

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: P270419

Luminaire Tested: **NAV-AF-03-D-UNV-AFL-7027-1200-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270419
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-03-D-UNV-AFL-7027-1200-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 2700K, 1200mA 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: 14490.5 lumens
Efficiency: N/A
Efficacy: 75.9 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type II - Short - Full Cutoff
BUG Rating: B1 - U0 - G2

Input Watts (W): 191
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

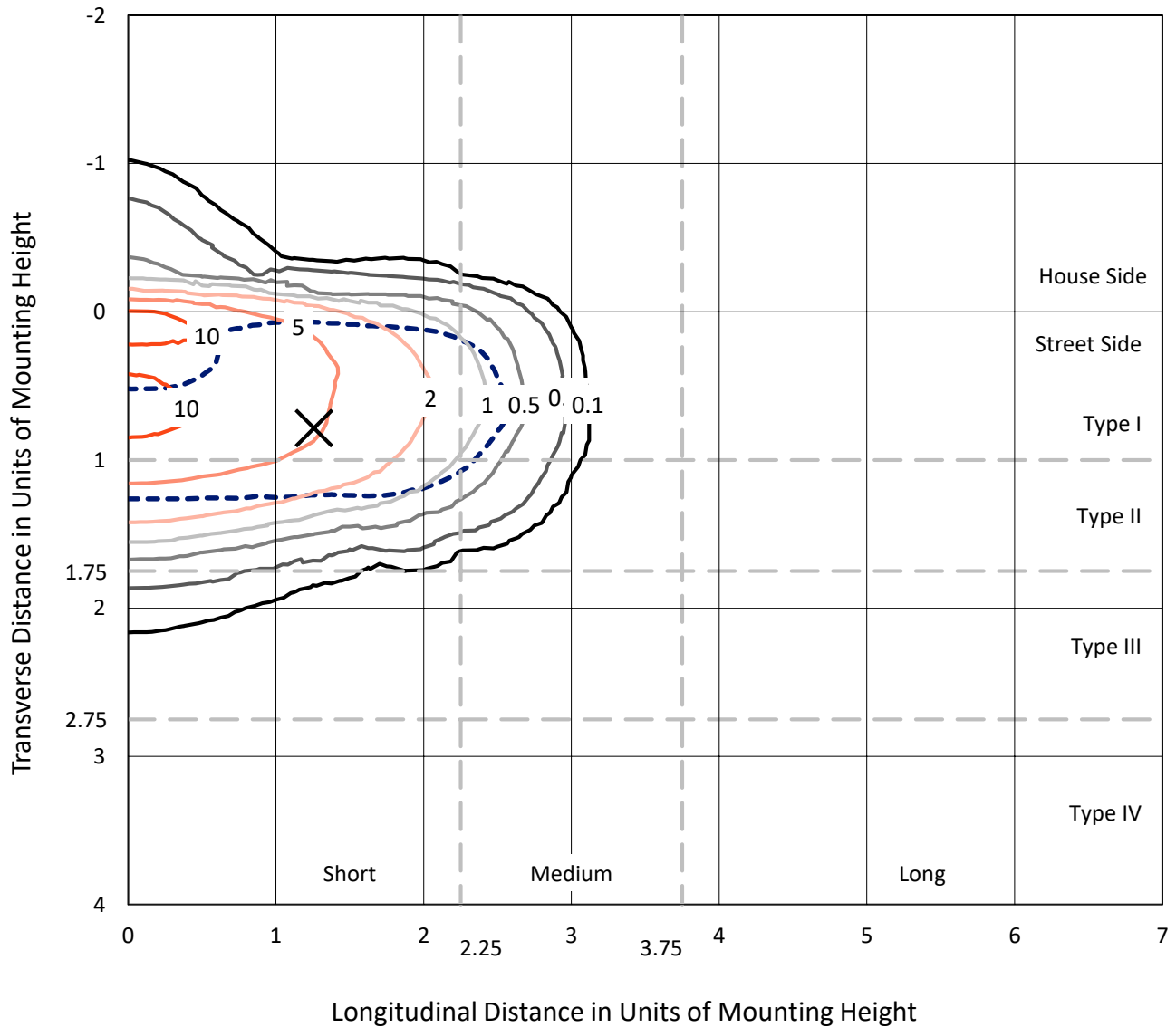


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

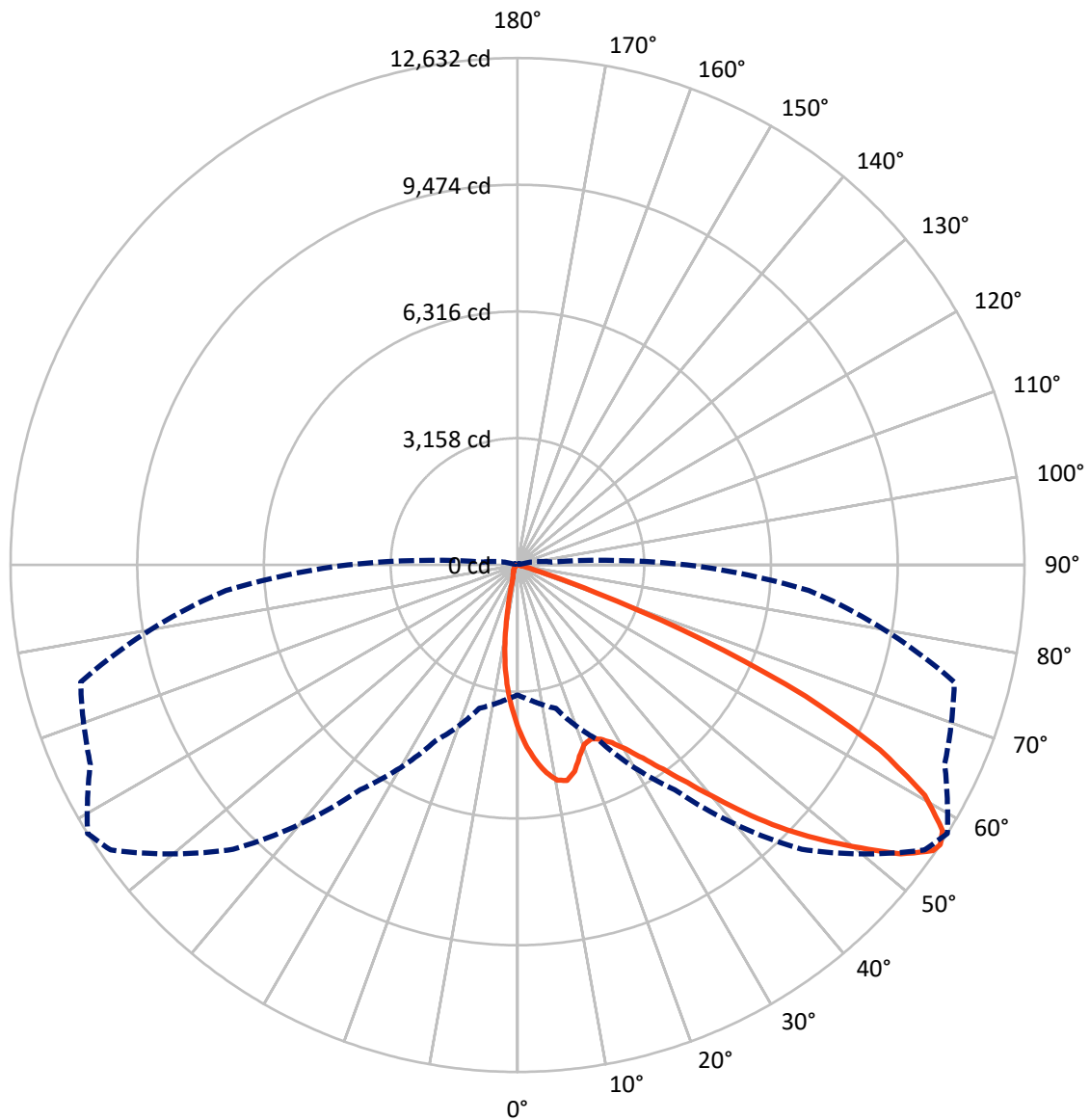


Based on 20 foot mounting height. Maximum calculated value = 12.7 fc
 Type II - Short - Full Cutoff

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Luminous Intensity Polar Plot



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

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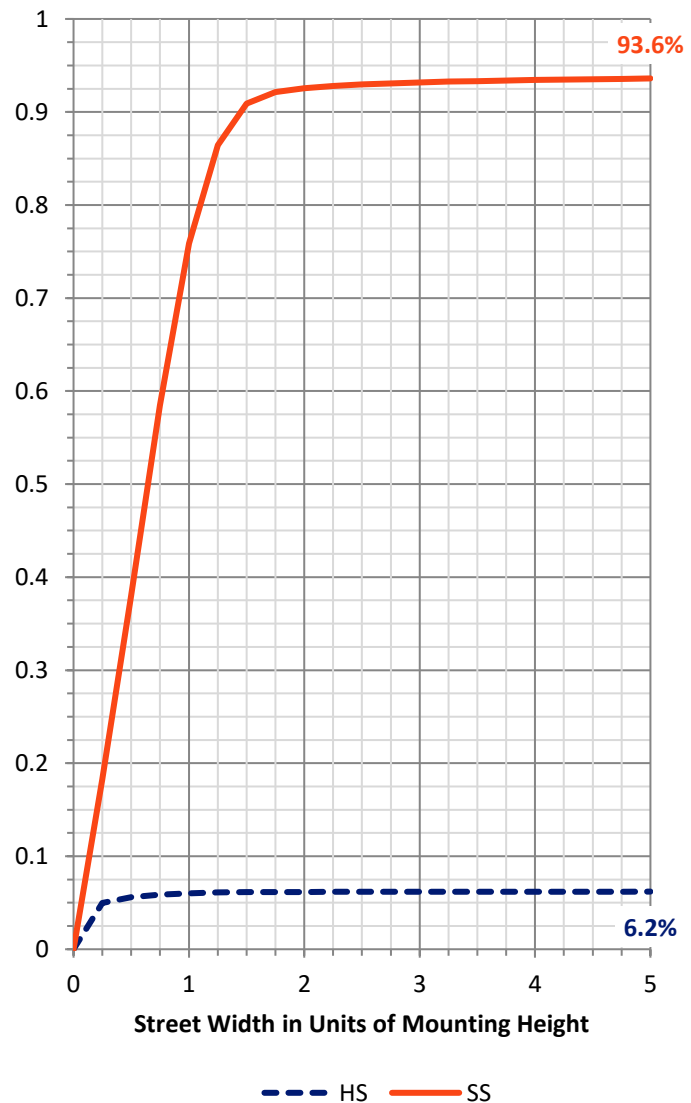
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	904.5	0.0	904.5
	% Fixture	6.2	0.0	6.2
Street Side	Lumens	13586.1	0.0	13586.1
	% Fixture	93.8	0.0	93.8
Total	Lumens	14490.5	0.0	14490.5
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	350.0	2.4
10°-20°	814.4	5.6
20°-30°	1370.3	9.5
30°-40°	2346.5	16.2
40°-50°	3540.9	24.4
50°-60°	3680.7	25.4
60°-70°	2066.3	14.3
70°-80°	283.2	2.0
80°-90°	38.4	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°	14490.5	100.0
0°-180°	14490.5	100.0



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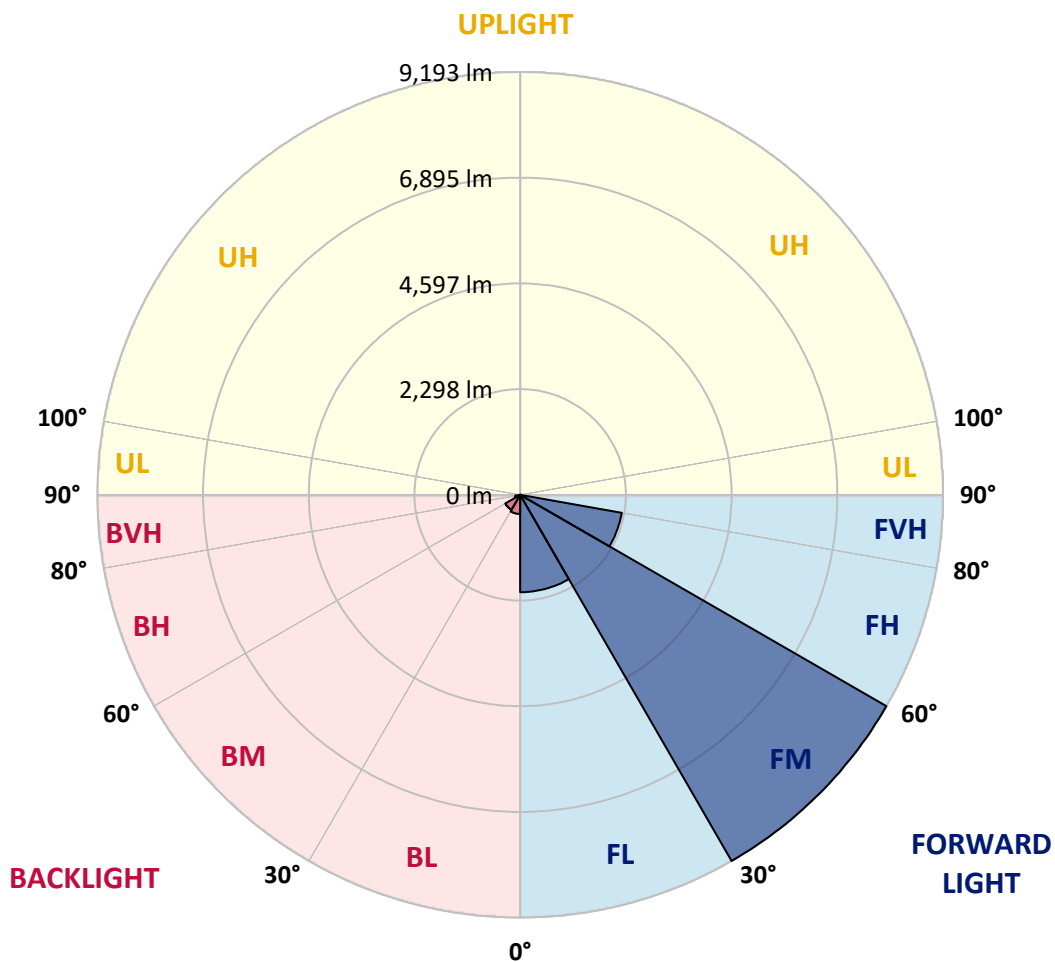
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2117.4	14.6			
FM	(30°-60°)	9193.4	63.4			
FH	(60°-80°)	2242.2	15.5			G2/5000
FVH	(80°-90°)	33.1	0.2			G1/100
BL	(0°-30°)	417.2	2.9	B1/500		
BM	(30°-60°)	374.7	2.6	B1/1000		
BH	(60°-80°)	107.3	0.7	B0/110		G0/110
BVH	(80°-90°)	5.3	0.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G2

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	4102.6	4102.6	4102.6	4102.6	4102.6	4102.6	4102.6	4102.6	4102.6	4102.6	4102.6
2.5°	4936.4	4906.5	4875.6	4818.0	4765.0	4683.1	4570.3	4542.6	4454.2	4308.4	4172.4
5°	5362.0	5356.5	5335.5	5289.0	5231.5	5131.9	5004.8	4919.7	4782.7	4552.7	4290.7
7.5°	5109.9	5156.4	5232.5	5341.0	5413.9	5403.9	5306.6	5232.5	5096.7	4782.7	4406.7
10°	4307.3	4316.0	4421.1	4648.9	5009.3	5345.4	5472.6	5452.6	5327.7	4983.8	4508.5
12.5°	4024.2	4029.7	4054.1	4127.1	4361.5	4830.1	5406.2	5510.2	5500.1	5176.3	4616.7
15°	4046.3	4049.6	4056.2	4079.6	4145.9	4381.4	5070.2	5334.3	5610.8	5358.6	4723.0
17.5°	4221.0	4218.8	4197.8	4175.7	4196.7	4274.0	4727.4	5006.0	5587.5	5512.3	4810.2
20°	4561.6	4572.6	4501.9	4403.4	4352.6	4355.9	4558.2	4767.1	5457.1	5631.7	4875.6
22.5°	5040.2	5047.9	4931.9	4761.6	4612.3	4537.2	4593.7	4704.2	5306.6	5742.2	4928.6
25°	5611.8	5611.8	5449.3	5207.1	4976.2	4811.4	4762.8	4804.8	5249.2	5867.2	4981.6
27.5°	6228.7	6250.9	6038.5	5721.2	5416.2	5175.1	5022.6	5014.8	5293.4	6024.2	5041.4
30°	6899.8	6919.6	6667.6	6279.6	5918.0	5609.6	5375.2	5324.3	5462.6	6235.3	5128.8
32.5°	7567.5	7584.1	7305.6	6909.8	6488.5	6125.9	5817.5	5736.8	5766.6	6543.9	5256.9
35°	8416.6	8420.0	8067.3	7596.2	7146.3	6720.7	6330.4	6250.9	6217.7	6932.9	5441.6
37.5°	9092.1	9065.5	8842.2	8396.6	7880.4	7436.0	6977.1	6873.2	6793.6	7480.1	5728.0
40°	9251.4	9251.4	9218.1	9084.4	8674.3	8246.4	7801.9	7647.1	7471.4	8124.7	6112.6
42.5°	8836.7	8863.2	9082.1	9372.9	9376.1	9102.0	8667.6	8537.1	8227.5	8858.8	6532.7
45°	7909.1	7916.9	8442.0	9227.0	9759.8	9916.8	9596.2	9416.0	8987.1	9621.7	6917.5
47.5°	7575.2	7599.7	7822.9	8782.5	9788.7	10576.9	10487.4	10239.7	9690.1	10318.2	7276.8
50°	7062.4	7092.2	7365.3	8128.0	9529.8	11000.4	11339.8	11074.3	10330.2	10898.5	7454.8
52.5°	5835.1	5881.6	6267.5	7262.3	8883.2	11018.0	12120.2	11961.0	10985.9	11209.2	7433.7
55°	4015.3	4049.6	4499.6	5669.4	7578.6	10477.4	12456.3	12565.9	11570.8	11278.8	7332.1
56°	3239.3	3367.6	3697.0	4830.1	6835.7	10017.4	12379.0	12632.1	11744.4	11267.8	7287.8
57.5°	2141.5	2165.9	2525.0	3500.2	5489.2	9019.2	12029.6	12490.7	11967.7	11211.4	7255.8
60°	1007.2	1018.1	1147.6	1615.2	2970.7	6572.5	10894.1	11659.2	12049.4	11093.2	7254.7
62.5°	656.8	658.8	674.4	770.6	1215.0	3579.7	9031.3	10132.4	11371.7	11080.0	7233.6
65°	540.6	546.2	527.3	539.5	635.7	1350.0	6370.2	7899.2	9780.8	10768.2	6997.1
67.5°	476.6	477.5	452.1	437.8	465.4	592.6	3209.5	4982.8	7315.4	9149.5	5763.3
70°	434.5	433.4	404.6	371.4	372.5	393.5	1045.8	2069.7	4047.5	5432.7	3308.9
72.5°	385.8	388.1	371.4	325.0	309.6	278.7	393.5	558.2	1377.6	1744.6	872.3
75°	338.3	333.9	317.3	287.5	258.7	186.8	197.8	237.7	359.3	356.0	187.9
77.5°	256.5	252.1	259.8	245.4	202.3	130.4	108.3	123.8	162.6	151.5	76.3
80°	195.7	193.4	176.8	210.1	184.6	98.5	74.1	76.3	88.5	80.7	37.5
82.5°	141.6	140.4	133.8	129.4	117.1	71.9	56.4	59.6	66.4	56.4	27.7
85°	54.2	54.2	105.0	88.5	80.7	48.7	39.9	43.1	50.8	41.0	18.8
87.5°	8.9	8.9	70.7	58.6	36.6	24.3	25.4	27.7	29.9	24.3	14.4
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°	4102.6	4102.6	4102.6	4102.6	4102.6	4102.6	4102.6	4102.6	4102.6	4102.6	4102.6
2.5°	4091.7	4017.6	3855.0	3698.1	3561.1	3410.7	3334.4	3245.9	3212.8	3146.5	3153.1
5°	4133.7	3979.0	3652.8	3308.9	2993.8	2673.3	2445.5	2231.0	2111.6	1993.2	1993.2
7.5°	4176.8	3940.2	3436.0	2886.7	2356.0	1806.5	1417.3	1105.5	932.0	815.9	812.5
10°	4206.7	3890.5	3189.5	2396.9	1614.2	930.9	561.6	442.2	399.0	380.3	379.3
12.5°	4245.3	3840.8	2908.7	1819.7	896.6	442.2	350.5	331.7	323.8	319.4	319.4
15°	4278.4	3769.9	2568.3	1223.9	471.0	331.7	301.8	295.3	294.0	292.9	294.0
17.5°	4286.3	3669.3	2160.2	716.4	341.6	289.7	276.4	270.8	270.8	269.8	269.8
20°	4268.6	3536.6	1709.1	442.2	295.3	266.4	252.1	245.4	244.2	244.2	244.2
22.5°	4232.1	3367.6	1263.6	335.0	268.7	245.4	226.6	220.1	220.1	221.2	222.2
25°	4186.7	3167.5	867.9	288.5	248.7	223.3	204.5	197.8	200.1	202.3	203.5
27.5°	4129.2	2928.7	568.3	249.9	222.2	201.2	184.6	180.2	184.6	189.1	191.2
30°	4071.7	2666.6	384.7	216.8	192.3	176.8	166.9	165.8	172.5	182.4	183.6
32.5°	4034.2	2397.9	290.7	194.6	169.2	155.9	151.5	153.7	163.6	174.7	176.8
35°	4030.9	2135.9	247.7	176.8	153.7	141.6	139.2	146.0	157.1	165.8	168.1
37.5°	4082.8	1890.6	224.4	163.6	141.6	129.4	126.0	138.2	148.1	157.1	159.2
40°	4187.9	1670.5	208.9	151.5	131.5	117.1	115.0	125.0	134.8	144.8	148.1
42.5°	4319.4	1464.9	191.2	139.2	120.6	103.9	101.7	109.5	119.5	133.8	136.0
45°	4433.2	1273.5	172.5	126.0	108.3	89.6	88.5	97.2	105.0	118.2	120.6
47.5°	4529.4	1114.3	154.8	111.7	92.9	79.6	78.5	83.0	87.3	99.5	101.7
50°	4478.6	979.5	137.1	91.7	75.2	68.5	67.5	67.5	72.9	85.1	87.3
52.5°	4353.6	895.5	120.6	76.3	62.0	58.6	55.2	56.4	62.0	67.5	68.5
55°	4253.0	855.6	106.1	67.5	51.9	48.7	45.4	44.2	45.4	43.1	41.0
56°	4228.7	851.2	102.9	65.2	49.8	45.4	41.0	38.6	37.5	33.1	32.1
57.5°	4217.7	851.2	97.2	60.8	46.4	41.0	35.4	30.9	26.5	23.3	23.3
60°	4208.9	856.9	90.6	53.1	39.9	33.1	25.4	18.8	15.5	15.5	15.5
62.5°	4190.1	854.6	83.0	44.2	34.2	25.4	15.5	12.1	11.0	12.1	13.2
65°	3979.0	793.8	72.9	35.4	26.5	17.6	8.9	8.9	9.9	12.1	13.2
67.5°	3206.1	601.4	59.6	27.7	18.8	13.2	7.7	7.7	9.9	12.1	13.2
70°	1761.1	317.3	50.8	19.9	14.4	11.0	7.7	6.6	9.9	12.1	13.2
72.5°	430.1	132.7	46.4	15.5	13.2	9.9	6.6	6.6	9.9	12.1	13.2
75°	106.1	99.5	37.5	12.1	11.0	8.9	6.6	6.6	9.9	12.1	13.2
77.5°	49.8	131.5	25.4	11.0	9.9	7.7	6.6	6.6	9.9	12.1	12.1
80°	29.9	99.5	15.5	9.9	8.9	7.7	6.6	6.6	9.9	12.1	13.2
82.5°	17.6	28.7	11.0	9.9	8.9	6.6	6.6	6.6	9.9	12.1	13.2
85°	15.5	14.4	11.0	9.9	8.9	7.7	6.6	6.6	11.0	13.2	13.2
87.5°	12.1	11.0	9.9	8.9	8.9	7.7	6.6	6.6	9.9	12.1	13.2
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)