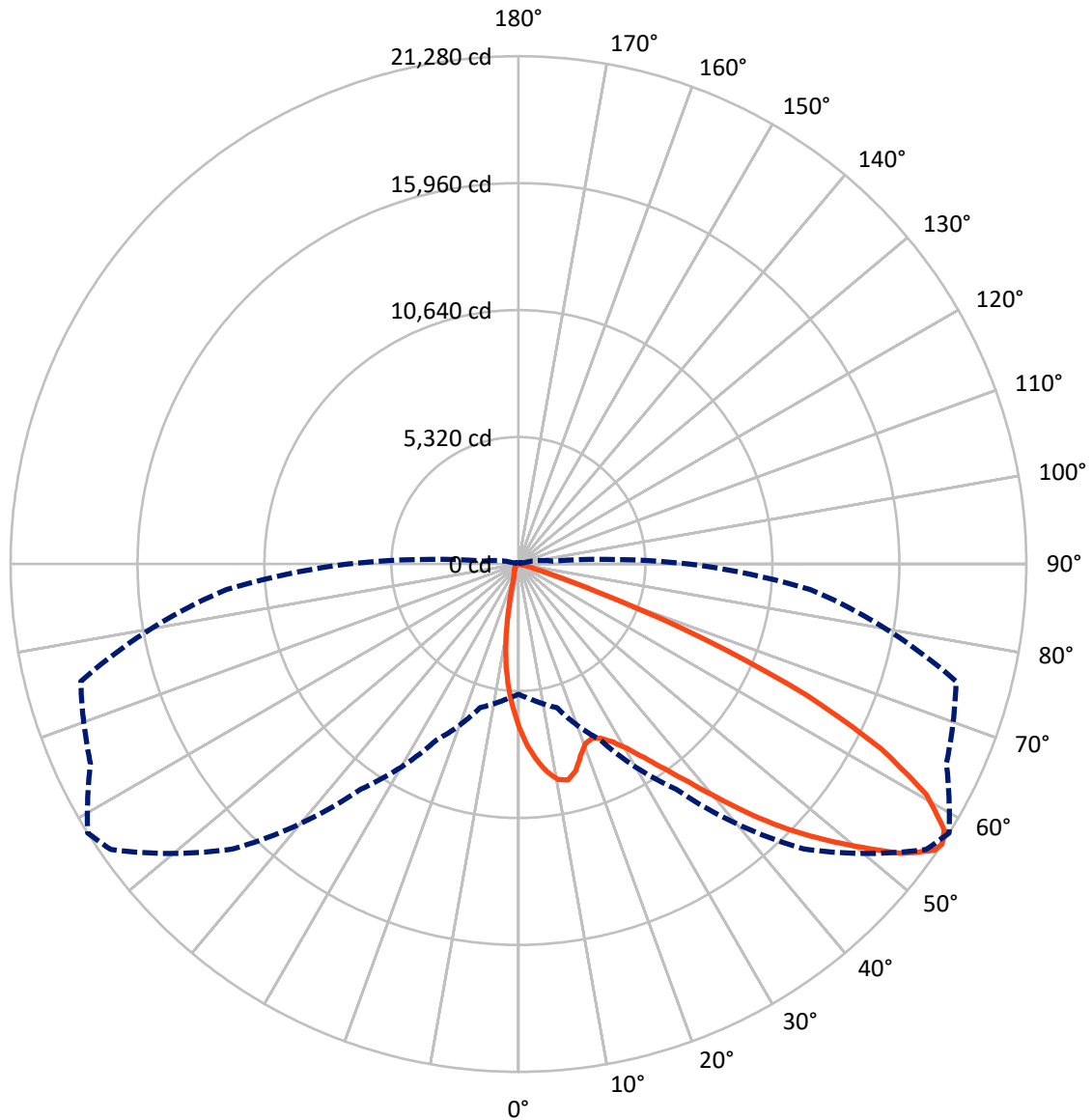


Based on 25 foot mounting height. Maximum calculated value = 13.7 fc  
 Type II - Short - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral    - - - Horizontal Cone Through 56-Deg Vertical

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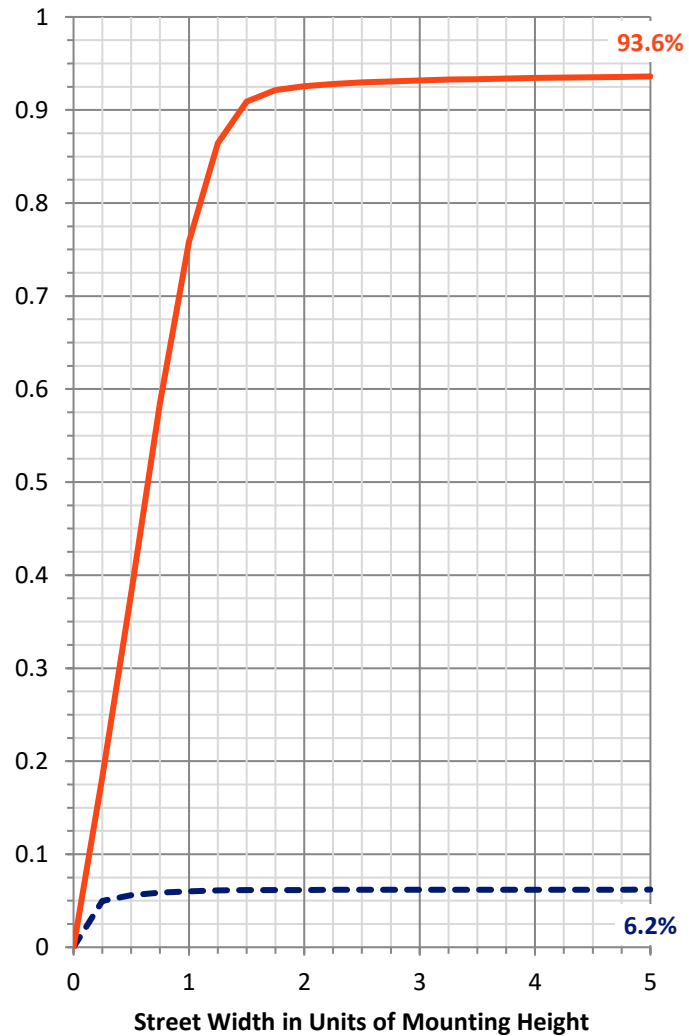
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1523.7	0.0	1523.7
	% Fixture	6.2	0.0	6.2
<b>Street Side</b>	Lumens	22887.0	0.0	22887.0
	% Fixture	93.8	0.0	93.8
<b>Total</b>	Lumens	24410.7	0.0	24410.7
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	589.6	2.4
10°-20°	1371.9	5.6
20°-30°	2308.4	9.5
30°-40°	3952.9	16.2
40°-50°	5965.0	24.4
50°-60°	6200.4	25.4
60°-70°	3480.8	14.3
70°-80°	477.0	2.0
80°-90°	64.6	0.3
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°	24410.7	100.0
0°-180°	24410.7	100.0



--- HS    — SS

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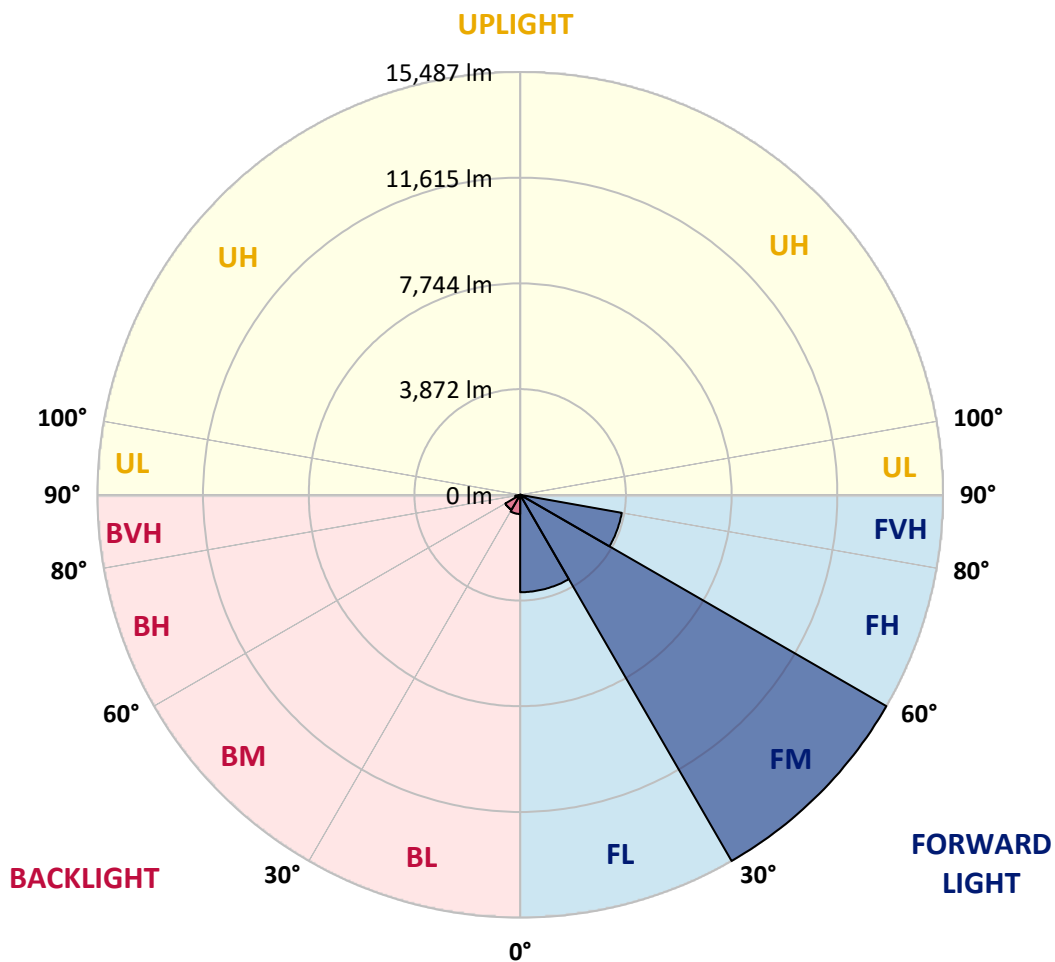
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	3567.0	14.6			
FM	(30°-60°)	15487.2	63.4			
FH	(60°-80°)	3777.1	15.5			G2/5000
FVH	(80°-90°)	55.7	0.2			G1/100
BL	(0°-30°)	702.9	2.9	B2/1000		
BM	(30°-60°)	631.2	2.6	B1/1000		
BH	(60°-80°)	180.7	0.7	B1/500		G1/500
BVH	(80°-90°)	8.9	0.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G2**

Type II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	6911.4	6911.4	6911.4	6911.4	6911.4	6911.4	6911.4	6911.4	6911.4	6911.4	6911.4
2.5°	8315.6	8265.4	8213.2	8116.5	8026.9	7889.2	7699.2	7652.6	7503.7	7257.8	7028.7
5°	9032.7	9023.4	8988.0	8909.8	8813.0	8645.3	8431.1	8287.8	8056.8	7669.5	7228.0
7.5°	8608.1	8686.3	8814.8	8997.3	9120.2	9103.5	8939.6	8814.8	8585.7	8056.8	7423.6
10°	7255.9	7270.8	7447.7	7831.4	8438.6	9004.7	9219.0	9185.4	8975.0	8395.7	7594.9
12.5°	6779.2	6788.5	6829.5	6952.3	7347.2	8136.9	9107.2	9282.2	9265.5	8719.8	7777.4
15°	6816.4	6822.0	6833.2	6872.3	6984.1	7380.8	8541.1	8986.1	9451.7	9027.1	7956.3
17.5°	7110.7	7107.0	7071.6	7034.3	7069.7	7200.0	7963.7	8432.9	9412.5	9286.0	8103.3
20°	7684.3	7702.9	7583.6	7417.9	7332.3	7337.9	7678.7	8030.7	9192.8	9487.1	8213.2
22.5°	8490.7	8503.7	8308.2	8021.4	7770.0	7643.3	7738.3	7924.6	8939.6	9673.4	8302.6
25°	9453.5	9453.5	9179.9	8772.0	8382.7	8105.2	8023.2	8094.0	8842.7	9883.8	8391.9
27.5°	10492.8	10530.1	10172.5	9638.0	9123.9	8717.9	8460.9	8447.9	8917.2	10148.3	8492.6
30°	11623.3	11656.9	11232.2	10578.5	9969.5	9449.9	9055.1	8969.4	9202.2	10503.9	8639.6
32.5°	12748.2	12776.1	12306.9	11640.1	10930.6	10319.6	9800.0	9664.1	9714.4	11023.6	8855.8
35°	14178.6	14184.1	13590.0	12796.7	12038.6	11321.6	10664.1	10530.1	10474.2	11679.2	9166.8
37.5°	15316.5	15271.8	14895.6	14145.0	13275.2	12526.6	11753.7	11578.6	11444.5	12601.1	9649.1
40°	15584.6	15584.6	15528.8	15303.4	14612.5	13891.8	13143.1	12882.3	12586.2	13686.9	10297.2
42.5°	14886.2	14931.0	15299.7	15789.5	15795.1	15333.2	14601.3	14381.6	13860.1	14923.5	11005.0
45°	13323.7	13336.7	14221.4	15543.7	16441.4	16705.8	16165.8	15862.1	15139.5	16208.6	11653.1
47.5°	12761.3	12802.2	13178.5	14795.1	16489.9	17817.7	17666.7	17249.7	16324.0	17381.8	12258.4
50°	11897.1	11947.4	12407.4	13692.5	16054.0	18531.0	19102.8	18655.8	17402.4	18359.6	12558.3
52.5°	9829.8	9908.0	10558.0	12234.2	14964.4	18560.8	20417.6	20149.4	18506.8	18883.0	12522.9
55°	6764.2	6822.0	7580.0	9550.5	12766.8	17650.1	20983.8	21168.2	19492.0	19000.3	12351.5
56°	5456.9	5673.0	6227.9	8136.9	11515.3	16875.3	20853.4	21279.9	19784.4	18981.7	12277.0
57.5°	3607.5	3648.5	4253.8	5896.4	9246.8	15193.6	20264.9	21041.4	20160.6	18886.7	12223.1
60°	1696.7	1715.3	1933.3	2721.0	5004.3	11072.0	18352.2	19641.0	20298.4	18687.4	12221.2
62.5°	1106.2	1110.0	1136.1	1298.1	2046.8	6030.4	15214.1	17069.0	19156.8	18665.1	12185.8
65°	910.6	920.1	888.4	908.8	1070.8	2274.0	10731.2	13306.9	16476.8	18139.9	11787.2
67.5°	802.7	804.5	761.7	737.5	784.1	998.3	5406.5	8393.9	12323.6	15413.3	9708.8
70°	731.9	730.1	681.7	625.7	627.5	662.9	1761.8	3486.5	6818.4	9151.9	5574.2
72.5°	650.0	653.7	625.7	547.5	521.5	469.4	662.9	940.5	2320.5	2938.8	1469.4
75°	569.9	562.4	534.5	484.2	435.8	314.7	333.3	400.4	605.3	599.8	316.7
77.5°	432.1	424.6	437.7	413.4	340.8	219.7	182.5	208.5	273.8	255.1	128.5
80°	329.6	325.9	297.9	353.9	311.1	165.7	124.8	128.5	149.0	135.9	63.4
82.5°	238.4	236.5	225.4	217.9	197.4	121.1	94.9	100.5	111.8	94.9	46.6
85°	91.2	91.2	176.9	149.0	135.9	82.0	67.0	72.6	85.7	69.0	31.6
87.5°	14.9	14.9	119.2	98.7	61.5	41.0	42.8	46.6	50.3	41.0	24.2
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°	6911.4	6911.4	6911.4	6911.4	6911.4	6911.4	6911.4	6911.4	6911.4	6911.4	6911.4
2.5°	6892.8	6767.9	6494.3	6229.8	5998.9	5745.5	5617.0	5468.0	5412.1	5300.3	5311.6
5°	6963.5	6702.8	6153.4	5574.2	5043.4	4503.3	4119.6	3758.3	3557.2	3358.0	3358.0
7.5°	7036.2	6637.6	5788.3	4862.8	3968.9	3043.2	2387.7	1862.5	1570.0	1374.5	1368.9
10°	7086.4	6553.8	5373.1	4037.6	2719.1	1568.2	946.0	744.9	672.4	640.7	638.8
12.5°	7151.7	6470.0	4899.9	3065.5	1510.4	744.9	590.4	558.8	545.6	538.2	538.2
15°	7207.5	6350.8	4326.3	2061.7	793.4	558.8	508.5	497.2	495.4	493.6	495.4
17.5°	7220.6	6181.4	3639.1	1206.9	575.5	488.0	465.6	456.2	456.2	454.4	454.4
20°	7190.8	5957.9	2879.3	744.9	497.2	448.8	424.6	413.4	411.6	411.6	411.6
22.5°	7129.2	5673.0	2128.7	564.4	452.6	413.4	381.8	370.6	370.6	372.5	374.3
25°	7052.9	5335.7	1462.0	486.1	419.0	376.2	344.5	333.3	337.1	340.8	342.6
27.5°	6956.1	4933.5	957.3	420.8	374.3	338.9	311.1	303.5	311.1	318.5	322.2
30°	6859.3	4492.0	648.1	365.0	324.1	297.9	281.3	279.3	290.5	307.3	309.2
32.5°	6795.9	4039.6	489.8	327.8	284.9	262.6	255.1	258.8	275.7	294.2	297.9
35°	6790.4	3598.1	417.2	297.9	258.8	238.4	234.7	245.9	264.5	279.3	283.1
37.5°	6877.9	3184.7	378.0	275.7	238.4	217.9	212.3	232.8	249.5	264.5	268.2
40°	7054.8	2814.1	352.1	255.1	221.6	197.4	193.7	210.5	227.3	243.9	249.5
42.5°	7276.4	2467.7	322.2	234.7	203.0	175.1	171.3	184.4	201.1	225.4	229.1
45°	7468.3	2145.6	290.5	212.3	182.5	150.9	149.0	163.9	176.9	199.3	203.0
47.5°	7630.3	1877.3	260.7	188.2	156.5	134.1	132.2	139.7	147.2	167.6	171.3
50°	7544.7	1650.2	231.0	154.6	126.6	115.5	113.6	113.6	122.9	143.4	147.2
52.5°	7334.1	1508.6	203.0	128.5	104.4	98.7	93.1	94.9	104.4	113.6	115.5
55°	7164.6	1441.4	178.7	113.6	87.5	82.0	76.4	74.6	76.4	72.6	69.0
56°	7123.7	1434.0	173.1	110.0	83.8	76.4	69.0	65.2	63.4	55.8	54.0
57.5°	7105.1	1434.0	163.9	102.4	78.2	69.0	59.5	52.1	44.7	39.2	39.2
60°	7090.2	1443.4	152.8	89.4	67.0	55.8	42.8	31.6	26.1	26.1	26.1
62.5°	7058.5	1439.6	139.7	74.6	57.7	42.8	26.1	20.5	18.6	20.5	22.4
65°	6702.8	1337.3	122.9	59.5	44.7	29.8	14.9	14.9	16.7	20.5	22.4
67.5°	5401.0	1013.2	100.5	46.6	31.6	22.4	13.0	13.0	16.7	20.5	22.4
70°	2966.8	534.5	85.7	33.6	24.2	18.6	13.0	11.2	16.7	20.5	22.4
72.5°	724.5	223.4	78.2	26.1	22.4	16.7	11.2	11.2	16.7	20.5	22.4
75°	178.7	167.6	63.4	20.5	18.6	14.9	11.2	11.2	16.7	20.5	22.4
77.5°	83.8	221.6	42.8	18.6	16.7	13.0	11.2	11.2	16.7	20.5	20.5
80°	50.3	167.6	26.1	16.7	14.9	13.0	11.2	11.2	16.7	20.5	22.4
82.5°	29.8	48.4	18.6	16.7	14.9	11.2	11.2	11.2	16.7	20.5	22.4
85°	26.1	24.2	18.6	16.7	14.9	13.0	11.2	11.2	18.6	22.4	22.4
87.5°	20.5	18.6	16.7	14.9	14.9	13.0	11.2	11.2	16.7	20.5	22.4
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)