

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: P197087

Luminaire Tested: **NAV-AF-05-D-UNV-SL3-8030-1200-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197087
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-SL3-8030-1200-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 80 CRI, 3000K, 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: 22849 lumens
Efficiency: N/A
Efficacy: 71.4 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): 320
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

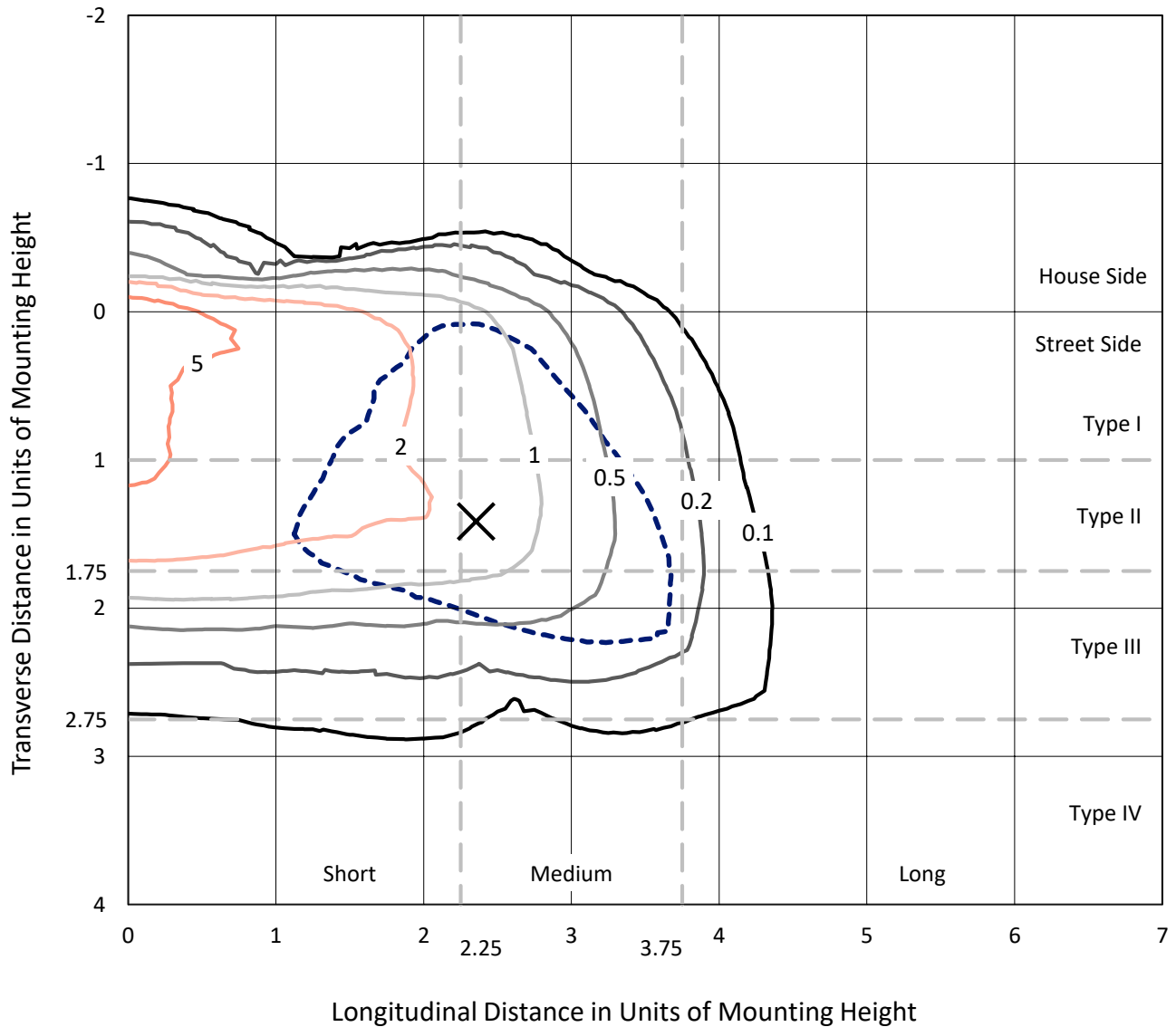


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

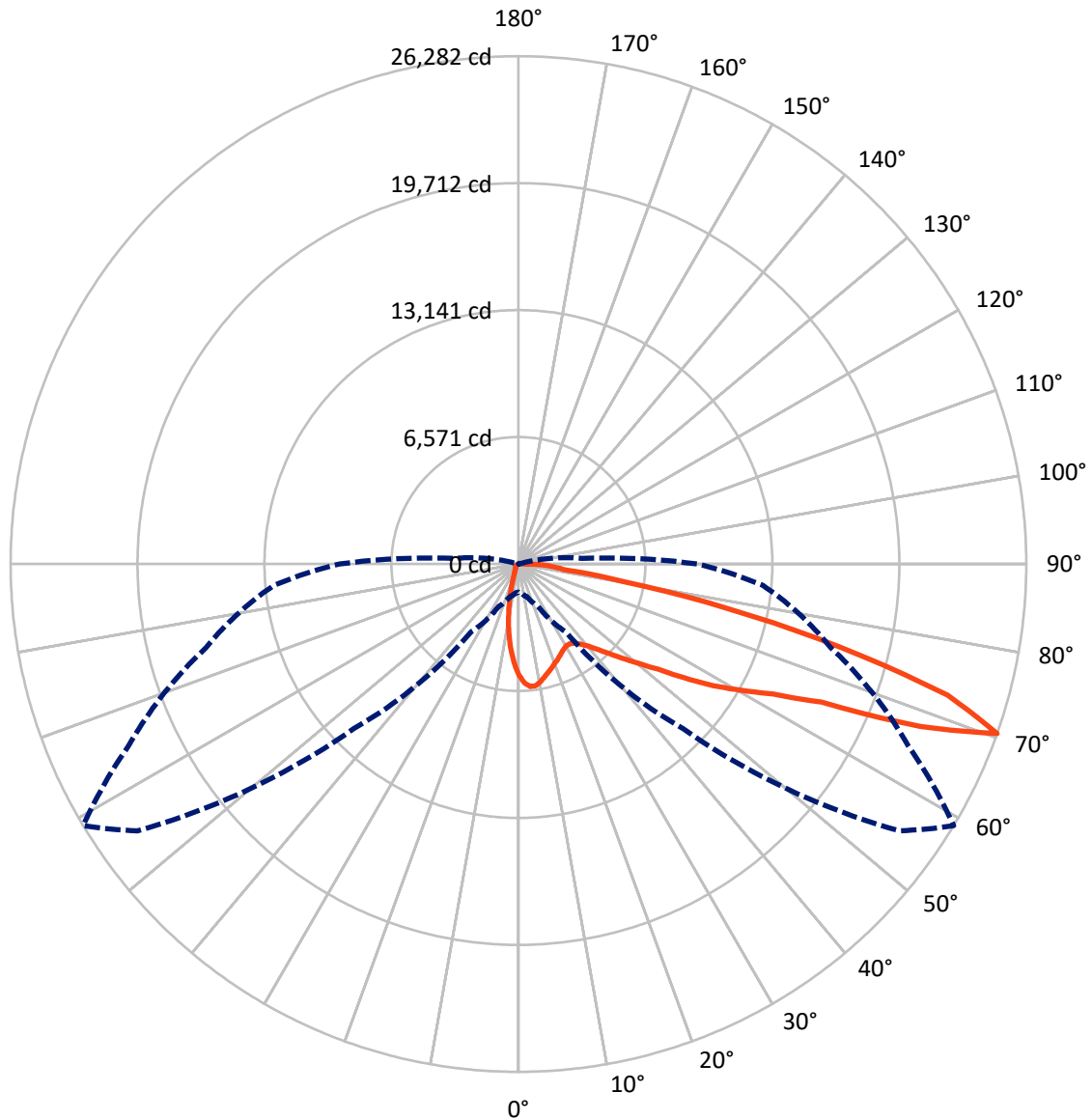


Based on 25 foot mounting height. Maximum calculated value = 9.8 fc
 Type III - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



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

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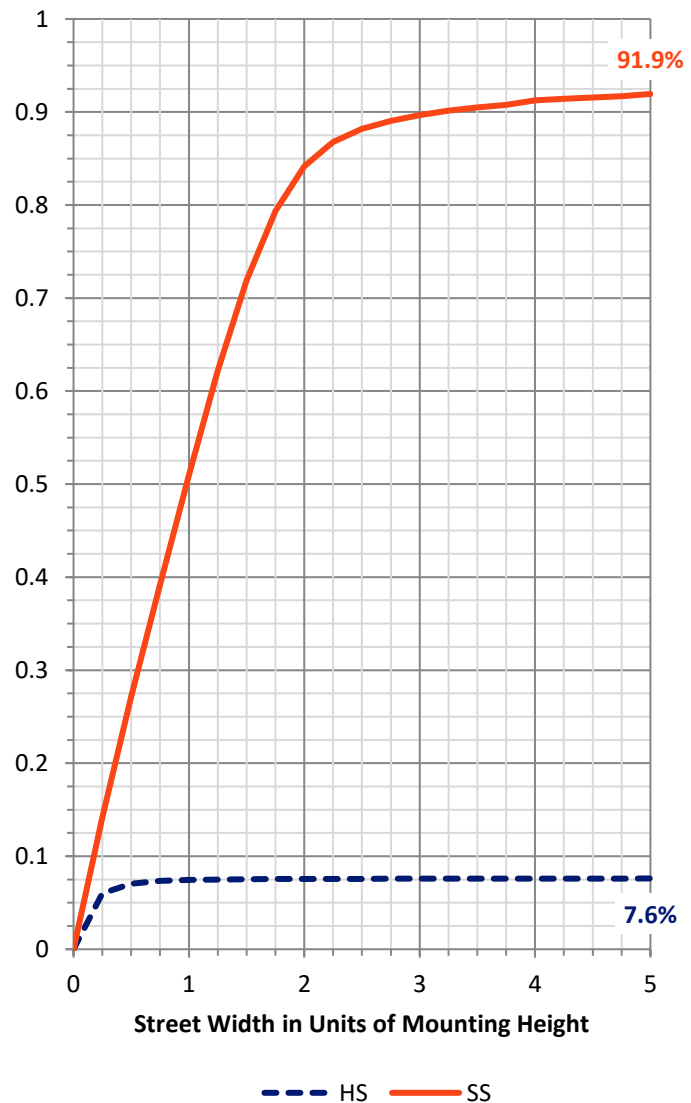
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1756.5	0.0	1756.5
	% Fixture	7.7	0.0	7.7
Street Side	Lumens	21092.5	0.0	21092.5
	% Fixture	92.3	0.0	92.3
Total	Lumens	22849.0	0.0	22849.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	475.1	2.1
10°-20°	996.5	4.4
20°-30°	1348.9	5.9
30°-40°	1946.7	8.5
40°-50°	3233.0	14.1
50°-60°	4945.3	21.6
60°-70°	6150.8	26.9
70°-80°	3400.1	14.9
80°-90°	352.6	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°	22849.0	100.0
0°-180°	22849.0	100.0



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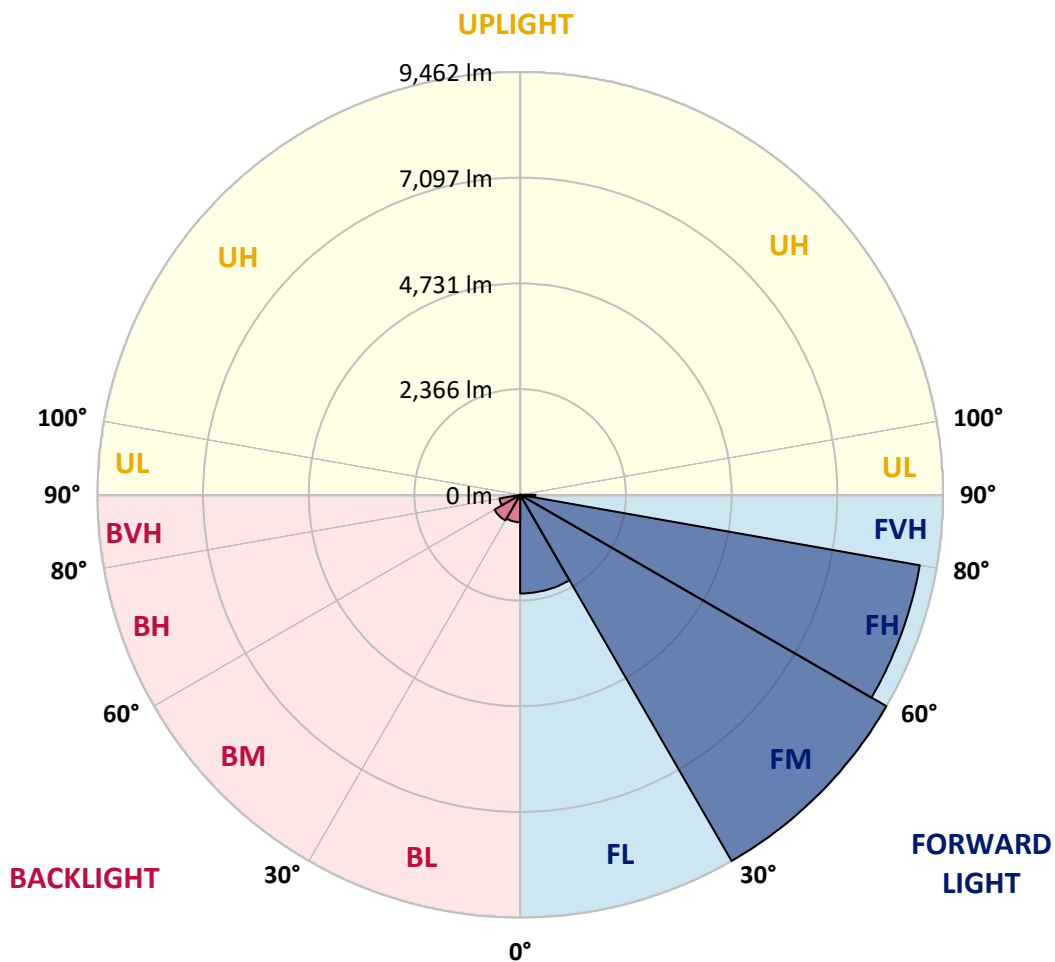
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2208.4	9.7			
FM	(30°-60°)	9462.0	41.4			
FH	(60°-80°)	9079.7	39.7			G4/12000
FVH	(80°-90°)	342.4	1.5			G3/500
BL	(0°-30°)	612.1	2.7	B2/1000		
BM	(30°-60°)	663.0	2.9	B1/1000		
BH	(60°-80°)	471.2	2.1	B1/500		G1/500
BVH	(80°-90°)	10.2	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°	5777.7	5777.7	5777.7	5777.7	5777.7	5777.7	5777.7	5777.7	5777.7	5777.7	5777.7
2.5°	6530.9	6520.6	6477.5	6468.9	6420.6	6324.1	6212.1	6167.2	6075.9	5931.1	5770.8
5°	6639.5	6644.7	6648.1	6629.2	6622.3	6543.0	6418.9	6365.5	6243.1	6005.2	5712.2
7.5°	6232.7	6246.5	6289.6	6308.6	6391.3	6422.3	6396.5	6362.0	6265.5	5984.5	5572.6
10°	5803.5	5829.4	5875.9	5907.0	6008.7	6091.4	6196.5	6205.2	6184.5	5915.6	5415.7
12.5°	5434.7	5458.8	5510.5	5572.6	5676.0	5782.9	5939.7	5994.9	6063.8	5870.8	5303.7
15°	5117.5	5124.4	5174.4	5252.0	5388.1	5534.7	5720.8	5801.8	5936.3	5853.5	5217.5
17.5°	4840.0	4841.7	4874.5	4945.2	5110.6	5303.7	5520.9	5627.7	5798.4	5829.4	5141.7
20°	4657.3	4655.6	4657.3	4695.2	4841.7	5071.0	5334.7	5446.7	5665.7	5800.1	5064.1
22.5°	4595.3	4586.6	4547.0	4533.2	4626.3	4828.0	5143.4	5289.9	5546.7	5791.5	5007.2
25°	4671.1	4665.9	4581.5	4502.2	4510.8	4636.6	4948.6	5127.9	5453.6	5822.5	4993.4
27.5°	4915.9	4905.5	4776.2	4621.1	4522.9	4545.3	4803.8	4991.7	5379.5	5898.3	5012.4
30°	5236.5	5238.2	5100.3	4912.4	4681.4	4553.9	4726.3	4903.8	5329.5	6012.1	5053.8
32.5°	5593.3	5591.5	5493.3	5276.1	4981.4	4712.5	4760.7	4910.7	5336.4	6179.3	5133.0
35°	5962.1	5943.2	5910.4	5719.1	5374.4	4990.0	4917.6	5027.9	5408.8	6399.9	5267.5
37.5°	6387.9	6381.0	6413.7	6212.1	5860.4	5398.5	5193.4	5267.5	5591.5	6725.7	5484.7
40°	7065.3	7027.3	7042.9	6768.8	6408.5	5948.3	5579.5	5598.4	5882.8	7156.6	5827.7
42.5°	8356.3	8202.9	7915.0	7401.4	7011.8	6558.5	6084.5	6051.8	6294.8	7678.9	6279.3
45°	9898.9	9723.1	8997.5	8099.5	7615.1	7213.5	6708.5	6620.6	6801.5	8301.1	6861.9
47.5°	11186.5	10996.9	10035.1	8828.6	8228.7	7889.2	7399.6	7296.2	7408.3	9023.3	7561.7
50°	11626.0	11520.9	10676.3	9435.3	8847.5	8647.6	8266.6	8094.3	8121.9	9802.4	8378.7
52.5°	11424.4	11388.2	10822.8	9850.7	9419.8	9485.3	9216.4	9035.4	9004.4	10653.9	9281.9
55°	10998.6	10981.4	10705.6	10081.7	9924.8	10252.3	10548.8	10391.9	10098.9	11558.8	10028.2
57.5°	10390.2	10455.7	10653.9	10526.4	10545.3	11062.4	11786.3	11867.4	11429.6	12279.3	10581.5
60°	8764.8	8940.6	9849.0	11003.8	11888.0	12410.3	13111.8	13263.5	12556.8	12772.3	11221.0
62.5°	6479.2	6730.9	8025.3	10147.2	12627.5	14973.4	14875.1	14807.9	13632.4	13432.4	12384.5
65°	3805.8	4100.6	5195.1	7928.8	11512.3	16621.2	18167.3	17236.5	15271.6	14804.5	14237.4
67.5°	1896.0	1897.7	2392.4	4185.0	8508.0	15471.5	22972.9	22435.1	18756.8	16826.3	14968.2
70°	1458.2	1497.9	1770.2	2432.1	4302.2	12050.1	24074.3	26282.3	22259.3	16736.7	12699.9
72.5°	1235.9	1261.7	1575.4	2116.6	3216.3	6615.4	20840.7	23231.4	21240.6	14140.9	9361.2
75°	889.4	910.1	1394.4	1920.2	2961.2	3281.8	14296.0	17229.7	15936.9	9947.2	5152.0
77.5°	220.6	218.9	486.1	1558.2	2649.3	2733.7	8202.9	11048.6	9144.0	4073.0	1323.8
80°	98.2	94.8	110.3	327.5	2464.8	2580.3	3607.6	5579.5	3507.6	660.2	405.1
82.5°	68.9	65.5	68.9	120.7	823.9	2394.2	2180.4	2418.3	1284.1	225.8	172.4
85°	22.4	20.7	37.9	101.7	231.0	1380.6	2127.0	1806.4	954.9	96.5	115.5
87.5°	3.4	3.4	13.8	55.2	67.2	460.2	1247.9	1251.4	429.2	56.9	51.7
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°	5777.7	5777.7	5777.7	5777.7	5777.7	5777.7	5777.7	5777.7	5777.7	5777.7	5777.7
2.5°	5689.8	5588.1	5445.0	5302.0	5172.7	5040.0	4933.1	4883.1	4860.7	4829.7	4762.5
5°	5558.8	5374.4	5060.6	4752.1	4464.3	4188.5	3952.3	3817.9	3673.1	3666.2	3595.5
7.5°	5348.5	5086.5	4591.8	4112.6	3673.1	3252.5	2890.6	2656.2	2495.9	2395.9	2326.9
10°	5114.1	4778.0	4123.0	3449.0	2850.9	2289.0	1823.6	1520.3	1335.8	1242.8	1189.3
12.5°	4927.9	4505.6	3661.0	2813.0	2063.2	1418.6	985.9	765.3	667.1	629.1	611.9
15°	4767.6	4255.7	3228.4	2244.2	1377.2	815.3	570.5	498.1	482.6	482.6	480.9
17.5°	4605.6	4014.4	2807.8	1685.7	867.0	534.3	449.9	439.5	441.3	446.4	446.4
20°	4452.2	3785.1	2402.8	1201.4	568.8	427.5	408.5	405.1	410.2	417.1	415.4
22.5°	4328.1	3583.5	2023.6	825.6	437.8	387.8	375.8	370.6	374.0	379.2	377.5
25°	4240.2	3411.1	1675.4	575.7	380.9	353.3	339.6	332.7	329.2	332.7	330.9
27.5°	4186.8	3266.3	1347.9	432.6	341.3	318.9	301.6	287.9	279.2	279.2	275.8
30°	4152.3	3130.2	1056.6	358.5	308.5	284.4	260.3	241.3	227.5	224.1	222.4
32.5°	4150.6	3012.9	789.4	317.2	277.5	249.9	220.6	196.5	181.0	177.5	175.8
35°	4193.7	2918.1	580.9	286.1	249.9	217.2	184.4	158.6	144.8	144.8	143.1
37.5°	4305.7	2863.0	439.5	262.0	227.5	189.6	155.1	131.0	118.9	122.4	122.4
40°	4514.3	2852.6	358.5	243.0	208.6	165.5	125.8	106.9	101.7	106.9	106.9
42.5°	4833.1	2907.8	318.9	229.2	191.3	141.3	105.1	91.4	89.6	94.8	94.8
45°	5248.5	3016.4	296.5	217.2	172.4	117.2	87.9	79.3	77.6	84.5	84.5
47.5°	5751.8	3162.9	275.8	203.4	153.4	96.5	74.1	67.2	67.2	74.1	75.8
50°	6348.2	3361.1	255.1	189.6	137.9	81.0	62.1	56.9	58.6	65.5	67.2
52.5°	7034.2	3604.2	236.1	177.5	120.7	65.5	51.7	48.3	50.0	56.9	58.6
55°	7625.4	3816.2	213.7	165.5	98.2	53.4	43.1	41.4	43.1	51.7	51.7
57.5°	8140.8	4019.6	193.0	146.5	77.6	43.1	34.5	34.5	37.9	46.5	48.3
60°	8825.1	4340.2	175.8	124.1	58.6	32.7	27.6	29.3	34.5	41.4	43.1
62.5°	10036.8	4884.8	153.4	103.4	43.1	25.9	22.4	24.1	31.0	39.6	41.4
65°	11553.7	5400.2	127.6	86.2	32.7	19.0	17.2	22.4	31.0	39.6	41.4
67.5°	11398.5	4697.0	100.0	68.9	24.1	15.5	13.8	20.7	29.3	39.6	41.4
70°	9244.0	3292.2	74.1	46.5	19.0	13.8	13.8	20.7	29.3	37.9	39.6
72.5°	6412.0	1832.2	56.9	31.0	17.2	13.8	12.1	19.0	27.6	37.9	39.6
75°	3050.9	561.9	44.8	22.4	15.5	12.1	10.3	19.0	27.6	37.9	39.6
77.5°	586.0	143.1	36.2	19.0	13.8	12.1	10.3	17.2	27.6	36.2	37.9
80°	198.2	63.8	29.3	17.2	13.8	12.1	10.3	17.2	25.9	34.5	36.2
82.5°	108.6	36.2	25.9	15.5	13.8	10.3	8.6	15.5	24.1	34.5	36.2
85°	84.5	25.9	20.7	15.5	13.8	10.3	8.6	15.5	24.1	32.7	34.5
87.5°	43.1	19.0	17.2	15.5	13.8	10.3	8.6	13.8	22.4	31.0	34.5
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)