

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: P195035

Luminaire Tested: **NAV-AF-05-D-UNV-AFL-7060-800-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195035
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-05-D-UNV-AFL-7060-800-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 70 CRI, 5700K, 800mA 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: 20392 lumens
Efficiency: N/A
Efficacy: 97.1 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): 210
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

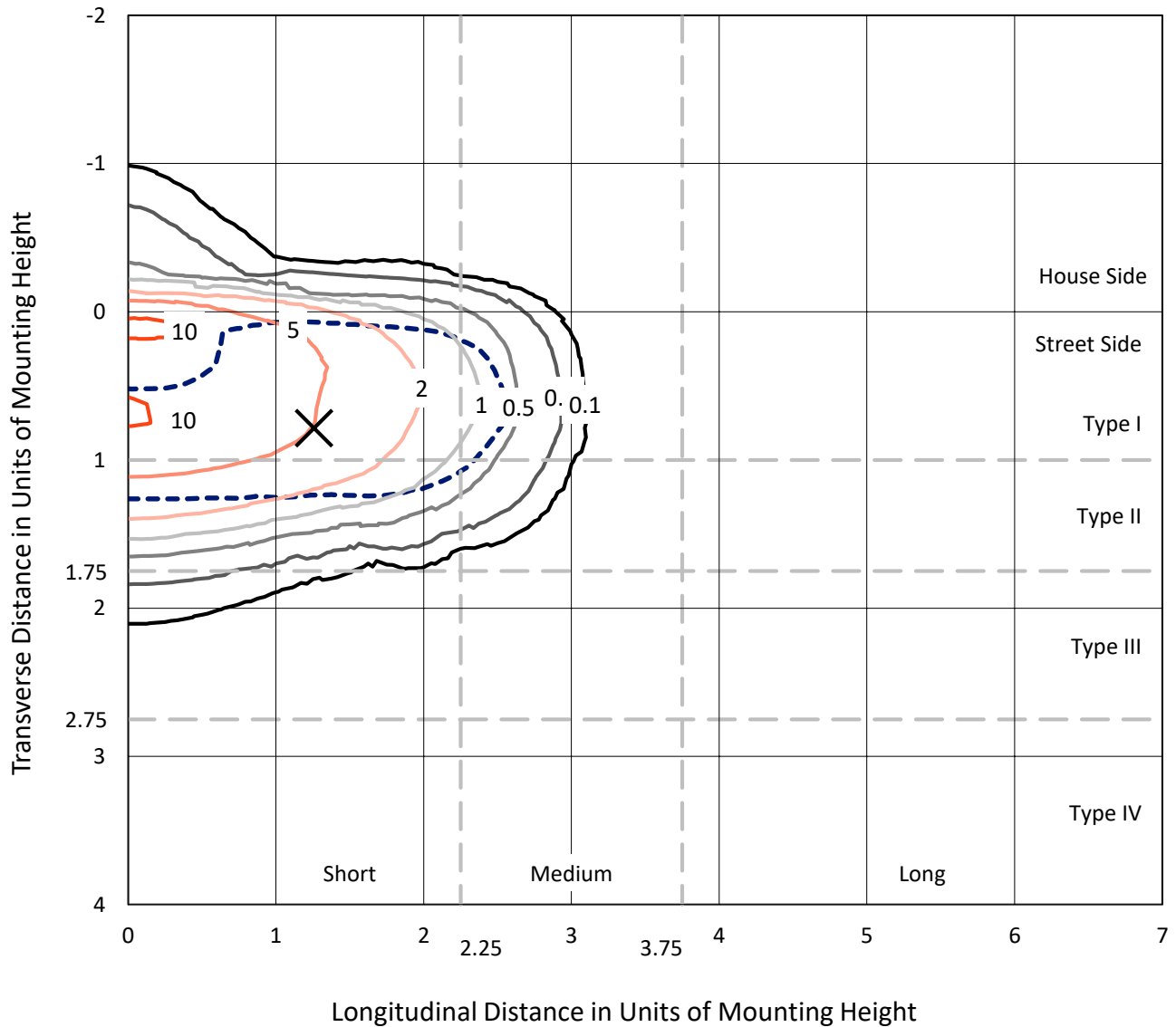


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

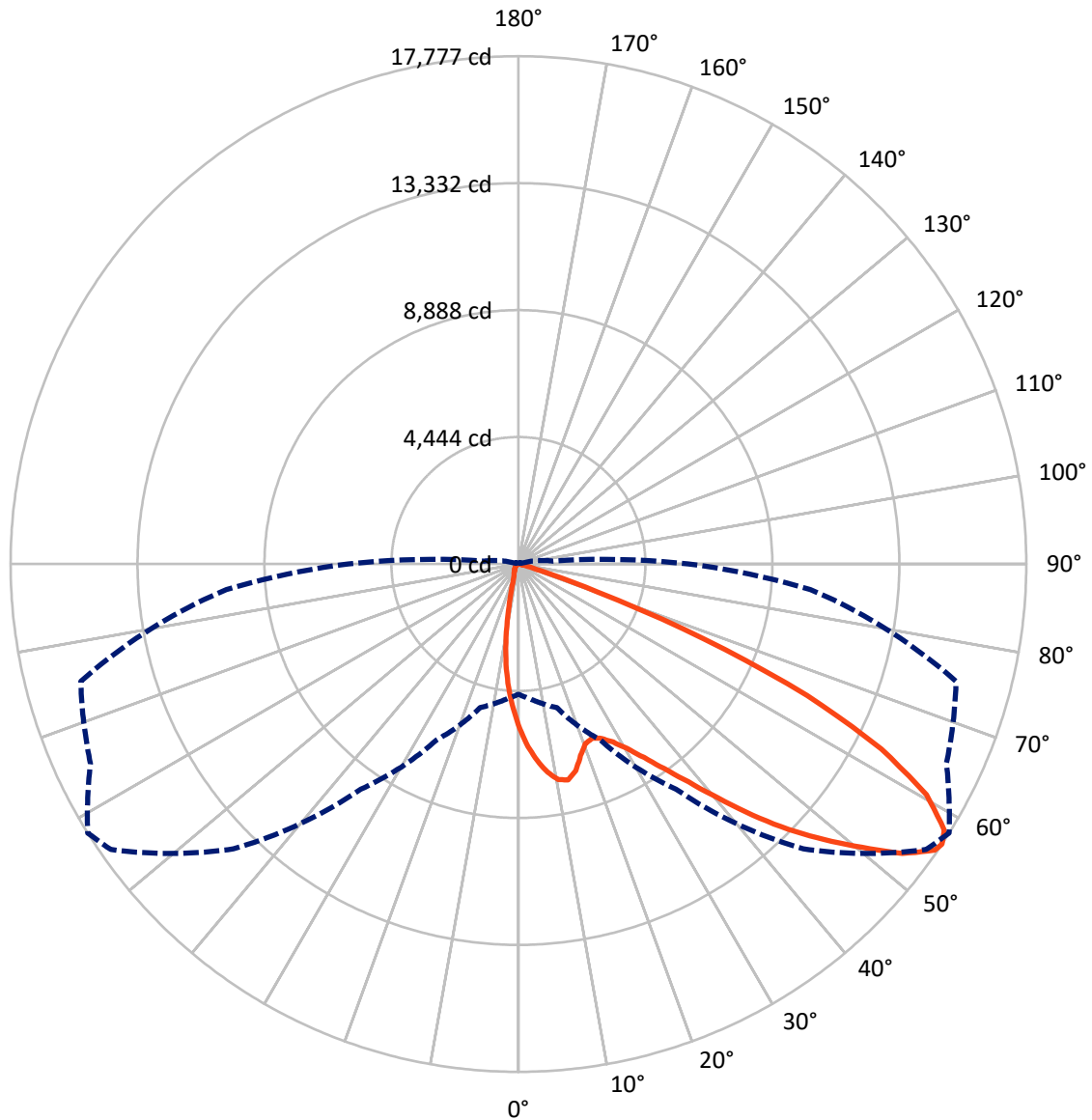


Based on 25 foot mounting height. Maximum calculated value = 11.5 fc
 Type II - Short - Full Cutoff

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Luminous Intensity Polar Plot



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

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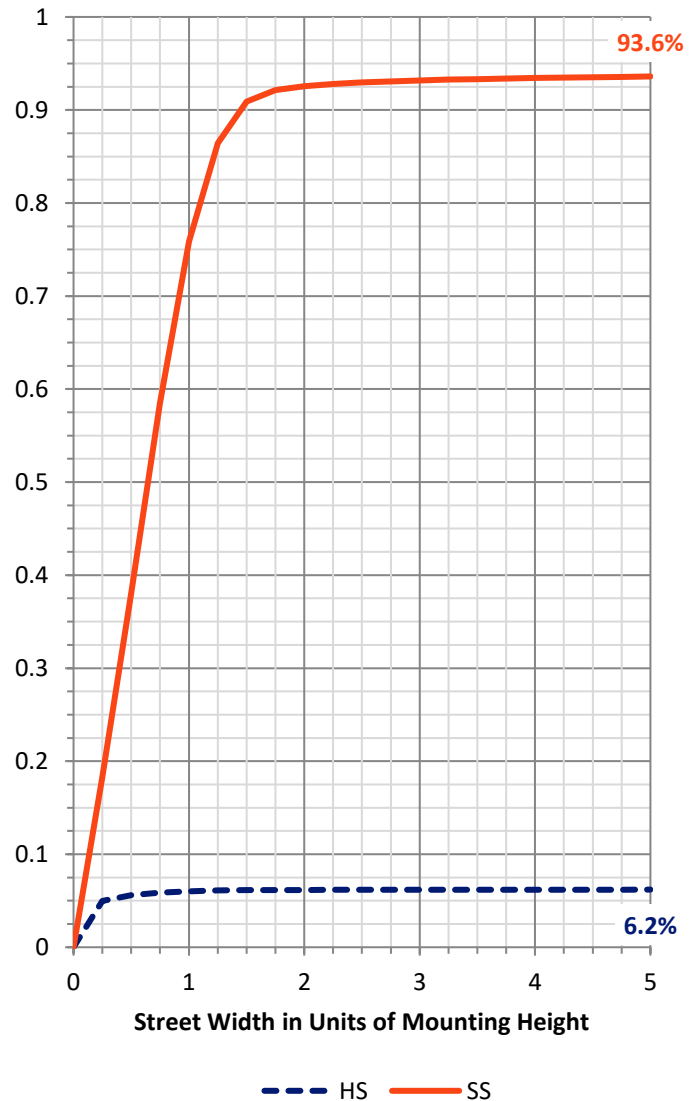
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1272.9	0.0	1272.9
	% Fixture	6.2	0.0	6.2
Street Side	Lumens	19119.1	0.0	19119.1
	% Fixture	93.8	0.0	93.8
Total	Lumens	20392.0	0.0	20392.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	492.5	2.4
10°-20°	1146.0	5.6
20°-30°	1928.4	9.5
30°-40°	3302.1	16.2
40°-50°	4983.0	24.4
50°-60°	5179.7	25.4
60°-70°	2907.8	14.3
70°-80°	398.5	2.0
80°-90°	54.0	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°	20392.0	100.0
0°-180°	20392.0	100.0

Coefficient of Utilization



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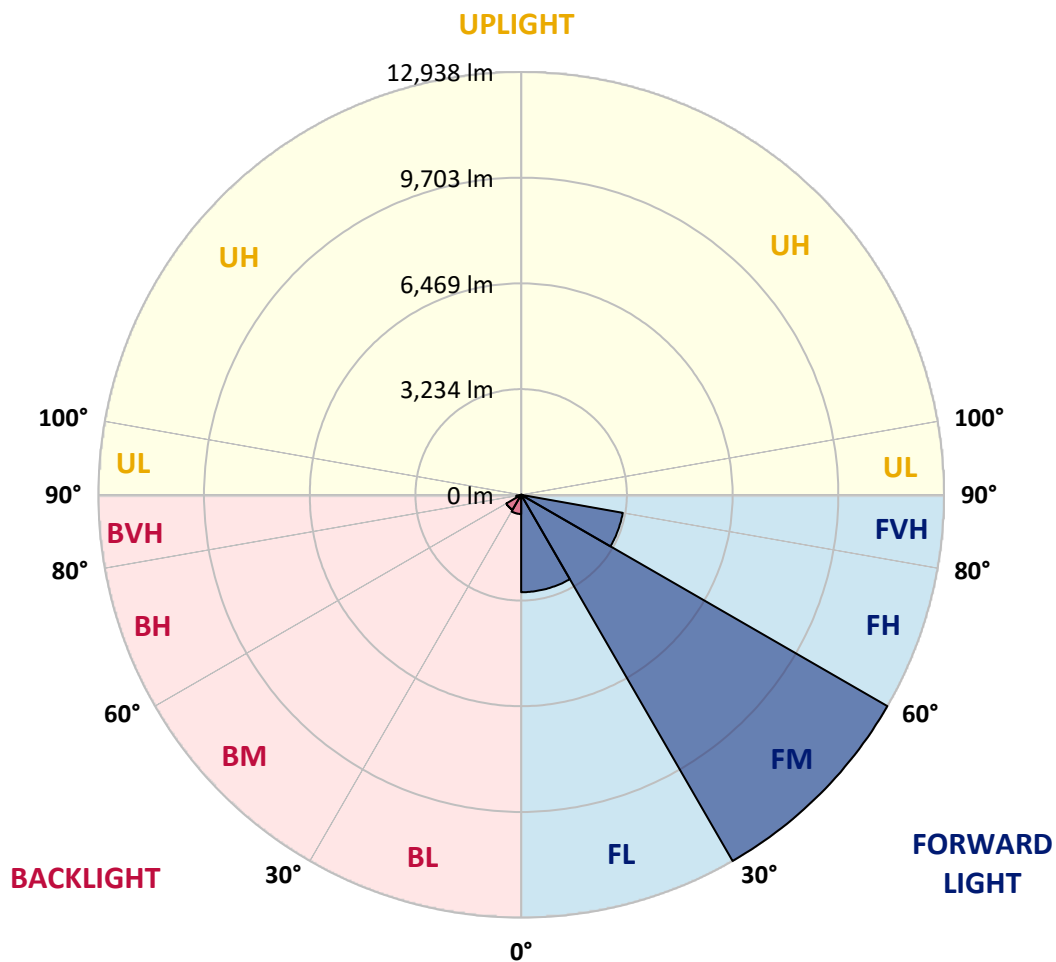
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2979.7	14.6			
FM (30°-60°)	12937.5	63.4			
FH (60°-80°)	3155.3	15.5			G2/5000
FVH (80°-90°)	46.5	0.2			G1/100
BL (0°-30°)	587.2	2.9	B2/1000		
BM (30°-60°)	527.3	2.6	B1/1000		
BH (60°-80°)	151.0	0.7	B1/500		G1/500
BVH (80°-90°)	7.5	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°	5773.6	5773.6	5773.6	5773.6	5773.6	5773.6	5773.6	5773.6	5773.6	5773.6	5773.6
2.5°	6946.7	6904.7	6861.1	6780.2	6705.5	6590.4	6431.7	6392.8	6268.3	6063.0	5871.6
5°	7545.7	7537.9	7508.3	7443.0	7362.1	7222.0	7043.1	6923.3	6730.4	6406.8	6038.1
7.5°	7190.9	7256.3	7363.6	7516.1	7618.8	7604.8	7467.9	7363.6	7172.3	6730.4	6201.4
10°	6061.4	6073.9	6221.7	6542.2	7049.4	7522.3	7701.2	7673.2	7497.4	7013.6	6344.6
12.5°	5663.1	5670.9	5705.1	5807.8	6137.7	6797.3	7607.9	7754.1	7740.1	7284.3	6497.0
15°	5694.2	5698.9	5708.2	5740.9	5834.3	6165.7	7134.9	7506.8	7895.7	7541.0	6646.4
17.5°	5940.1	5937.0	5907.4	5876.3	5905.8	6014.7	6652.6	7044.7	7863.0	7757.2	6769.3
20°	6419.3	6434.8	6335.2	6196.8	6125.2	6129.9	6414.6	6708.6	7679.5	7925.3	6861.1
22.5°	7092.9	7103.8	6940.4	6700.9	6490.8	6385.0	6464.4	6619.9	7467.9	8080.9	6935.8
25°	7897.3	7897.3	7668.6	7327.8	7002.7	6770.9	6702.4	6761.5	7387.0	8256.7	7010.5
27.5°	8765.4	8796.5	8497.8	8051.3	7621.9	7282.7	7068.0	7057.1	7449.2	8477.6	7094.5
30°	9709.8	9737.8	9383.1	8837.0	8328.2	7894.2	7564.3	7492.8	7687.2	8774.7	7217.4
32.5°	10649.5	10672.8	10280.8	9723.8	9131.0	8620.7	8186.6	8073.1	8115.1	9208.8	7397.9
35°	11844.3	11849.0	11352.7	10689.9	10056.7	9457.7	8908.5	8796.5	8749.8	9756.5	7657.7
37.5°	12794.9	12757.6	12443.3	11816.3	11089.8	10464.3	9818.7	9672.4	9560.4	10526.6	8060.6
40°	13019.0	13019.0	12972.3	12784.0	12206.8	11604.7	10979.3	10761.5	10514.1	11433.6	8602.0
42.5°	12435.5	12472.9	12780.9	13190.1	13194.8	12808.9	12197.5	12013.9	11578.3	12466.7	9193.3
45°	11130.2	11141.1	11880.1	12984.7	13734.6	13955.6	13504.4	13250.8	12647.1	13540.2	9734.7
47.5°	10660.4	10694.6	11008.9	12359.3	13775.1	14884.4	14758.4	14409.9	13636.6	14520.3	10240.3
50°	9938.5	9980.5	10364.8	11438.3	13411.0	15480.3	15957.9	15584.5	14537.4	15337.1	10490.8
52.5°	8211.5	8276.9	8819.9	10220.1	12500.9	15505.2	17056.3	16832.3	15460.0	15774.3	10461.2
55°	5650.7	5698.9	6332.1	7978.2	10665.0	14744.4	17529.3	17683.3	16283.1	15872.3	10318.1
56°	4558.5	4739.0	5202.6	6797.3	9619.5	14097.1	17420.3	17776.6	16527.3	15856.8	10255.9
57.5°	3013.6	3047.8	3553.5	4925.7	7724.6	12692.3	16928.7	17577.5	16841.6	15777.4	10210.7
60°	1417.3	1432.9	1614.9	2273.0	4180.4	9249.3	15330.9	16407.5	16956.7	15610.9	10209.2
62.5°	924.1	927.3	949.0	1084.4	1709.8	5037.7	12709.4	14259.0	16003.0	15592.3	10179.6
65°	760.8	768.6	742.1	759.2	894.6	1899.6	8964.5	11116.2	13764.2	15153.5	9846.7
67.5°	670.6	672.1	636.3	616.1	655.0	833.9	4516.5	7012.0	10294.8	12875.8	8110.4
70°	611.4	609.9	569.4	522.8	524.3	553.9	1471.8	2912.5	5695.8	7645.2	4656.5
72.5°	543.0	546.1	522.8	457.4	435.6	392.1	553.9	785.7	1938.5	2455.1	1227.5
75°	476.1	469.9	446.5	404.5	364.1	262.9	278.5	334.5	505.6	501.0	264.5
77.5°	360.9	354.7	365.6	345.4	284.7	183.6	152.5	174.3	228.7	213.1	107.4
80°	275.4	272.3	248.9	295.6	259.8	138.5	104.2	107.4	124.5	113.6	52.9
82.5°	199.1	197.6	188.3	182.0	164.9	101.1	79.3	84.0	93.3	79.3	38.9
85°	76.2	76.2	147.8	124.5	113.6	68.5	56.0	60.7	71.6	57.6	26.4
87.5°	12.4	12.4	99.6	82.5	51.3	34.2	35.8	38.9	42.0	34.2	20.2
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°	5773.6	5773.6	5773.6	5773.6	5773.6	5773.6	5773.6	5773.6	5773.6	5773.6	5773.6
2.5°	5758.0	5653.8	5425.1	5204.2	5011.2	4799.7	4692.3	4567.8	4521.2	4427.8	4437.2
5°	5817.2	5599.3	5140.4	4656.5	4213.1	3761.9	3441.4	3139.6	2971.6	2805.1	2805.1
7.5°	5877.8	5544.9	4835.4	4062.2	3315.4	2542.2	1994.5	1555.8	1311.5	1148.2	1143.5
10°	5919.8	5474.9	4488.5	3373.0	2271.5	1310.0	790.3	622.3	561.6	535.2	533.6
12.5°	5974.3	5404.9	4093.3	2560.9	1261.8	622.3	493.2	466.7	455.9	449.6	449.6
15°	6021.0	5305.3	3614.1	1722.3	662.8	466.7	424.7	415.4	413.8	412.3	413.8
17.5°	6031.9	5163.7	3040.0	1008.2	480.7	407.6	389.0	381.2	381.2	379.6	379.6
20°	6007.0	4977.0	2405.3	622.3	415.4	374.9	354.7	345.4	343.8	343.8	343.8
22.5°	5955.6	4739.0	1778.3	471.4	378.1	345.4	318.9	309.6	309.6	311.2	312.7
25°	5891.8	4457.4	1221.3	406.1	350.1	314.3	287.8	278.5	281.6	284.7	286.3
27.5°	5810.9	4121.3	799.7	351.6	312.7	283.2	259.8	253.6	259.8	266.0	269.2
30°	5730.0	3752.6	541.4	304.9	270.7	248.9	234.9	233.4	242.7	256.7	258.3
32.5°	5677.1	3374.5	409.2	273.8	238.0	219.4	213.1	216.3	230.3	245.8	248.9
35°	5672.5	3005.8	348.5	248.9	216.3	199.1	196.0	205.4	220.9	233.4	236.5
37.5°	5745.6	2660.4	315.8	230.3	199.1	182.0	177.4	194.5	208.5	220.9	224.0
40°	5893.4	2350.8	294.0	213.1	185.1	164.9	161.8	175.8	189.8	203.8	208.5
42.5°	6078.5	2061.4	269.2	196.0	169.6	146.2	143.1	154.0	168.0	188.3	191.4
45°	6238.8	1792.3	242.7	177.4	152.5	126.0	124.5	136.9	147.8	166.5	169.6
47.5°	6374.1	1568.3	217.8	157.1	130.7	112.0	110.5	116.7	122.9	140.0	143.1
50°	6302.6	1378.4	192.9	129.1	105.8	96.5	94.9	94.9	102.7	119.8	122.9
52.5°	6126.8	1260.2	169.6	107.4	87.1	82.5	77.8	79.3	87.1	94.9	96.5
55°	5985.2	1204.2	149.4	94.9	73.1	68.5	63.8	62.2	63.8	60.7	57.6
56°	5951.0	1198.0	144.7	91.8	70.0	63.8	57.6	54.5	52.9	46.7	45.1
57.5°	5935.4	1198.0	136.9	85.6	65.3	57.6	49.8	43.6	37.3	32.7	32.7
60°	5922.9	1205.7	127.6	74.7	56.0	46.7	35.8	26.4	21.8	21.8	21.8
62.5°	5896.5	1202.6	116.7	62.2	48.2	35.8	21.8	17.1	15.6	17.1	18.7
65°	5599.3	1117.1	102.7	49.8	37.3	24.9	12.4	12.4	14.0	17.1	18.7
67.5°	4511.8	846.4	84.0	38.9	26.4	18.7	10.9	10.9	14.0	17.1	18.7
70°	2478.4	446.5	71.6	28.0	20.2	15.6	10.9	9.3	14.0	17.1	18.7
72.5°	605.2	186.7	65.3	21.8	18.7	14.0	9.3	9.3	14.0	17.1	18.7
75°	149.4	140.0	52.9	17.1	15.6	12.4	9.3	9.3	14.0	17.1	18.7
77.5°	70.0	185.1	35.8	15.6	14.0	10.9	9.3	9.3	14.0	17.1	17.1
80°	42.0	140.0	21.8	14.0	12.4	10.9	9.3	9.3	14.0	17.1	18.7
82.5°	24.9	40.5	15.6	14.0	12.4	9.3	9.3	9.3	14.0	17.1	18.7
85°	21.8	20.2	15.6	14.0	12.4	10.9	9.3	9.3	15.6	18.7	18.7
87.5°	17.1	15.6	14.0	12.4	12.4	10.9	9.3	9.3	14.0	17.1	18.7
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)