

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: P270600

Luminaire Tested: **NAV-AF-05-D-UNV-SL3-7027-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270600
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-05-D-UNV-SL3-7027-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 70 CRI, 2700K, 1050mA 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: 22177.6 lumens
Efficiency: N/A
Efficacy: 79.5 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

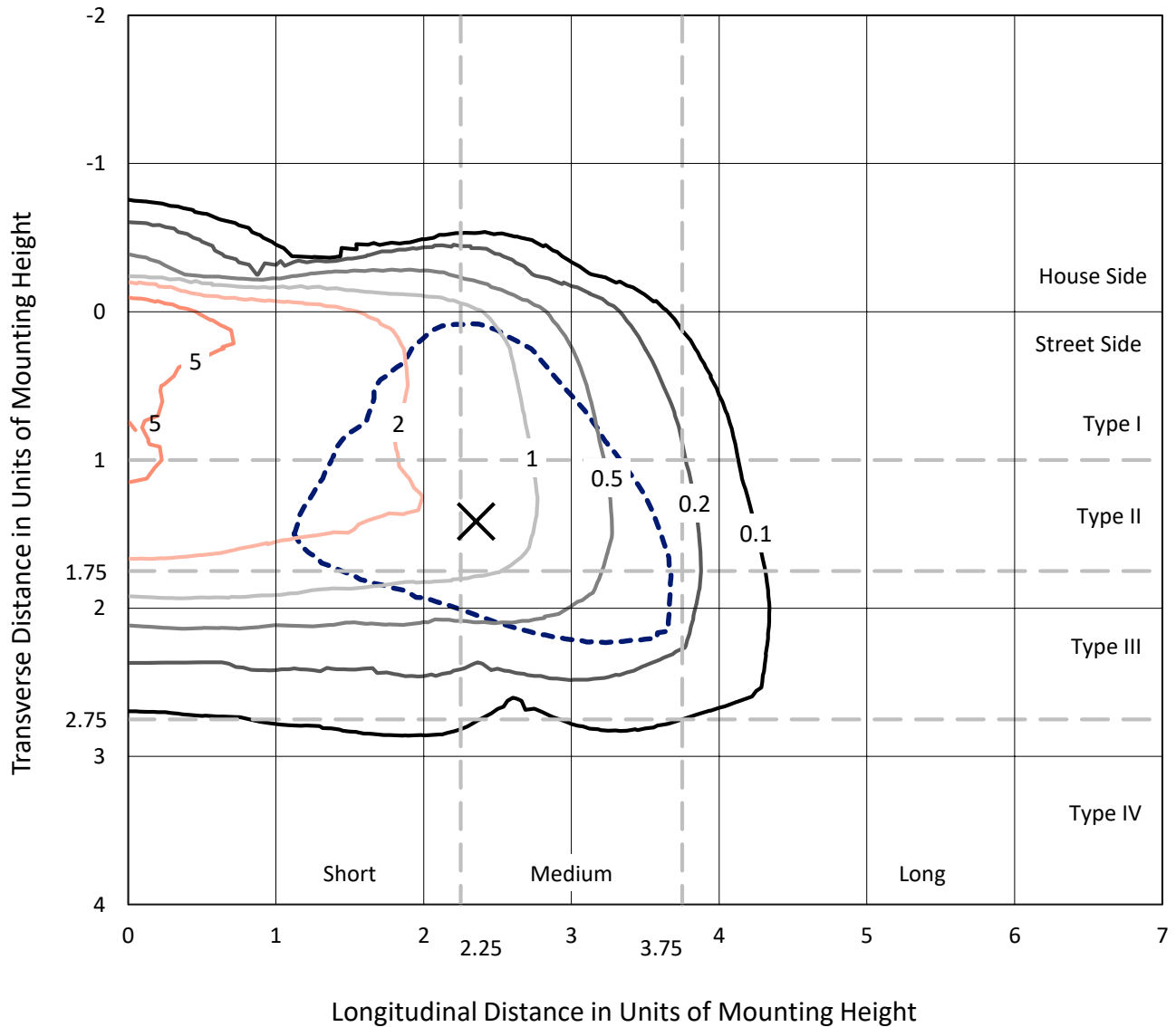
Input Watts (W): 279
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

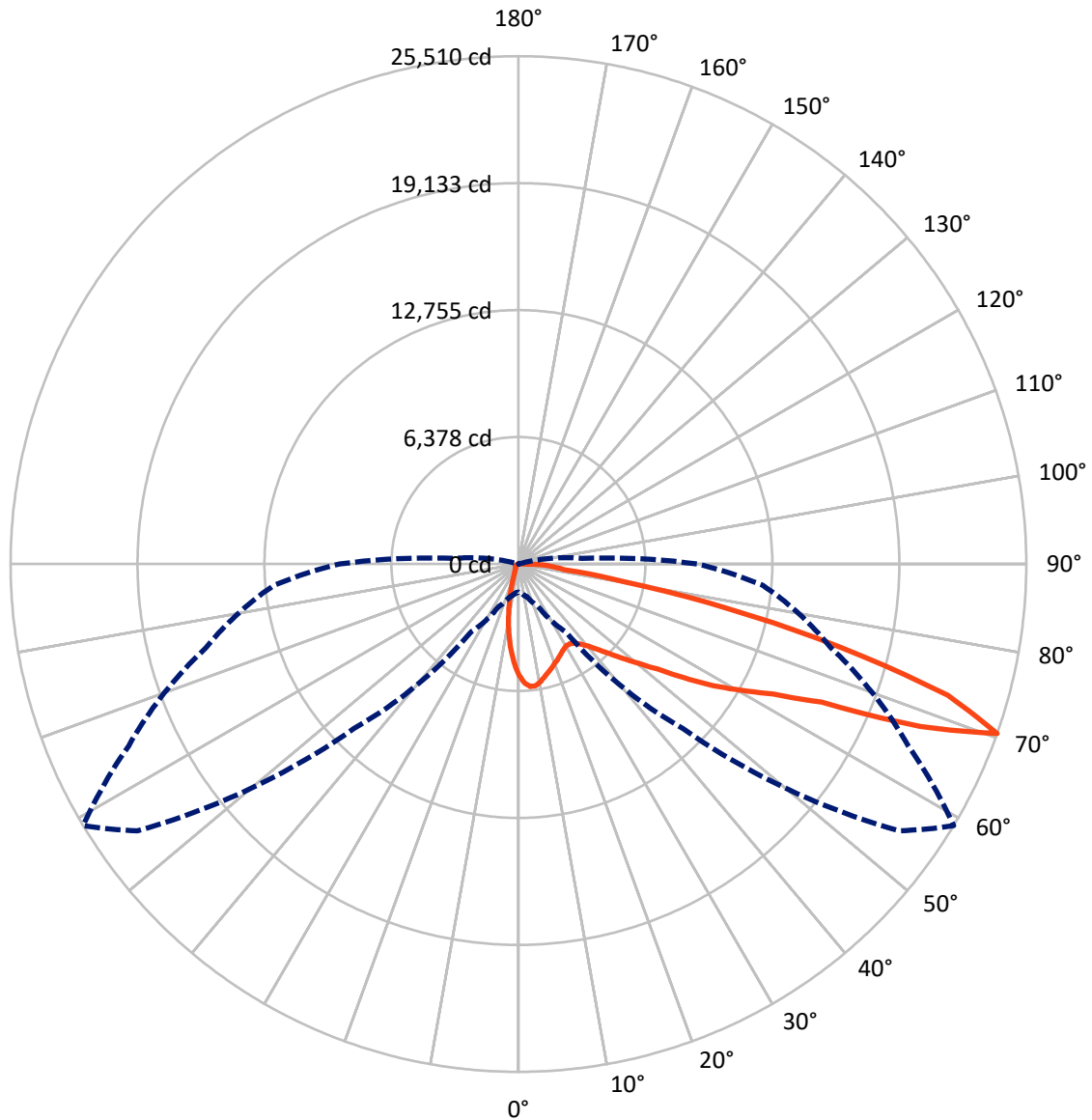


Based on 25 foot mounting height. Maximum calculated value = 9.5 fc
 Type III - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



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

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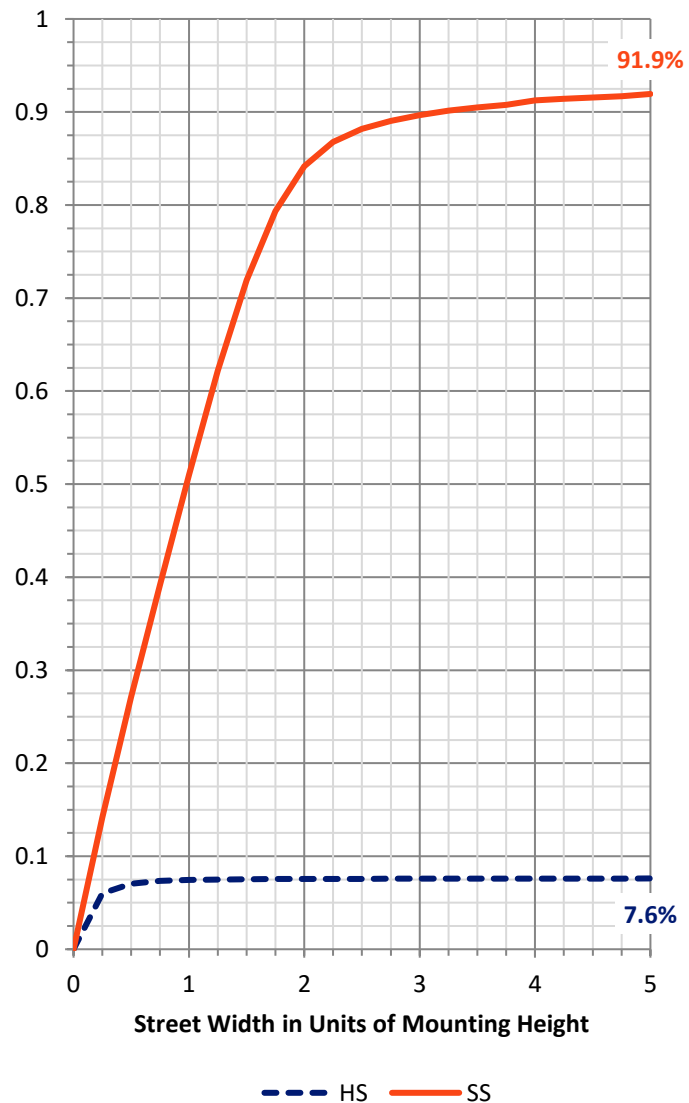
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1704.9	0.0	1704.9
	% Fixture	7.7	0.0	7.7
Street Side	Lumens	20472.7	0.0	20472.7
	% Fixture	92.3	0.0	92.3
Total	Lumens	22177.6	0.0	22177.6
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	461.1	2.1
10°-20°	967.2	4.4
20°-30°	1309.3	5.9
30°-40°	1889.5	8.5
40°-50°	3138.0	14.1
50°-60°	4800.0	21.6
60°-70°	5970.0	26.9
70°-80°	3300.2	14.9
80°-90°	342.2	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°	22177.6	100.0
0°-180°	22177.6	100.0

Coefficient of Utilization



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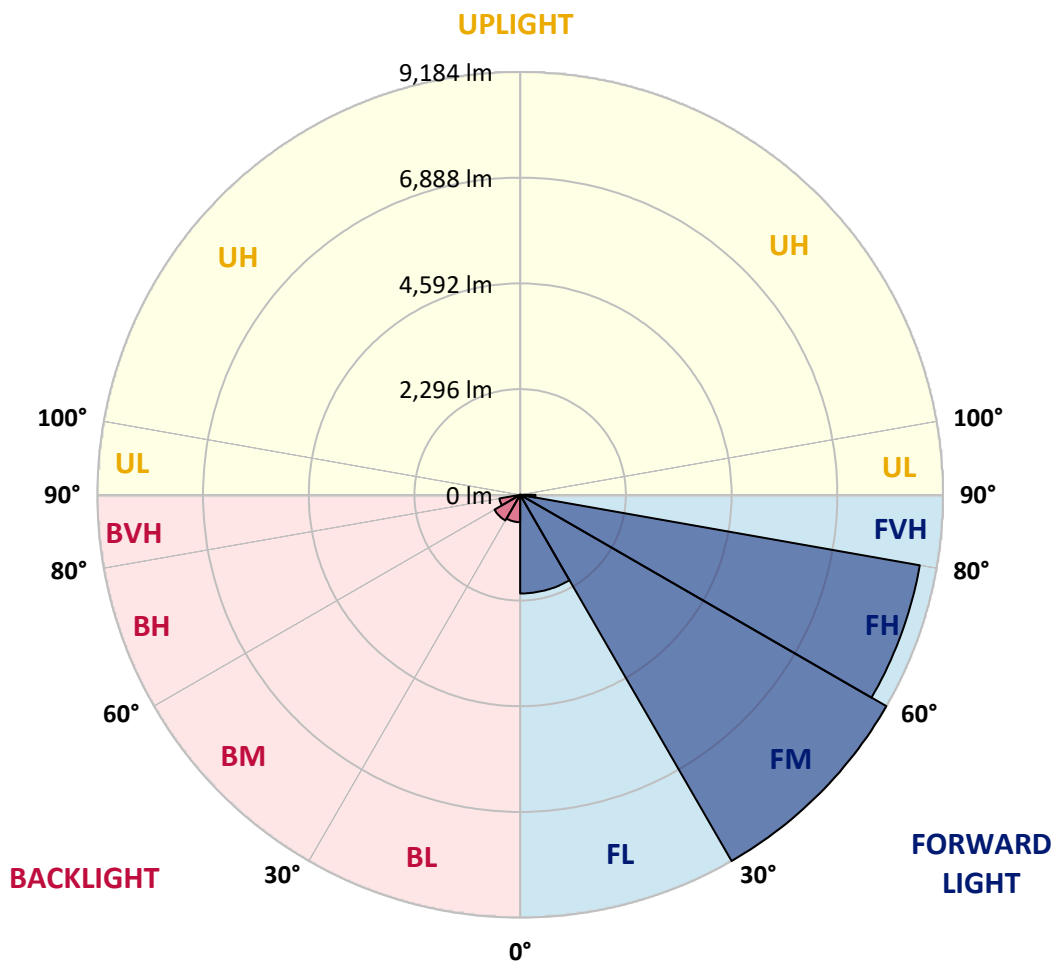
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2143.5	9.7			
FM	(30°-60°)	9184.0	41.4			
FH	(60°-80°)	8812.9	39.7			G4/12000
FVH	(80°-90°)	332.3	1.5			G3/500
BL	(0°-30°)	594.1	2.7	B2/1000		
BM	(30°-60°)	643.5	2.9	B1/1000		
BH	(60°-80°)	457.4	2.1	B1/500		G1/500
BVH	(80°-90°)	9.9	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-G4

Type III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	5607.8	5607.8	5607.8	5607.8	5607.8	5607.8	5607.8	5607.8	5607.8	5607.8	5607.8
2.5°	6339.0	6329.0	6287.1	6278.8	6231.9	6138.3	6029.6	5985.9	5897.4	5756.8	5601.2
5°	6444.4	6449.4	6452.7	6434.4	6427.7	6350.7	6230.3	6178.5	6059.5	5828.7	5544.2
7.5°	6049.5	6063.0	6104.8	6123.1	6203.4	6233.6	6208.5	6175.0	6081.3	5808.7	5408.9
10°	5633.0	5658.2	5703.2	5733.4	5832.1	5912.4	6014.4	6022.7	6002.7	5741.7	5256.6
12.5°	5274.9	5298.5	5348.6	5408.9	5509.1	5612.9	5765.1	5818.7	5885.6	5698.3	5147.8
15°	4967.2	4973.8	5022.3	5097.6	5229.8	5372.0	5552.8	5631.4	5761.8	5681.5	5064.1
17.5°	4697.7	4699.5	4731.3	4799.9	4960.4	5147.8	5358.6	5462.4	5628.1	5658.2	4990.5
20°	4520.5	4518.7	4520.5	4557.2	4699.5	4922.0	5177.9	5286.6	5499.2	5629.7	4915.3
22.5°	4460.3	4451.9	4413.5	4400.0	4490.4	4686.1	4992.2	5134.4	5383.7	5621.4	4860.1
25°	4533.8	4528.9	4446.8	4369.9	4378.2	4500.4	4803.1	4977.1	5293.4	5651.3	4846.6
27.5°	4771.3	4761.3	4636.0	4485.2	4389.9	4411.7	4662.7	4845.0	5221.5	5725.0	4865.1
30°	5082.6	5084.2	4950.4	4768.1	4543.8	4420.1	4587.4	4759.7	5172.9	5835.4	4905.3
32.5°	5428.8	5427.2	5331.9	5121.1	4834.9	4574.0	4620.8	4766.3	5179.5	5997.8	4982.2
35°	5786.9	5768.6	5736.8	5551.0	5216.4	4843.3	4773.1	4880.1	5249.9	6211.9	5112.8
37.5°	6200.1	6193.5	6225.3	6029.6	5688.2	5239.9	5040.7	5112.8	5427.2	6528.1	5323.4
40°	6857.7	6820.8	6835.9	6569.8	6220.3	5773.5	5415.5	5433.8	5709.9	6946.4	5656.4
42.5°	8110.7	7961.8	7682.5	7183.8	6805.7	6365.7	5905.6	5873.8	6109.8	7453.2	6094.7
45°	9608.0	9437.5	8733.1	7861.4	7391.3	7001.5	6511.4	6425.9	6601.6	8057.2	6660.3
47.5°	10857.9	10673.8	9740.2	8569.1	7986.9	7657.3	7182.2	7081.8	7190.6	8758.1	7339.4
50°	11284.4	11182.3	10362.6	9158.0	8587.5	8393.5	8023.8	7856.4	7883.2	9514.4	8132.4
52.5°	11088.7	11053.6	10504.8	9561.2	9142.9	9206.5	8945.5	8770.0	8739.8	10340.7	9009.1
55°	10675.5	10658.7	10391.1	9785.3	9633.2	9951.1	10238.8	10086.4	9802.1	11219.1	9733.6
57.5°	10084.8	10148.4	10340.7	10217.1	10235.5	10737.4	11439.9	11518.6	11093.7	11918.4	10270.5
60°	8507.2	8677.8	9559.6	10680.5	11538.6	12045.6	12726.6	12873.8	12187.8	12397.0	10891.2
62.5°	6288.9	6533.1	7789.6	9848.9	12256.5	14533.4	14438.0	14372.8	13231.8	13037.7	12020.5
65°	3694.0	3980.1	5042.5	7695.8	11173.9	16132.8	17633.5	16730.0	14822.8	14369.4	13818.9
67.5°	1840.3	1842.0	2322.1	4062.0	8257.9	15016.8	22297.8	21775.9	18205.6	16331.8	14528.4
70°	1415.4	1453.8	1718.2	2360.6	4175.9	11695.9	23366.8	25510.0	21605.1	16244.9	12326.7
72.5°	1199.5	1224.6	1529.2	2054.5	3121.8	6420.9	20228.3	22548.7	20616.5	13725.4	9086.0
75°	863.4	883.4	1353.4	1863.8	2874.1	3185.4	13875.8	16723.3	15468.5	9655.0	5000.7
77.5°	214.2	212.4	471.8	1512.3	2571.4	2653.4	7961.8	10724.0	8875.3	3953.4	1284.8
80°	95.4	92.0	107.1	317.9	2392.4	2504.5	3501.7	5415.5	3404.5	640.8	393.2
82.5°	67.0	63.6	67.0	117.0	799.8	2323.7	2116.3	2347.2	1246.4	219.1	167.4
85°	21.7	20.1	36.8	98.8	224.1	1340.1	2064.5	1753.3	926.8	93.8	112.1
87.5°	3.4	3.4	13.4	53.4	65.2	446.6	1211.3	1214.6	416.5	55.2	50.1
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°	5607.8	5607.8	5607.8	5607.8	5607.8	5607.8	5607.8	5607.8	5607.8	5607.8	5607.8
2.5°	5522.6	5423.8	5285.0	5146.2	5020.6	4891.9	4788.1	4739.5	4717.9	4687.7	4622.5
5°	5395.4	5216.4	4911.9	4612.4	4333.1	4065.4	3836.2	3705.7	3565.2	3558.5	3489.8
7.5°	5191.3	4937.1	4456.9	3991.8	3565.2	3157.0	2805.6	2578.0	2422.5	2325.5	2258.6
10°	4963.9	4637.6	4001.8	3347.7	2767.1	2221.8	1770.0	1475.6	1296.6	1206.2	1154.4
12.5°	4783.1	4373.2	3553.4	2730.4	2002.6	1376.9	957.0	742.8	647.5	610.7	593.9
15°	4627.4	4130.6	3133.6	2178.2	1336.8	791.3	553.7	483.5	468.5	468.5	466.8
17.5°	4470.2	3896.4	2725.3	1636.3	841.5	518.6	436.7	426.6	428.3	433.3	433.3
20°	4321.3	3673.9	2332.2	1166.1	552.1	414.8	396.5	393.2	398.2	404.9	403.2
22.5°	4201.0	3478.1	1964.1	801.4	425.0	376.4	364.7	359.7	363.1	368.0	366.4
25°	4115.6	3310.9	1626.1	558.7	369.7	343.0	329.6	322.9	319.5	322.9	321.2
27.5°	4063.8	3170.4	1308.3	419.9	331.3	309.5	292.8	279.5	271.0	271.0	267.6
30°	4030.2	3038.2	1025.5	348.1	299.4	276.0	252.7	234.2	220.9	217.5	215.9
32.5°	4028.5	2924.4	766.3	307.8	269.3	242.6	214.2	190.7	175.7	172.4	170.7
35°	4070.4	2832.4	563.7	277.8	242.6	210.8	179.0	153.9	140.6	140.6	138.9
37.5°	4179.2	2778.8	426.6	254.3	220.9	184.1	150.6	127.1	115.4	118.8	118.8
40°	4381.7	2768.8	348.1	235.9	202.5	160.5	122.1	103.8	98.8	103.8	103.8
42.5°	4691.0	2822.4	309.5	222.5	185.7	137.3	102.0	88.7	87.0	92.0	92.0
45°	5094.3	2927.8	287.7	210.8	167.4	113.7	85.2	77.0	75.3	81.9	81.9
47.5°	5582.7	3070.0	267.6	197.4	148.8	93.8	72.0	65.2	65.2	72.0	73.7
50°	6161.7	3262.4	247.7	184.1	133.8	78.6	60.2	55.2	57.0	63.6	65.2
52.5°	6827.5	3498.3	229.2	172.4	117.0	63.6	50.1	46.8	48.5	55.2	57.0
55°	7401.3	3704.0	207.5	160.5	95.4	51.8	41.9	40.2	41.9	50.1	50.1
57.5°	7901.6	3901.5	187.3	142.2	75.3	41.9	33.4	33.4	36.8	45.2	46.8
60°	8565.8	4212.6	170.7	120.5	57.0	31.8	26.8	28.4	33.4	40.2	41.9
62.5°	9741.8	4741.3	148.8	100.4	41.9	25.2	21.7	23.4	30.2	38.4	40.2
65°	11214.1	5241.5	123.7	83.6	31.8	18.4	16.7	21.7	30.2	38.4	40.2
67.5°	11063.5	4559.0	97.0	67.0	23.4	15.0	13.4	20.1	28.4	38.4	40.2
70°	8972.4	3195.5	72.0	45.2	18.4	13.4	13.4	20.1	28.4	36.8	38.4
72.5°	6223.5	1778.5	55.2	30.2	16.7	13.4	11.7	18.4	26.8	36.8	38.4
75°	2961.3	545.5	43.5	21.7	15.0	11.7	10.1	18.4	26.8	36.8	38.4
77.5°	568.8	138.9	35.2	18.4	13.4	11.7	10.1	16.7	26.8	35.2	36.8
80°	192.3	62.0	28.4	16.7	13.4	11.7	10.1	16.7	25.2	33.4	35.2
82.5°	105.5	35.2	25.2	15.0	13.4	10.1	8.4	15.0	23.4	33.4	35.2
85°	81.9	25.2	20.1	15.0	13.4	10.1	8.4	15.0	23.4	31.8	33.4
87.5°	41.9	18.4	16.7	15.0	13.4	10.1	8.4	13.4	21.7	30.2	33.4
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)