

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: P270679

Luminaire Tested: **NAV-AF-06-D-UNV-SL3-7027-1200-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270679
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24263)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-06-D-UNV-SL3-7027-1200-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 2700K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III
SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 29144.1 lumens
Efficiency: N/A
Efficacy: 76.3 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type III - Medium - Non-Cutoff
BUG Rating: B2 - U0 - G4

Input Watts (W): 382
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

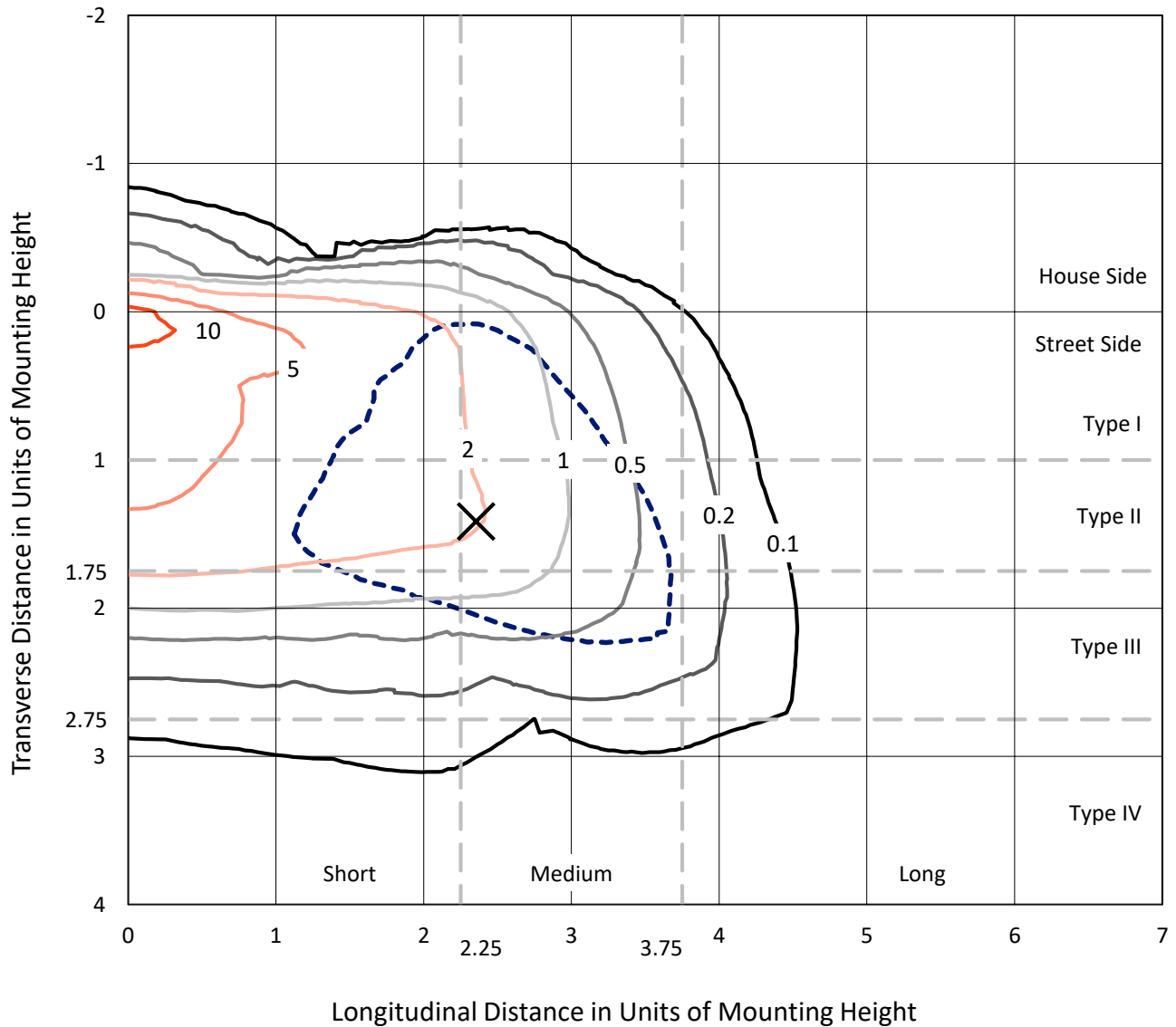


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

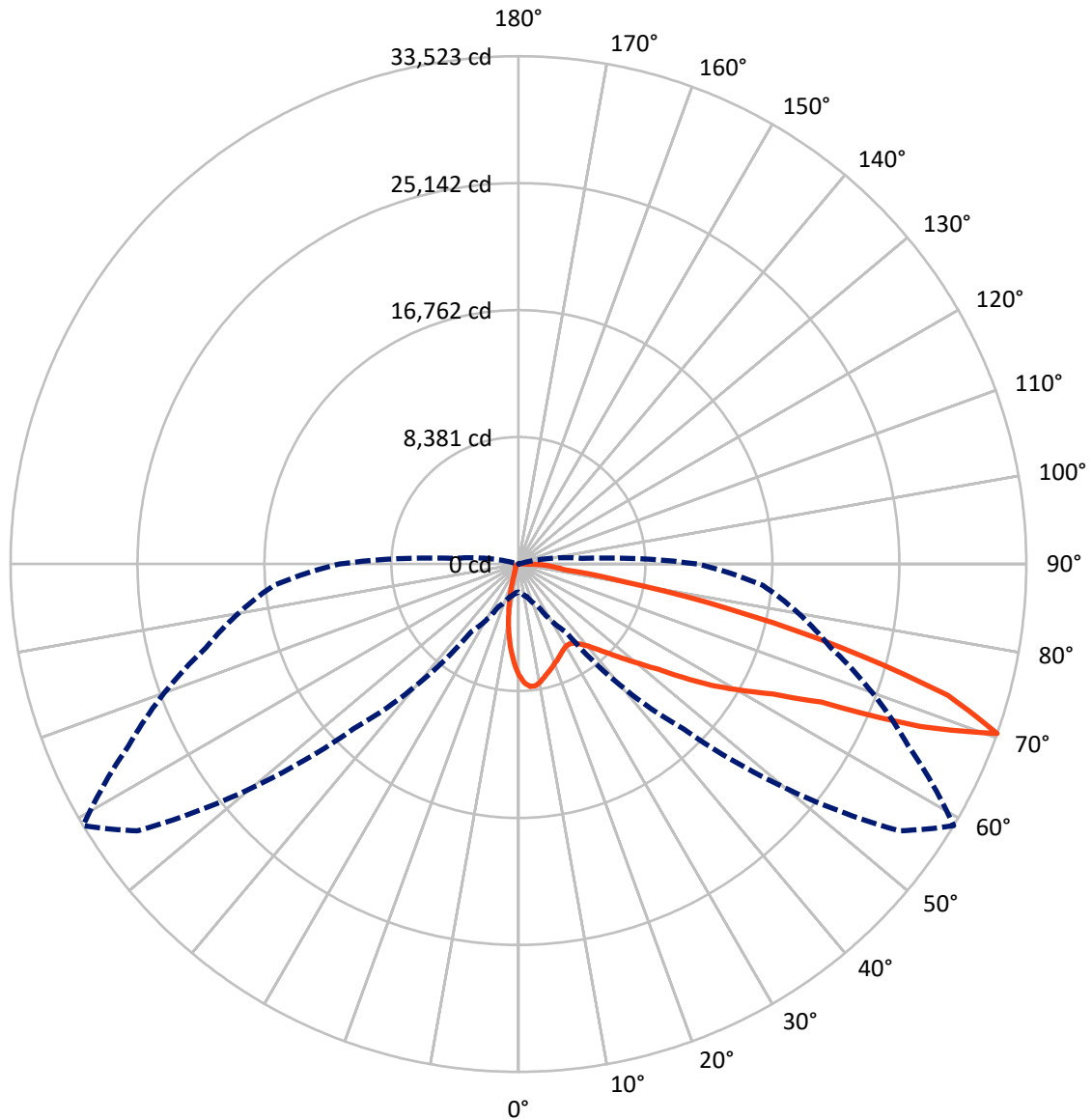


Based on 25 foot mounting height. Maximum calculated value = 12.5 fc
 Type III - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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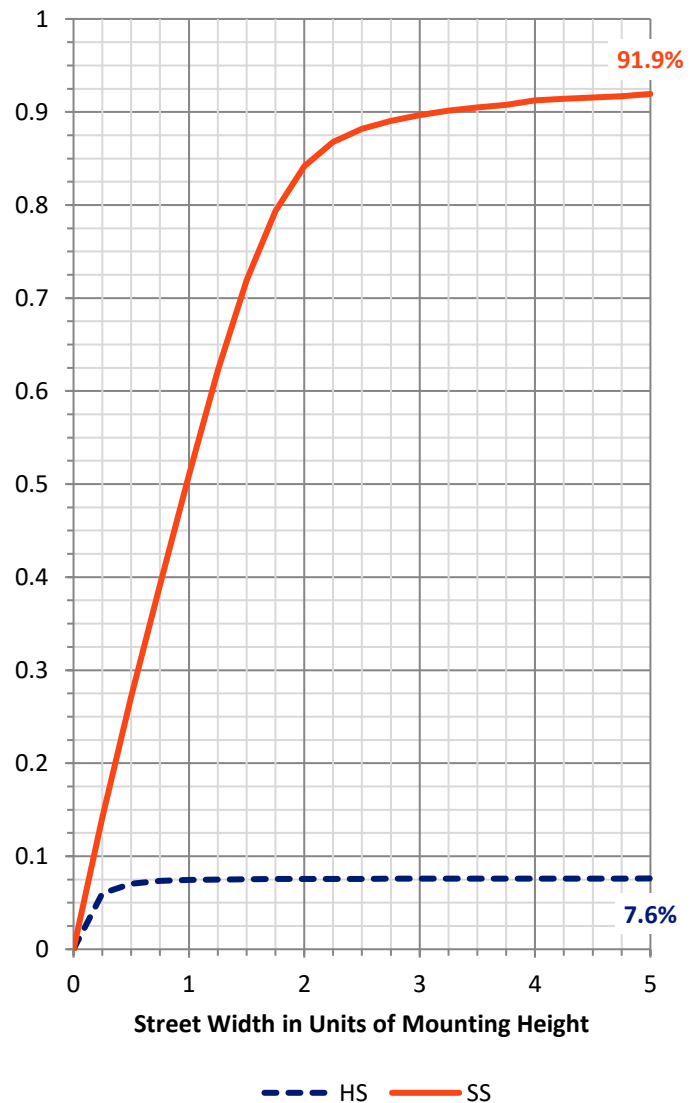
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2240.4	0.0	2240.4
	% Fixture	7.7	0.0	7.7
Street Side	Lumens	26903.7	0.0	26903.7
	% Fixture	92.3	0.0	92.3
Total	Lumens	29144.1	0.0	29144.1
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	606.0	2.1
10°-20°	1271.0	4.4
20°-30°	1720.6	5.9
30°-40°	2483.0	8.5
40°-50°	4123.8	14.1
50°-60°	6307.7	21.6
60°-70°	7845.4	26.9
70°-80°	4336.9	14.9
80°-90°	449.7	1.5
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°	29144.1	100.0
0°-180°	29144.1	100.0



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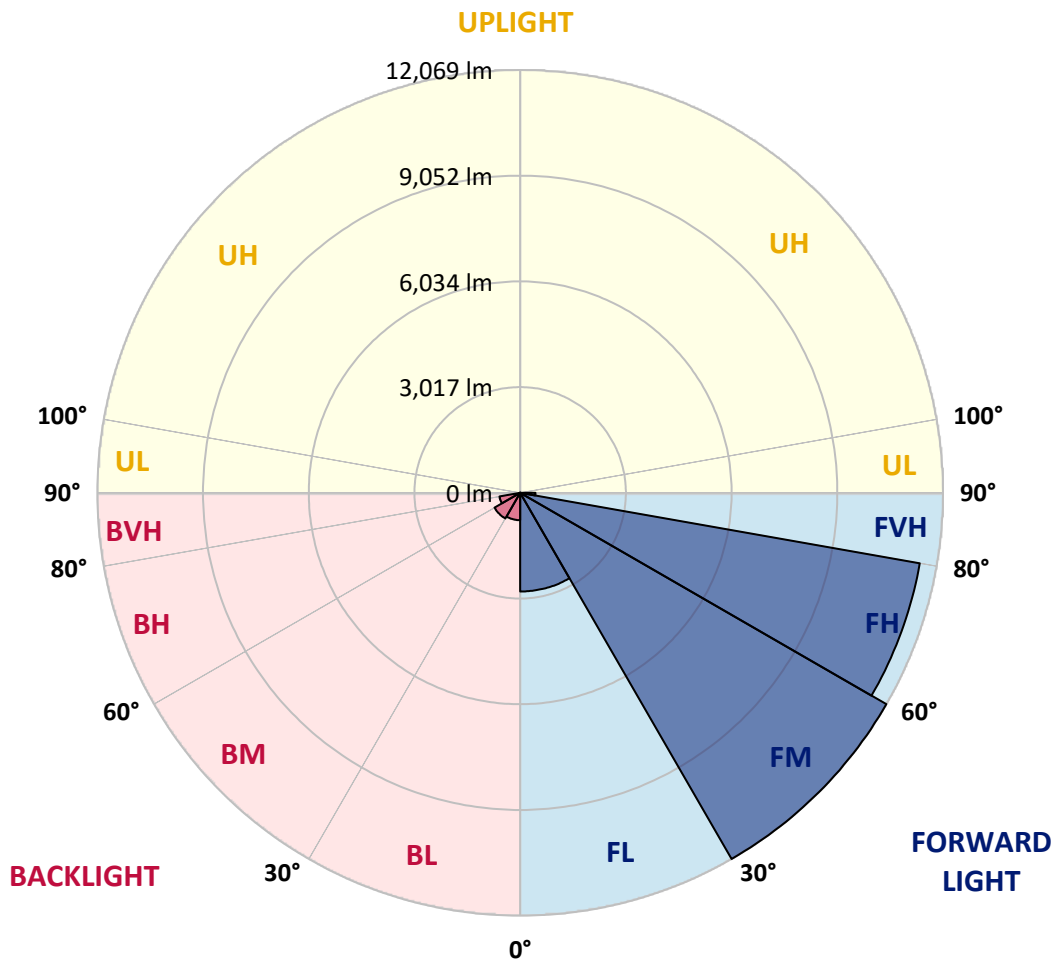
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2816.9	9.7			
FM (30°-60°)	12068.9	41.4			
FH (60°-80°)	11581.3	39.7			G4/12000
FVH (80°-90°)	436.7	1.5			G3/500
BL (0°-30°)	780.7	2.7	B2/1000		
BM (30°-60°)	845.7	2.9	B1/1000		
BH (60°-80°)	601.0	2.1	B2/1000		G2/1000
BVH (80°-90°)	13.0	0.0			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G4

Type III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	7369.4	7369.4	7369.4	7369.4	7369.4	7369.4	7369.4	7369.4	7369.4	7369.4	7369.4
2.5°	8330.3	8317.0	8262.2	8251.1	8189.6	8066.4	7923.5	7866.4	7749.9	7565.2	7360.7
5°	8468.9	8475.4	8479.8	8455.6	8446.9	8345.7	8187.3	8119.2	7963.0	7659.7	7286.0
7.5°	7949.9	7967.4	8022.5	8046.7	8152.2	8191.7	8158.8	8114.7	7991.7	7633.3	7107.8
10°	7402.5	7435.5	7494.7	7534.4	7664.1	7769.6	7903.7	7914.7	7888.3	7545.4	6907.7
12.5°	6932.0	6962.8	7028.7	7107.8	7239.8	7376.2	7576.1	7646.6	7734.4	7488.2	6764.9
15°	6527.4	6536.2	6599.9	6698.9	6872.7	7059.5	7296.9	7400.2	7571.8	7466.3	6655.0
17.5°	6173.5	6175.7	6217.4	6307.5	6518.7	6764.9	7042.0	7178.3	7395.8	7435.5	6558.3
20°	5940.4	5938.2	5940.4	5988.8	6175.7	6468.1	6804.5	6947.4	7226.5	7398.1	6459.4
22.5°	5861.4	5850.3	5799.7	5782.2	5900.8	6158.2	6560.4	6747.3	7075.0	7387.1	6386.8
25°	5958.1	5951.5	5843.7	5742.5	5753.6	5914.1	6312.0	6540.6	6956.1	7426.6	6369.2
27.5°	6270.2	6257.1	6092.1	5894.3	5768.9	5797.5	6127.2	6366.9	6861.7	7523.3	6393.3
30°	6679.2	6681.4	6505.4	6265.9	5971.3	5808.5	6028.3	6254.9	6797.8	7668.6	6446.1
32.5°	7134.2	7132.1	7006.7	6729.7	6353.8	6010.7	6072.4	6263.6	6806.6	7881.8	6547.2
35°	7604.7	7580.5	7538.8	7294.7	6855.1	6364.9	6272.4	6413.1	6899.1	8163.2	6718.8
37.5°	8147.7	8139.1	8180.8	7923.5	7475.1	6885.8	6624.2	6718.8	7132.1	8578.8	6995.7
40°	9011.7	8963.5	8983.2	8633.7	8174.1	7587.2	7116.6	7140.8	7503.6	9128.3	7433.3
42.5°	10658.5	10462.9	10095.7	9440.5	8943.6	8365.5	7760.8	7719.0	8029.1	9794.5	8009.3
45°	12626.1	12401.9	11476.3	10330.9	9713.2	9200.9	8556.7	8444.5	8675.4	10588.1	8752.4
47.5°	14268.5	14026.7	12799.9	11261.0	10495.8	10062.8	9438.3	9306.4	9449.4	11509.4	9645.0
50°	14829.1	14695.1	13617.8	12034.9	11285.0	11030.1	10544.1	10324.3	10359.6	12503.1	10687.0
52.5°	14571.9	14525.8	13804.7	12564.7	12015.0	12098.6	11755.6	11524.7	11485.2	13589.2	11839.1
55°	14028.9	14006.9	13655.1	12859.2	12659.2	13076.8	13455.1	13255.0	12881.2	14743.4	12791.1
57.5°	13252.8	13336.3	13589.2	13426.4	13450.6	14110.1	15033.7	15136.9	14578.6	15662.4	13496.9
60°	11179.5	11403.9	12562.4	14035.5	15163.3	15829.5	16724.3	16917.7	16016.3	16291.1	14312.4
62.5°	8264.2	8585.3	10236.4	12942.8	16106.5	19098.7	18973.5	18887.7	17388.2	17133.3	15796.4
65°	4854.4	5230.3	6626.3	10113.3	14684.1	21200.4	23172.6	21985.4	19479.0	18883.2	18160.0
67.5°	2418.3	2420.7	3051.5	5338.1	10852.0	19734.1	29302.2	28616.1	23924.5	21462.1	19092.0
70°	1860.0	1910.5	2257.9	3102.1	5487.6	15370.0	30706.9	33523.3	28391.9	21347.9	16198.9
72.5°	1576.3	1609.4	2009.5	2699.8	4102.5	8438.0	26582.6	29631.9	27092.6	18036.8	11940.2
75°	1134.4	1160.8	1778.6	2449.1	3777.2	4186.0	18234.7	21976.6	20327.7	12687.8	6571.5
77.5°	281.3	279.3	620.0	1987.5	3379.2	3487.0	10462.9	14092.6	11663.2	5195.2	1688.5
80°	125.4	120.9	140.8	417.7	3143.9	3291.2	4601.6	7116.6	4474.0	842.0	516.6
82.5°	87.9	83.5	87.9	153.9	1050.8	3053.8	2781.2	3084.5	1637.9	287.9	219.8
85°	28.6	26.4	48.4	129.7	294.6	1761.0	2713.1	2304.1	1218.0	123.1	147.3
87.5°	4.4	4.4	17.5	70.3	85.8	587.0	1591.7	1596.2	547.4	72.6	65.9
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°	7369.4	7369.4	7369.4	7369.4	7369.4	7369.4	7369.4	7369.4	7369.4	7369.4	7369.4
2.5°	7257.3	7127.6	6945.2	6762.7	6597.8	6428.5	6292.2	6228.5	6199.9	6160.2	6074.6
5°	7090.3	6855.1	6455.0	6061.4	5694.1	5342.4	5041.3	4869.7	4685.1	4676.2	4586.1
7.5°	6822.1	6487.9	5856.9	5245.7	4685.1	4148.6	3687.0	3388.0	3183.5	3055.9	2968.0
10°	6523.0	6094.3	5258.9	4399.3	3636.3	2919.6	2326.0	1939.1	1703.8	1585.1	1517.0
12.5°	6285.6	5746.9	4669.7	3588.0	2631.7	1809.4	1257.5	976.2	850.9	802.5	780.4
15°	6081.2	5428.2	4117.9	2862.4	1756.6	1039.9	727.6	635.5	615.6	615.6	613.5
17.5°	5874.5	5120.3	3581.5	2150.2	1105.9	681.5	573.7	560.6	562.8	569.4	569.4
20°	5678.8	4828.0	3064.7	1532.4	725.6	545.2	521.0	516.6	523.3	532.1	529.8
22.5°	5520.5	4570.8	2581.1	1053.2	558.4	494.6	479.2	472.7	477.1	483.6	481.5
25°	5408.3	4350.9	2137.0	734.4	485.9	450.7	433.2	424.3	419.9	424.3	422.2
27.5°	5340.2	4166.2	1719.3	551.7	435.3	406.8	384.7	367.1	356.2	356.2	351.7
30°	5296.2	3992.5	1347.6	457.2	393.5	362.7	332.0	307.8	290.2	285.8	283.7
32.5°	5294.2	3843.0	1006.9	404.5	353.9	318.8	281.3	250.6	230.9	226.5	224.2
35°	5349.0	3722.1	740.9	364.9	318.8	276.9	235.3	202.3	184.7	184.7	182.4
37.5°	5492.0	3651.8	560.6	334.2	290.2	241.9	197.8	167.1	151.8	156.0	156.0
40°	5758.0	3638.6	457.2	309.9	266.0	211.0	160.4	136.4	129.7	136.4	136.4
42.5°	6164.7	3708.9	406.8	292.4	244.0	180.3	134.0	116.5	114.4	120.9	120.9
45°	6694.6	3847.4	378.1	276.9	219.8	149.5	112.1	101.1	99.0	107.7	107.7
47.5°	7336.5	4034.3	351.7	259.4	195.7	123.1	94.5	85.8	85.8	94.5	96.7
50°	8097.2	4287.2	325.4	241.9	175.9	103.3	79.1	72.6	74.7	83.5	85.8
52.5°	8972.2	4597.2	301.2	226.5	153.9	83.5	65.9	61.5	63.8	72.6	74.7
55°	9726.3	4867.6	272.6	211.0	125.4	68.1	54.9	52.8	54.9	65.9	65.9
57.5°	10383.7	5126.9	246.2	186.8	99.0	54.9	43.9	43.9	48.4	59.4	61.5
60°	11256.5	5536.0	224.2	158.3	74.7	41.9	35.2	37.4	43.9	52.8	54.9
62.5°	12802.0	6230.6	195.7	132.0	54.9	33.0	28.6	30.8	39.5	50.6	52.8
65°	14736.8	6888.1	162.8	110.0	41.9	24.2	22.0	28.6	39.5	50.6	52.8
67.5°	14538.9	5991.1	127.5	87.9	30.8	19.9	17.5	26.4	37.4	50.6	52.8
70°	11790.8	4199.1	94.5	59.4	24.2	17.5	17.5	26.4	37.4	48.4	50.6
72.5°	8178.6	2337.0	72.6	39.5	22.0	17.5	15.5	24.2	35.2	48.4	50.6
75°	3891.4	716.7	57.1	28.6	19.9	15.5	13.1	24.2	35.2	48.4	50.6
77.5°	747.5	182.4	46.2	24.2	17.5	15.5	13.1	22.0	35.2	46.2	48.4
80°	252.9	81.3	37.4	22.0	17.5	15.5	13.1	22.0	33.0	43.9	46.2
82.5°	138.5	46.2	33.0	19.9	17.5	13.1	11.0	19.9	30.8	43.9	46.2
85°	107.7	33.0	26.4	19.9	17.5	13.1	11.0	19.9	30.8	41.9	43.9
87.5°	54.9	24.2	22.0	19.9	17.5	13.1	11.0	17.5	28.6	39.5	43.9
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)