

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: P270519

Luminaire Tested: **NAV-AF-04-D-UNV-SL3-7027-1200-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270519
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-04-D-UNV-SL3-7027-1200-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(4) 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: 19738.6 lumens
Efficiency: N/A
Efficacy: 76.5 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Medium - Non-Cutoff
BUG Rating: B2 - U0 - G4

Input Watts (W): 258
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

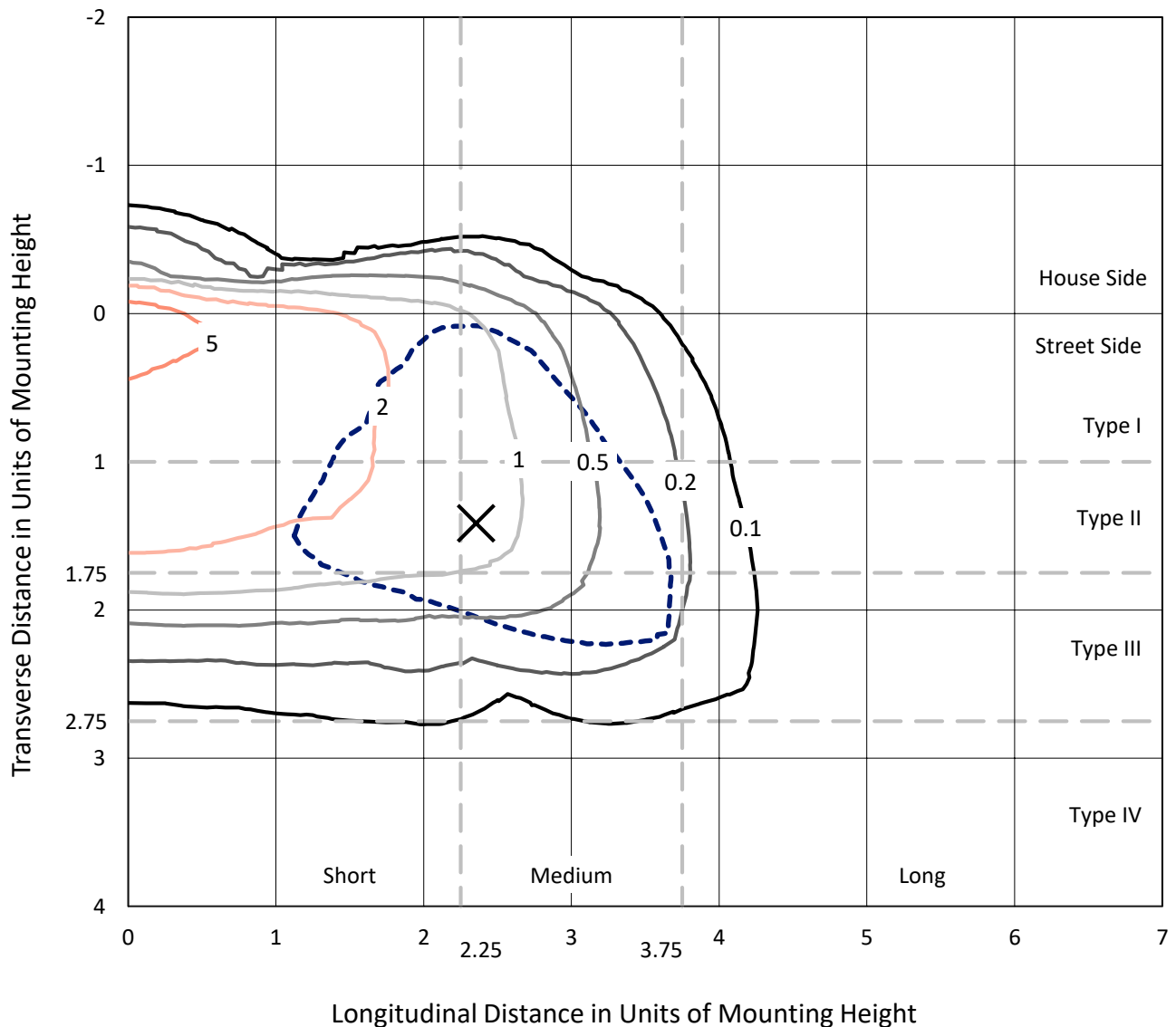


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

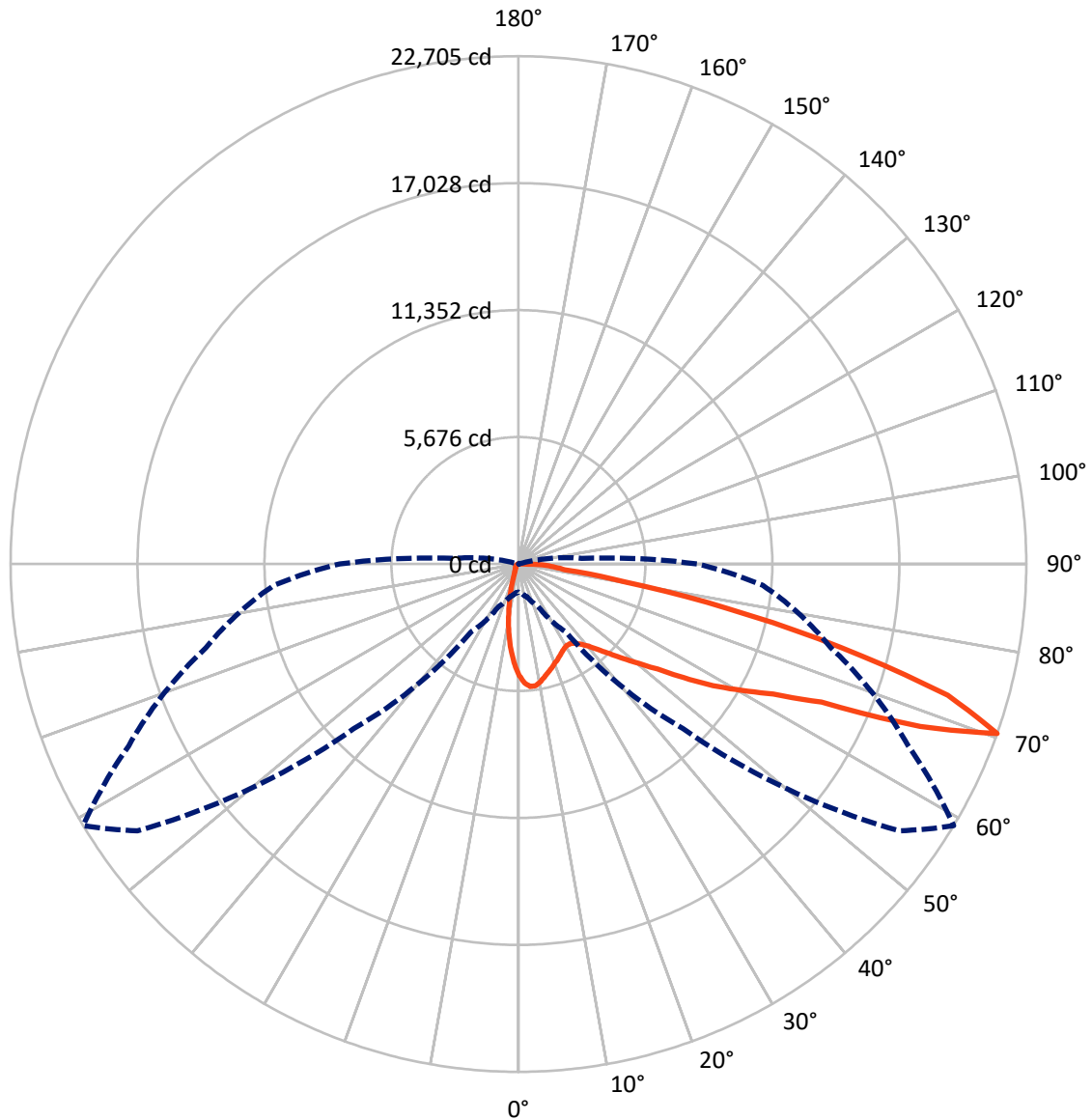


Based on 25 foot mounting height. Maximum calculated value = 8.5 fc
 Type III - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



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

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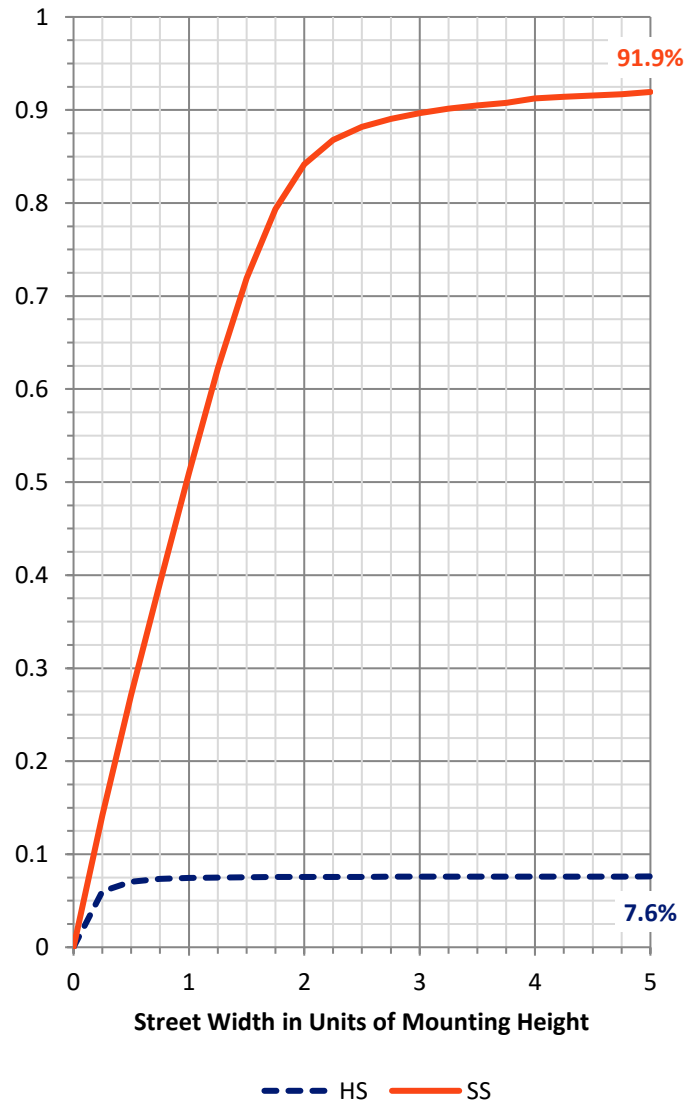
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1517.4	0.0	1517.4
	% Fixture	7.7	0.0	7.7
Street Side	Lumens	18221.2	0.0	18221.2
	% Fixture	92.3	0.0	92.3
Total	Lumens	19738.6	0.0	19738.6
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	410.4	2.1
10°-20°	860.8	4.4
20°-30°	1165.3	5.9
30°-40°	1681.7	8.5
40°-50°	2792.9	14.1
50°-60°	4272.1	21.6
60°-70°	5313.5	26.9
70°-80°	2937.3	14.9
80°-90°	304.6	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°	19738.6	100.0
0°-180°	19738.6	100.0

Coefficient of Utilization



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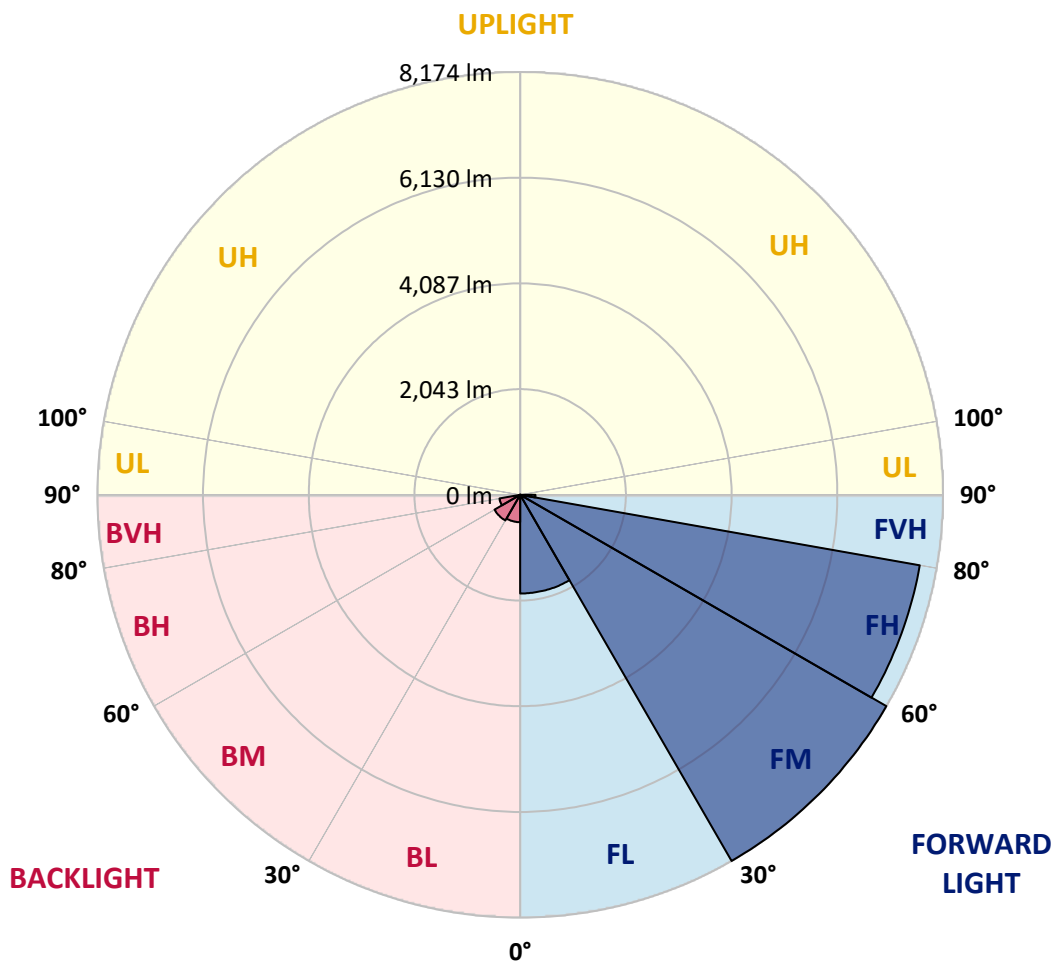
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1907.8	9.7			
FM	(30°-60°)	8174.0	41.4			
FH	(60°-80°)	7843.7	39.7			G4/12000
FVH	(80°-90°)	295.8	1.5			G3/500
BL	(0°-30°)	528.8	2.7	B2/1000		
BM	(30°-60°)	572.8	2.9	B1/1000		
BH	(60°-80°)	407.0	2.1	B1/500		G1/500
BVH	(80°-90°)	8.8	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-G4

Type III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	4991.2	4991.2	4991.2	4991.2	4991.2	4991.2	4991.2	4991.2	4991.2	4991.2	4991.2
2.5°	5641.9	5632.9	5595.7	5588.3	5546.6	5463.2	5366.5	5327.7	5248.7	5123.8	4985.2
5°	5735.7	5740.2	5743.1	5726.8	5720.8	5652.2	5545.1	5499.0	5393.2	5187.7	4934.6
7.5°	5384.4	5396.2	5433.4	5449.7	5521.3	5548.0	5525.7	5495.9	5412.6	5169.8	4813.9
10°	5013.5	5035.9	5076.1	5102.8	5190.6	5262.2	5353.0	5360.5	5342.6	5110.3	4678.6
12.5°	4694.8	4715.7	4760.4	4813.9	4903.3	4995.7	5131.2	5178.8	5238.3	5071.7	4581.6
15°	4420.9	4426.8	4470.1	4537.0	4654.7	4781.1	4942.0	5012.1	5128.2	5056.6	4507.2
17.5°	4181.2	4182.7	4211.0	4272.0	4414.9	4581.6	4769.3	4861.6	5009.0	5035.9	4441.7
20°	4023.2	4021.8	4023.2	4056.0	4182.7	4380.7	4608.6	4705.3	4894.3	5010.6	4374.7
22.5°	3969.7	3962.2	3928.0	3916.2	3996.5	4170.7	4443.2	4569.8	4791.6	5003.1	4325.6
25°	4035.2	4030.8	3957.8	3889.3	3896.8	4005.5	4274.9	4429.8	4711.3	5029.9	4313.8
27.5°	4246.6	4237.8	4126.1	3992.1	3907.2	3926.5	4149.9	4312.1	4647.2	5095.4	4330.1
30°	4523.7	4525.1	4405.9	4243.8	4044.2	3933.9	4082.8	4236.2	4604.1	5193.7	4365.9
32.5°	4831.9	4830.4	4745.4	4557.9	4303.2	4070.9	4112.7	4242.2	4610.0	5338.1	4434.3
35°	5150.5	5134.2	5105.8	4940.6	4642.7	4310.6	4248.2	4343.5	4672.5	5528.7	4550.5
37.5°	5518.3	5512.3	5540.7	5366.5	5062.7	4663.6	4486.3	4550.5	4830.4	5810.1	4738.0
40°	6103.4	6070.7	6084.1	5847.3	5536.2	5138.6	4819.9	4836.4	5082.0	6182.3	5034.3
42.5°	7218.7	7086.2	6837.5	6393.9	6057.4	5665.7	5256.3	5228.0	5437.9	6633.5	5424.4
45°	8551.4	8399.5	7772.7	6996.9	6578.5	6231.5	5795.2	5719.2	5875.6	7171.1	5927.7
47.5°	9663.6	9499.9	8669.1	7626.7	7108.6	6815.3	6392.2	6303.0	6399.7	7795.0	6532.4
50°	10043.4	9952.6	9223.0	8151.0	7643.0	7470.3	7141.3	6992.3	7016.2	8468.1	7238.2
52.5°	9869.1	9837.9	9349.5	8509.7	8137.4	8194.0	7961.8	7805.5	7778.7	9203.6	8018.4
55°	9501.5	9486.6	9248.3	8709.2	8573.8	8856.7	9112.8	8977.2	8724.1	9985.3	8663.1
57.5°	8975.8	9032.4	9203.6	9093.5	9109.8	9556.4	10181.8	10251.8	9873.6	10607.7	9141.1
60°	7571.6	7723.4	8508.2	9505.9	10269.8	10720.9	11326.9	11458.1	10847.5	11033.6	9693.5
62.5°	5597.2	5814.5	6932.8	8765.8	10908.5	12935.1	12850.2	12792.1	11776.6	11603.9	10698.5
65°	3287.7	3542.3	4487.9	6849.4	9945.1	14358.6	15694.2	14890.1	13192.7	12789.1	12299.2
67.5°	1637.9	1639.3	2066.7	3615.3	7349.8	13365.4	19845.5	19381.0	16203.4	14535.7	12930.7
70°	1259.8	1294.0	1529.3	2101.0	3716.6	10409.6	20797.1	22704.5	19229.1	14458.3	10971.1
72.5°	1067.6	1090.0	1360.9	1828.5	2778.5	5714.8	18003.7	20068.9	18349.0	12216.0	8086.8
75°	768.3	786.1	1204.5	1658.8	2558.2	2835.1	12349.9	14884.1	13767.5	8593.0	4450.7
77.5°	190.6	189.2	419.9	1346.1	2288.6	2361.6	7086.2	9544.6	7899.2	3518.5	1143.5
80°	84.9	81.8	95.3	283.0	2129.3	2229.1	3116.5	4819.9	3030.2	570.3	349.9
82.5°	59.6	56.7	59.6	104.3	711.7	2068.3	1883.6	2089.1	1109.2	195.0	148.8
85°	19.4	17.8	32.8	87.9	199.6	1192.7	1837.5	1560.4	825.0	83.5	99.7
87.5°	3.0	3.0	11.9	47.6	58.1	397.6	1078.1	1081.0	370.8	49.1	44.6
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°	4991.2	4991.2	4991.2	4991.2	4991.2	4991.2	4991.2	4991.2	4991.2	4991.2	4991.2
2.5°	4915.3	4827.4	4703.7	4580.2	4468.4	4353.8	4261.6	4218.4	4198.9	4172.2	4114.1
5°	4802.1	4642.7	4371.7	4105.3	3856.6	3618.4	3414.3	3298.1	3173.2	3167.2	3106.1
7.5°	4620.4	4394.1	3966.7	3552.7	3173.2	2809.8	2497.1	2294.6	2156.1	2069.8	2010.1
10°	4418.0	4127.5	3561.7	2979.5	2462.9	1977.3	1575.4	1313.3	1154.1	1073.6	1027.4
12.5°	4257.1	3892.3	3162.7	2430.1	1782.3	1225.5	851.8	661.2	576.3	543.5	528.7
15°	4118.5	3676.4	2788.9	1938.7	1189.7	704.4	492.9	430.3	417.0	417.0	415.5
17.5°	3978.7	3467.8	2425.7	1456.2	748.9	461.5	388.6	379.8	381.2	385.6	385.6
20°	3846.2	3269.9	2075.7	1037.8	491.4	369.3	352.9	349.9	354.4	360.3	358.9
22.5°	3738.9	3095.6	1748.1	713.3	378.1	335.0	324.6	320.2	323.1	327.6	326.1
25°	3663.0	2946.8	1447.3	497.3	329.0	305.2	293.3	287.4	284.5	287.4	285.9
27.5°	3616.8	2821.7	1164.5	373.8	294.9	275.5	260.6	248.7	241.3	241.3	238.2
30°	3587.0	2704.1	912.8	309.7	266.5	245.6	224.8	208.4	196.5	193.6	192.1
32.5°	3585.6	2602.7	682.0	274.0	239.8	216.0	190.6	169.8	156.3	153.4	151.9
35°	3622.8	2521.0	501.9	247.2	216.0	187.7	159.3	137.0	125.0	125.0	123.5
37.5°	3719.5	2473.3	379.8	226.4	196.5	163.9	133.9	113.1	102.8	105.7	105.7
40°	3899.7	2464.3	309.7	209.9	180.2	142.9	108.7	92.3	87.9	92.3	92.3
42.5°	4175.2	2512.0	275.5	198.0	165.3	122.1	90.8	79.0	77.4	81.8	81.8
45°	4534.0	2605.8	256.0	187.7	148.8	101.2	75.9	68.5	67.1	72.9	72.9
47.5°	4968.9	2732.4	238.2	175.7	132.5	83.5	64.0	58.1	58.1	64.0	65.5
50°	5484.1	2903.6	220.4	163.9	119.1	70.0	53.5	49.1	50.7	56.7	58.1
52.5°	6076.7	3113.5	203.9	153.4	104.3	56.7	44.6	41.7	43.2	49.1	50.7
55°	6587.5	3296.7	184.6	142.9	84.9	46.2	37.2	35.8	37.2	44.6	44.6
57.5°	7032.7	3472.4	166.7	126.7	67.1	37.2	29.7	29.7	32.8	40.2	41.7
60°	7623.7	3749.3	151.9	107.2	50.7	28.2	23.9	25.3	29.7	35.8	37.2
62.5°	8670.5	4219.9	132.5	89.3	37.2	22.4	19.4	20.8	26.8	34.2	35.8
65°	9980.9	4665.1	110.2	74.5	28.2	16.3	14.9	19.4	26.8	34.2	35.8
67.5°	9846.9	4057.6	86.3	59.6	20.8	13.5	11.9	17.8	25.3	34.2	35.8
70°	7985.7	2844.0	64.0	40.2	16.3	11.9	11.9	17.8	25.3	32.8	34.2
72.5°	5539.0	1582.9	49.1	26.8	14.9	11.9	10.4	16.3	23.9	32.8	34.2
75°	2635.5	485.4	38.6	19.4	13.5	10.4	9.0	16.3	23.9	32.8	34.2
77.5°	506.3	123.5	31.4	16.3	11.9	10.4	9.0	14.9	23.9	31.4	32.8
80°	171.2	55.1	25.3	14.9	11.9	10.4	9.0	14.9	22.4	29.7	31.4
82.5°	93.9	31.4	22.4	13.5	11.9	9.0	7.5	13.5	20.8	29.7	31.4
85°	72.9	22.4	17.8	13.5	11.9	9.0	7.5	13.5	20.8	28.2	29.7
87.5°	37.2	16.3	14.9	13.5	11.9	9.0	7.5	11.9	19.4	26.8	29.7
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)