

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: P195510

Luminaire Tested: **NAV-AF-06-D-UNV-AFL-7050-600-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195510
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-06-D-UNV-AFL-7050-600-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 5000K, 615mA 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: 19921 lumens
Efficiency: N/A
Efficacy: 103.2 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type II - Short - Full Cutoff
BUG Rating: B2 - U0 - G2

Input Watts (W): 193
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

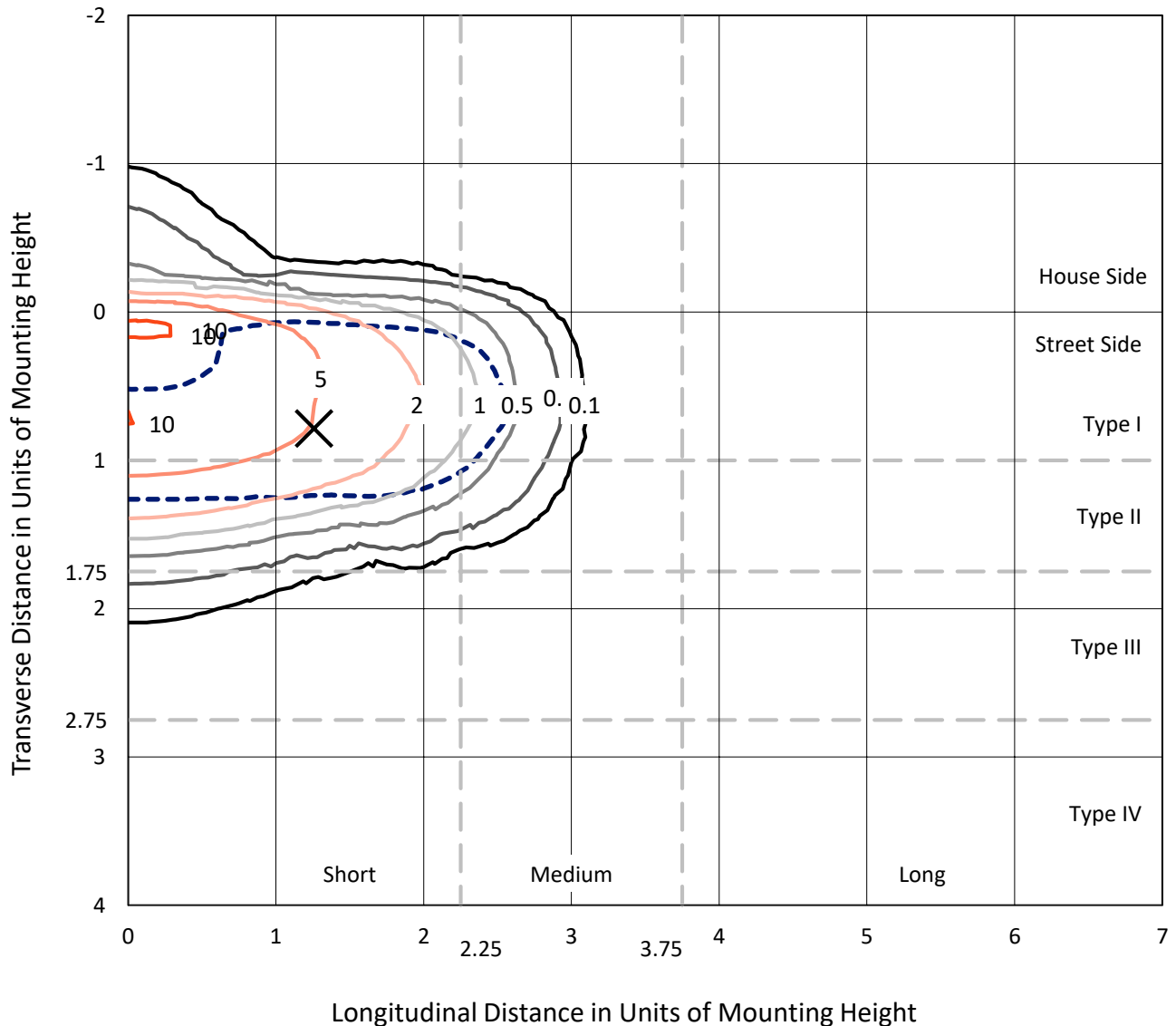


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

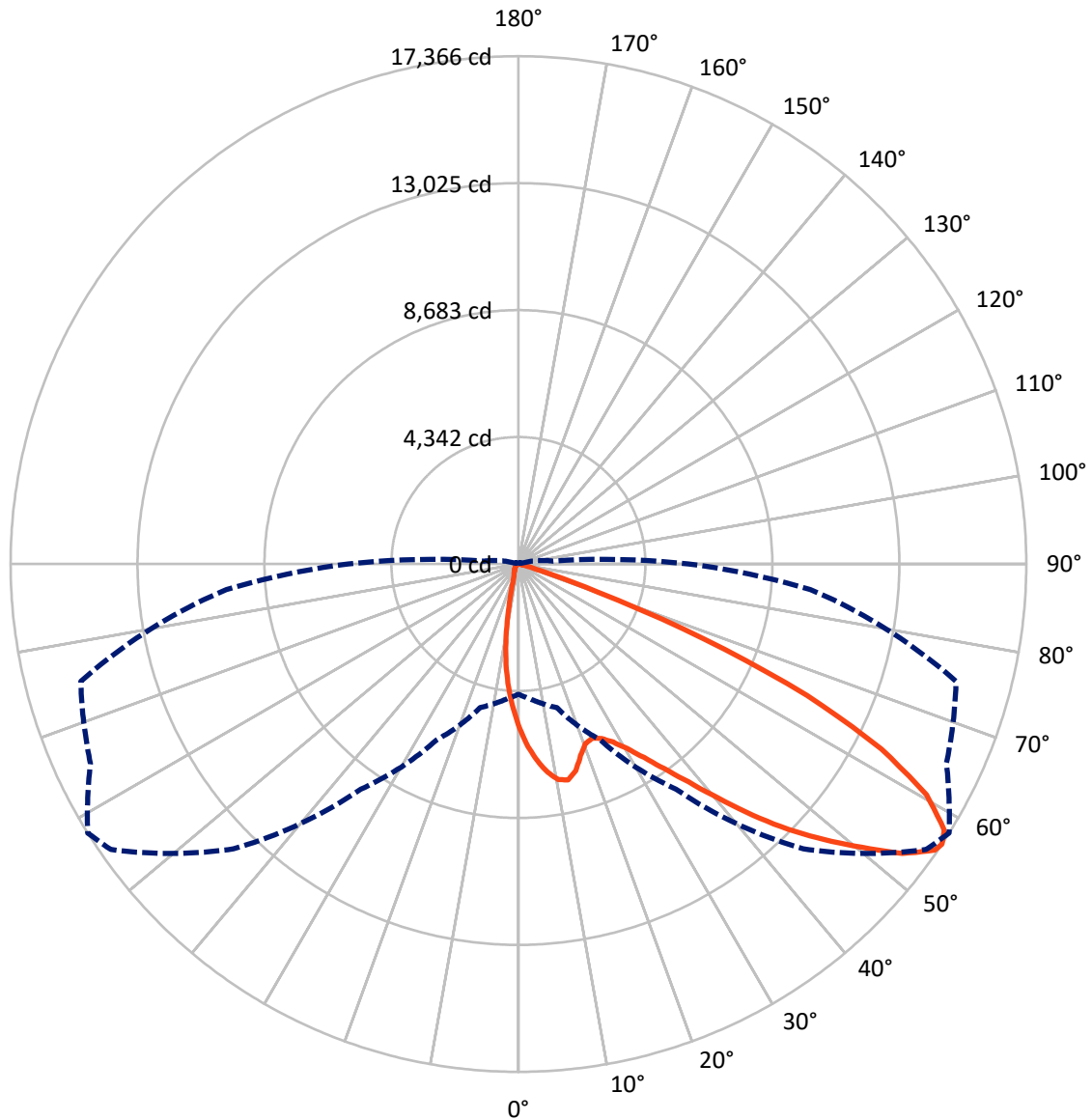


Based on 25 foot mounting height. Maximum calculated value = 11.2 fc
 Type II - Short - Full Cutoff

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Luminous Intensity Polar Plot



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

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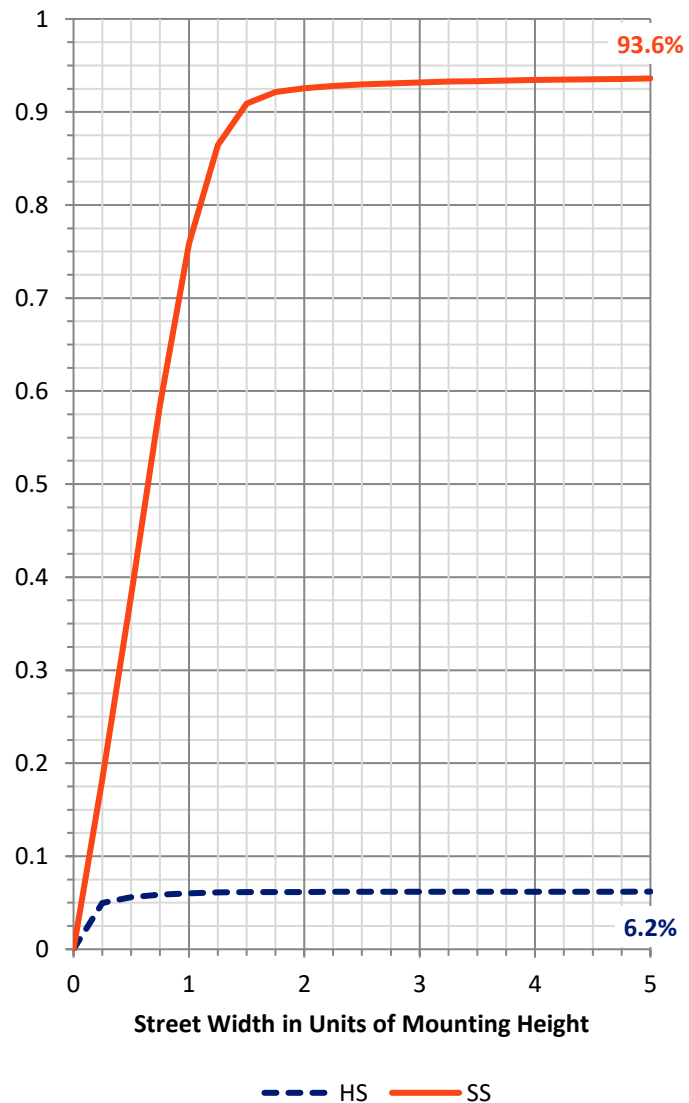
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1243.5	0.0	1243.5
	% Fixture	6.2	0.0	6.2
Street Side	Lumens	18677.5	0.0	18677.5
	% Fixture	93.8	0.0	93.8
Total	Lumens	19921.0	0.0	19921.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	481.1	2.4
10°-20°	1119.6	5.6
20°-30°	1883.8	9.5
30°-40°	3225.9	16.2
40°-50°	4867.9	24.4
50°-60°	5060.0	25.4
60°-70°	2840.6	14.3
70°-80°	389.3	2.0
80°-90°	52.8	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°	19921.0	100.0
0°-180°	19921.0	100.0

Coefficient of Utilization



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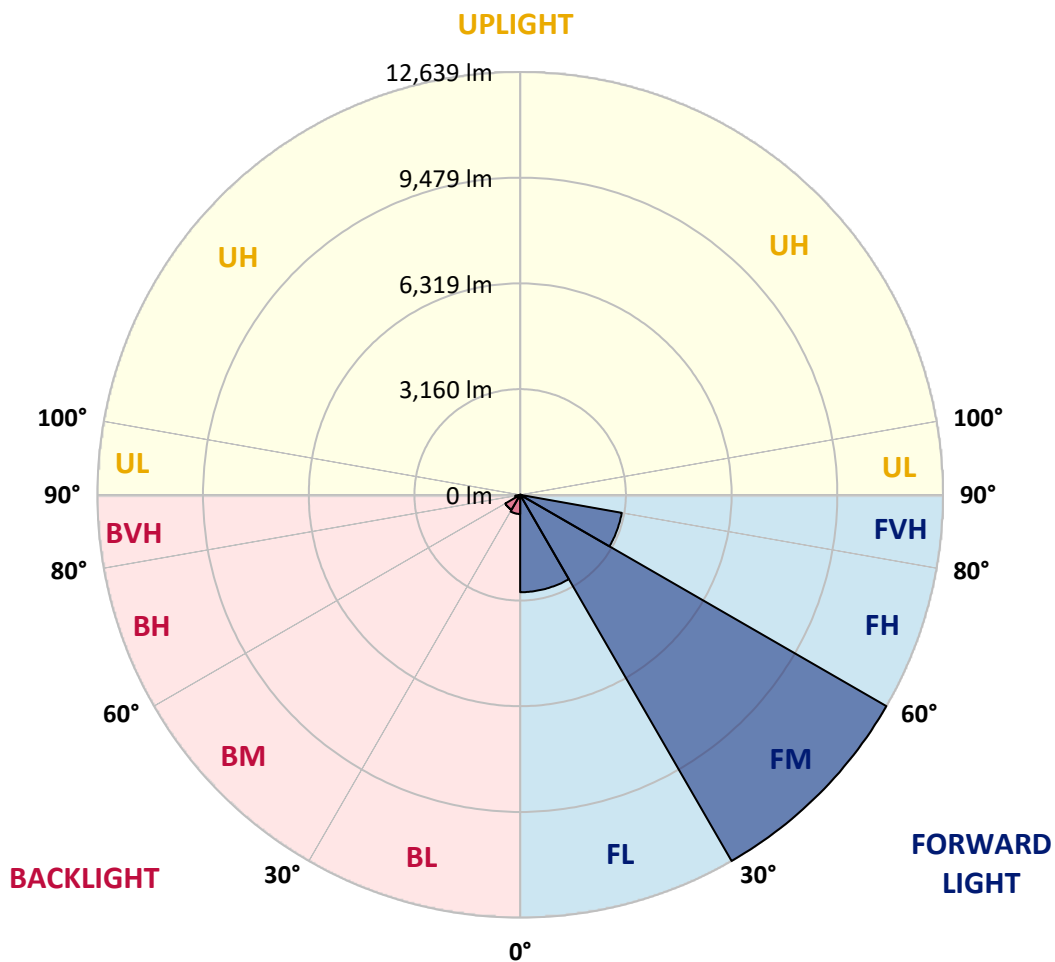
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2910.9	14.6			
FM	(30°-60°)	12638.7	63.4			
FH	(60°-80°)	3082.4	15.5			G2/5000
FVH	(80°-90°)	45.5	0.2			G1/100
BL	(0°-30°)	573.6	2.9	B2/1000		
BM	(30°-60°)	515.1	2.6	B1/1000		
BH	(60°-80°)	147.5	0.7	B1/500		G1/500
BVH	(80°-90°)	7.3	0.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G2

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	5640.2	5640.2	5640.2	5640.2	5640.2	5640.2	5640.2	5640.2	5640.2	5640.2	5640.2
2.5°	6786.2	6745.2	6702.6	6623.6	6550.6	6438.2	6283.1	6245.1	6123.6	5922.9	5736.0
5°	7371.4	7363.8	7334.9	7271.1	7192.0	7055.2	6880.5	6763.4	6575.0	6258.8	5898.6
7.5°	7024.8	7088.7	7193.5	7342.5	7442.8	7429.1	7295.4	7193.5	7006.6	6575.0	6058.2
10°	5921.4	5933.6	6078.0	6391.1	6886.5	7348.6	7523.4	7496.0	7324.3	6851.6	6198.0
12.5°	5532.3	5539.9	5573.4	5673.7	5995.9	6640.3	7432.2	7575.0	7561.4	7116.0	6347.0
15°	5562.7	5567.3	5576.4	5608.3	5699.5	6023.2	6970.1	7333.4	7713.3	7366.8	6492.9
17.5°	5802.9	5799.8	5770.9	5740.5	5769.4	5875.8	6499.0	6882.0	7681.4	7578.1	6613.0
20°	6271.0	6286.2	6188.9	6053.6	5983.7	5988.3	6266.4	6553.7	7502.1	7742.2	6702.6
22.5°	6929.1	6939.7	6780.1	6546.1	6340.9	6237.5	6315.1	6467.0	7295.4	7894.2	6775.6
25°	7714.9	7714.9	7491.4	7158.6	6840.9	6614.5	6547.6	6605.4	7216.3	8066.0	6848.5
27.5°	8562.9	8593.3	8301.5	7865.3	7445.8	7114.5	6904.8	6894.1	7277.1	8281.8	6930.6
30°	9485.5	9512.9	9166.3	8632.9	8135.9	7711.8	7389.6	7319.7	7509.7	8572.1	7050.7
32.5°	10403.5	10426.3	10043.3	9499.2	8920.1	8421.6	7997.6	7886.6	7927.6	8996.1	7227.0
35°	11570.8	11575.3	11090.5	10443.0	9824.4	9239.3	8702.8	8593.3	8547.7	9531.1	7480.8
37.5°	12499.4	12462.9	12155.9	11543.4	10833.6	10222.6	9591.9	9449.0	9339.6	10283.4	7874.4
40°	12718.3	12718.3	12672.7	12488.8	11924.9	11336.7	10725.7	10512.9	10271.3	11169.5	8403.4
42.5°	12148.3	12184.8	12485.7	12885.5	12890.0	12513.1	11915.8	11736.4	11310.9	12178.7	8980.9
45°	10873.2	10883.8	11605.7	12684.8	13417.4	13633.2	13192.5	12944.7	12355.0	13227.4	9509.8
47.5°	10414.1	10447.6	10754.6	12073.8	13456.9	14540.6	14417.5	14077.0	13321.7	14184.9	10003.8
50°	9708.9	9750.0	10125.4	11174.1	13101.3	15122.7	15589.3	15224.5	14201.7	14982.9	10248.5
52.5°	8021.9	8085.7	8616.1	9984.0	12212.2	15147.0	16662.3	16443.5	15102.9	15410.0	10219.6
55°	5520.2	5567.3	6185.9	7793.9	10418.7	14403.8	17124.4	17274.8	15907.0	15505.7	10079.8
56°	4453.2	4629.5	5082.4	6640.3	9397.4	13771.5	17018.0	17366.0	16145.6	15490.5	10019.0
57.5°	2944.0	2977.4	3471.4	4811.9	7546.2	12399.1	16537.7	17171.5	16452.6	15413.0	9974.9
60°	1384.6	1399.8	1577.6	2220.5	4083.9	9035.6	14976.8	16028.5	16565.1	15250.4	9973.4
62.5°	902.8	905.8	927.1	1059.3	1670.3	4921.3	12415.8	13929.6	15633.4	15232.1	9944.5
65°	743.2	750.8	725.0	741.7	873.9	1855.8	8757.5	10859.5	13446.3	14803.5	9619.3
67.5°	655.1	656.6	621.6	601.9	639.9	814.7	4412.2	6850.1	10057.0	12578.4	7923.1
70°	597.3	595.8	556.3	510.7	512.2	541.1	1437.8	2845.2	5564.2	7468.6	4549.0
72.5°	530.4	533.5	510.7	446.8	425.6	383.0	541.1	767.5	1893.8	2398.4	1199.2
75°	465.1	459.0	436.2	395.2	355.6	256.9	272.1	326.8	494.0	489.4	258.4
77.5°	352.6	346.5	357.2	337.4	278.1	179.3	148.9	170.2	223.4	208.2	104.9
80°	269.0	266.0	243.2	288.8	253.8	135.3	101.8	104.9	121.6	111.0	51.7
82.5°	194.5	193.0	183.9	177.8	161.1	98.8	77.5	82.1	91.2	77.5	38.0
85°	74.5	74.5	144.4	121.6	111.0	66.9	54.7	59.3	69.9	56.2	25.8
87.5°	12.2	12.2	97.3	80.6	50.2	33.4	35.0	38.0	41.0	33.4	19.8
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°	5640.2	5640.2	5640.2	5640.2	5640.2	5640.2	5640.2	5640.2	5640.2	5640.2	5640.2
2.5°	5625.0	5523.2	5299.8	5084.0	4895.5	4688.8	4583.9	4462.3	4416.7	4325.6	4334.7
5°	5682.8	5470.0	5021.7	4549.0	4115.8	3675.0	3362.0	3067.1	2903.0	2740.3	2740.3
7.5°	5742.1	5416.8	4723.8	3968.4	3238.8	2483.5	1948.5	1519.9	1281.3	1121.7	1117.1
10°	5783.1	5348.4	4384.8	3295.1	2219.0	1279.7	772.1	607.9	548.7	522.8	521.3
12.5°	5836.3	5280.0	3998.8	2501.7	1232.6	607.9	481.8	456.0	445.3	439.2	439.2
15°	5881.9	5182.8	3530.7	1682.5	647.5	456.0	414.9	405.8	404.3	402.8	404.3
17.5°	5892.5	5044.4	2969.8	984.9	469.6	398.2	380.0	372.4	372.4	370.8	370.8
20°	5868.2	4862.1	2349.7	607.9	405.8	366.3	346.5	337.4	335.9	335.9	335.9
22.5°	5818.1	4629.5	1737.2	460.5	369.3	337.4	311.6	302.5	302.5	304.0	305.5
25°	5755.7	4354.4	1193.1	396.7	342.0	307.0	281.2	272.1	275.1	278.1	279.7
27.5°	5676.7	4026.1	781.2	343.5	305.5	276.6	253.8	247.7	253.8	259.9	262.9
30°	5597.7	3665.9	528.9	297.9	264.5	243.2	229.5	228.0	237.1	250.8	252.3
32.5°	5546.0	3296.6	399.7	267.5	232.5	214.3	208.2	211.3	224.9	240.1	243.2
35°	5541.4	2936.4	340.5	243.2	211.3	194.5	191.5	200.6	215.8	228.0	231.0
37.5°	5612.9	2599.0	308.5	224.9	194.5	177.8	173.3	190.0	203.7	215.8	218.9
40°	5757.3	2296.5	287.3	208.2	180.9	161.1	158.1	171.7	185.4	199.1	203.7
42.5°	5938.1	2013.8	262.9	191.5	165.7	142.9	139.8	150.5	164.1	183.9	186.9
45°	6094.7	1750.9	237.1	173.3	148.9	123.1	121.6	133.7	144.4	162.6	165.7
47.5°	6226.9	1532.0	212.8	153.5	127.7	109.4	107.9	114.0	120.1	136.8	139.8
50°	6157.0	1346.6	188.5	126.1	103.4	94.2	92.7	92.7	100.3	117.0	120.1
52.5°	5985.2	1231.1	165.7	104.9	85.1	80.6	76.0	77.5	85.1	92.7	94.2
55°	5846.9	1176.4	145.9	92.7	71.4	66.9	62.3	60.8	62.3	59.3	56.2
56°	5813.5	1170.3	141.3	89.7	68.4	62.3	56.2	53.2	51.7	45.6	44.1
57.5°	5798.3	1170.3	133.7	83.6	63.8	56.2	48.6	42.6	36.5	31.9	31.9
60°	5786.1	1177.9	124.6	73.0	54.7	45.6	35.0	25.8	21.3	21.3	21.3
62.5°	5760.3	1174.9	114.0	60.8	47.1	35.0	21.3	16.7	15.2	16.7	18.2
65°	5470.0	1091.3	100.3	48.6	36.5	24.3	12.2	12.2	13.7	16.7	18.2
67.5°	4407.6	826.8	82.1	38.0	25.8	18.2	10.6	10.6	13.7	16.7	18.2
70°	2421.2	436.2	69.9	27.4	19.8	15.2	10.6	9.1	13.7	16.7	18.2
72.5°	591.2	182.4	63.8	21.3	18.2	13.7	9.1	9.1	13.7	16.7	18.2
75°	145.9	136.8	51.7	16.7	15.2	12.2	9.1	9.1	13.7	16.7	18.2
77.5°	68.4	180.9	35.0	15.2	13.7	10.6	9.1	9.1	13.7	16.7	16.7
80°	41.0	136.8	21.3	13.7	12.2	10.6	9.1	9.1	13.7	16.7	18.2
82.5°	24.3	39.5	15.2	13.7	12.2	9.1	9.1	9.1	13.7	16.7	18.2
85°	21.3	19.8	15.2	13.7	12.2	10.6	9.1	9.1	15.2	18.2	18.2
87.5°	16.7	15.2	13.7	12.2	12.2	10.6	9.1	9.1	13.7	16.7	18.2
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)