

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: P270577

Luminaire Tested: **NAV-AF-05-D-UNV-AFL-7027-800-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270577
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-7027-800-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 70 CRI, 2700K, 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: 17716.7 lumens
Efficiency: N/A
Efficacy: 84.4 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

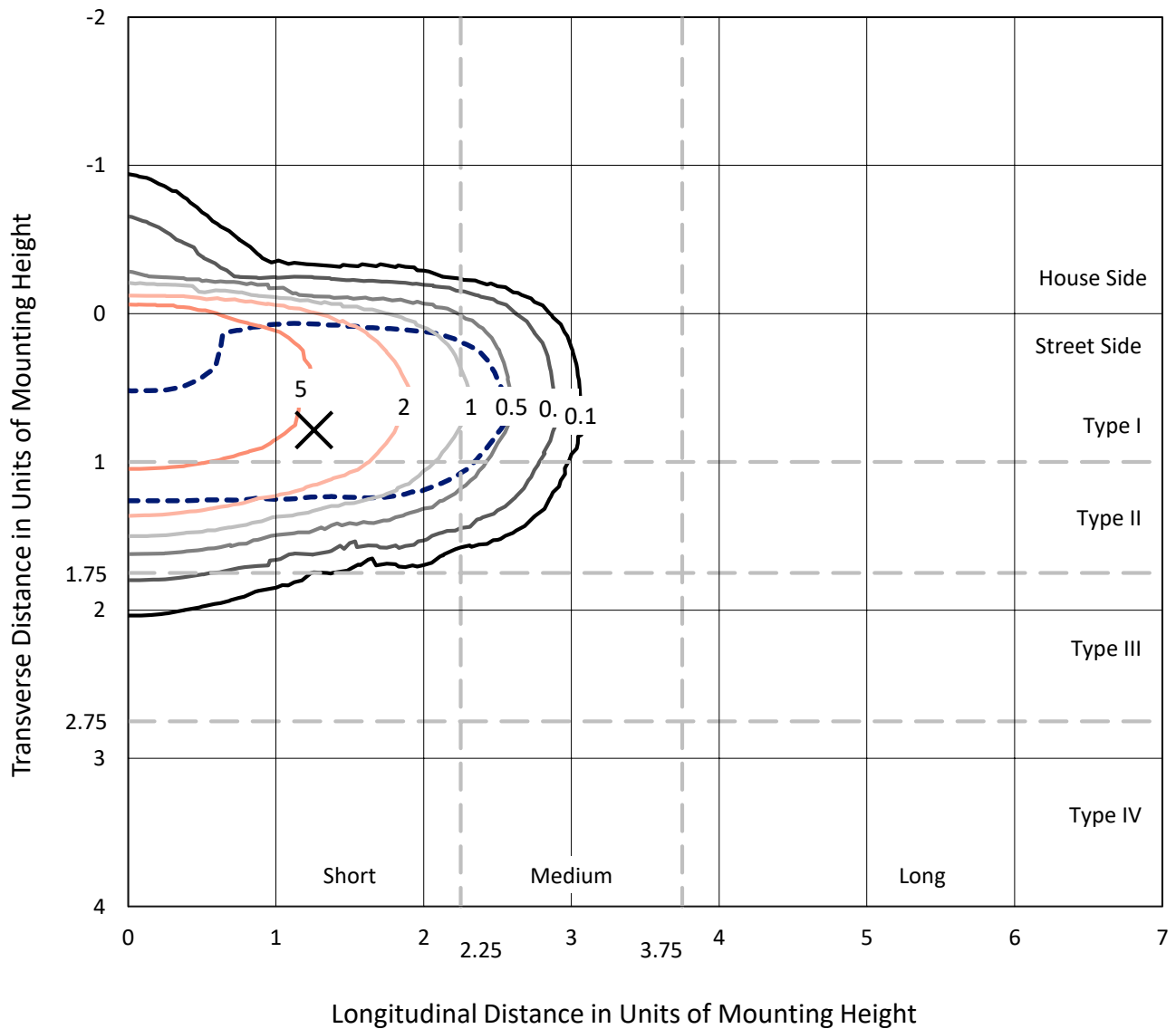


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

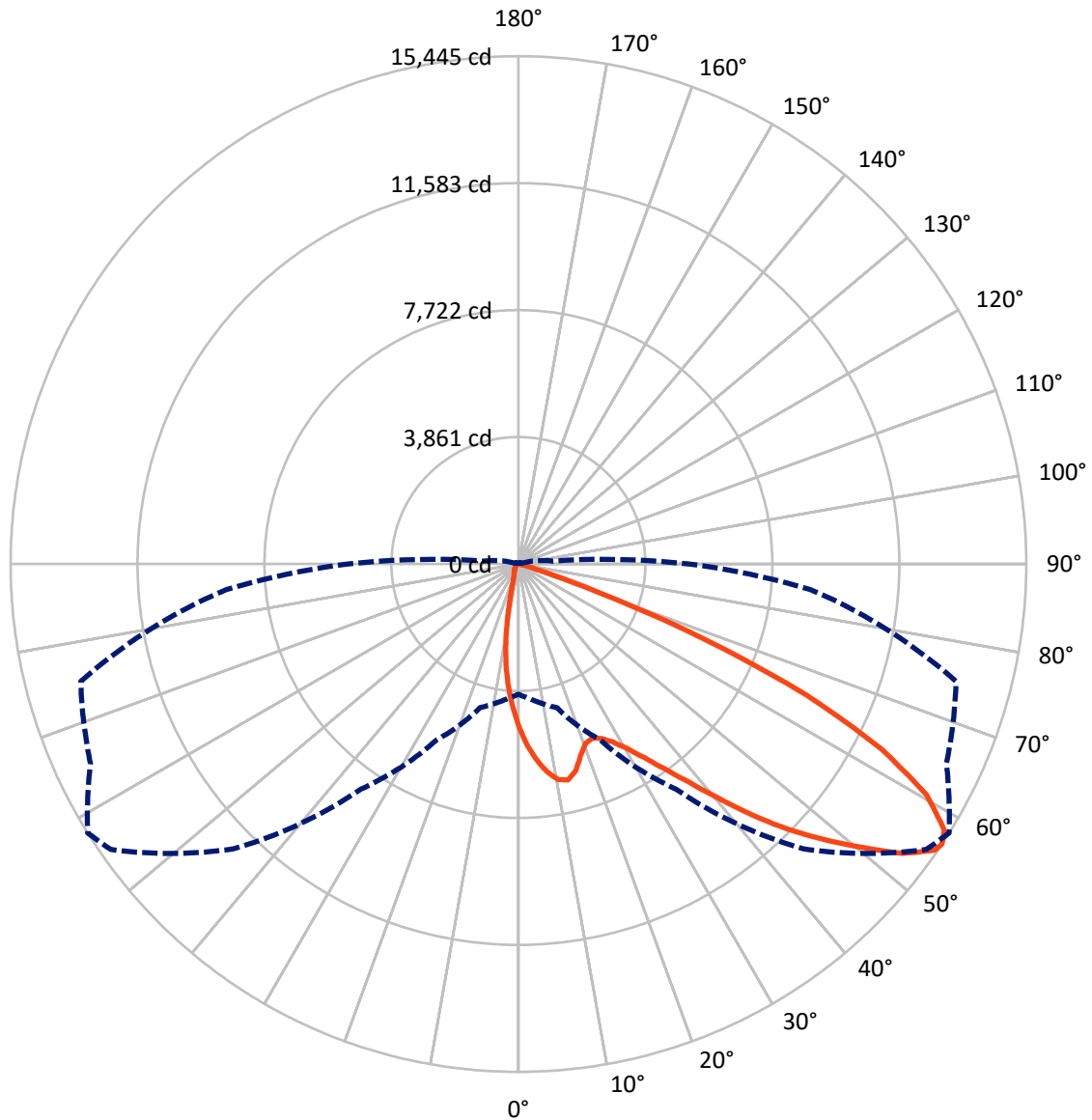


Based on 25 foot mounting height. Maximum calculated value = 10 fc
 Type II - Short - Full Cutoff

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Luminous Intensity Polar Plot



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

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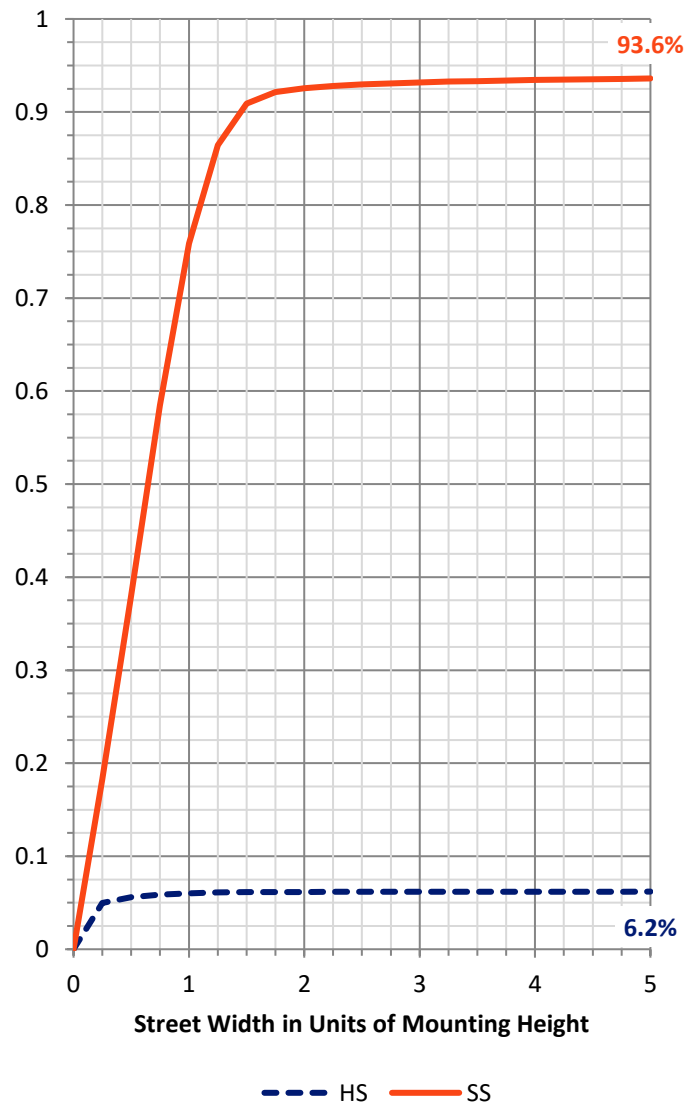
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1105.9	0.0	1105.9
	% Fixture	6.2	0.0	6.2
Street Side	Lumens	16610.8	0.0	16610.8
	% Fixture	93.8	0.0	93.8
Total	Lumens	17716.7	0.0	17716.7
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	427.9	2.4
10°-20°	995.7	5.6
20°-30°	1675.4	9.5
30°-40°	2868.9	16.2
40°-50°	4329.3	24.4
50°-60°	4500.1	25.4
60°-70°	2526.3	14.3
70°-80°	346.2	2.0
80°-90°	46.9	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°	17716.7	100.0
0°-180°	17716.7	100.0

Coefficient of Utilization



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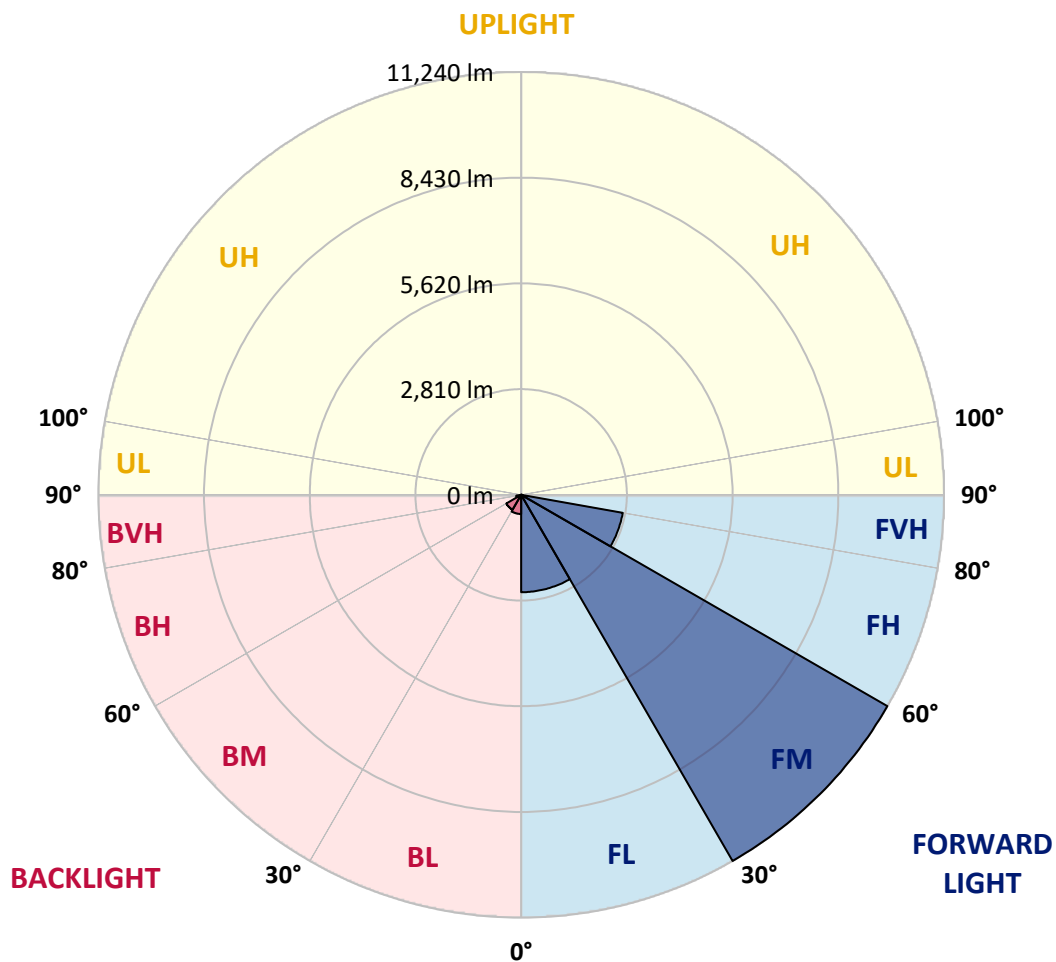
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2588.8	14.6			
FM	(30°-60°)	11240.2	63.4			
FH	(60°-80°)	2741.4	15.5			G2/5000
FVH	(80°-90°)	40.4	0.2			G1/100
BL	(0°-30°)	510.1	2.9	B2/1000		
BM	(30°-60°)	458.1	2.6	B1/1000		
BH	(60°-80°)	131.2	0.7	B1/500		G1/500
BVH	(80°-90°)	6.5	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°	5016.1	5016.1	5016.1	5016.1	5016.1	5016.1	5016.1	5016.1	5016.1	5016.1	5016.1
2.5°	6035.4	5998.8	5961.0	5890.6	5825.8	5725.7	5587.8	5554.1	5446.0	5267.5	5101.3
5°	6555.7	6549.0	6523.3	6466.4	6396.2	6274.7	6119.2	6015.1	5847.4	5566.3	5245.9
7.5°	6247.5	6304.3	6397.5	6530.0	6619.3	6607.0	6488.2	6397.5	6231.4	5847.4	5387.9
10°	5266.3	5277.1	5405.5	5683.8	6124.6	6535.4	6690.8	6666.5	6513.8	6093.5	5512.2
12.5°	4920.1	4926.9	4956.7	5045.9	5332.3	5905.5	6609.8	6736.8	6724.7	6328.6	5644.7
15°	4947.1	4951.3	4959.4	4987.7	5068.9	5356.8	6198.8	6522.0	6859.8	6551.7	5774.5
17.5°	5160.8	5158.1	5132.3	5105.3	5130.9	5225.6	5779.9	6120.5	6831.5	6739.5	5881.3
20°	5577.0	5590.6	5504.2	5383.8	5321.6	5325.7	5573.1	5828.6	6672.0	6885.5	5961.0
22.5°	6162.4	6171.9	6030.0	5821.7	5639.3	5547.4	5616.4	5751.5	6488.2	7020.8	6025.9
25°	6861.3	6861.3	6662.5	6366.5	6084.0	5882.6	5823.2	5874.5	6417.9	7173.4	6090.8
27.5°	7615.4	7642.5	7383.0	6995.0	6621.9	6327.3	6140.8	6131.3	6471.8	7365.5	6163.7
30°	8436.0	8460.2	8152.1	7677.6	7235.6	6858.5	6571.9	6509.7	6678.7	7623.6	6270.4
32.5°	9252.4	9272.7	8931.9	8448.1	7933.1	7489.8	7112.6	7014.0	7050.4	8000.7	6427.4
35°	10290.4	10294.4	9863.3	9287.4	8737.4	8216.9	7739.7	7642.5	7601.9	8476.4	6653.0
37.5°	11116.3	11083.8	10810.8	10266.1	9635.0	9091.4	8530.6	8403.5	8306.2	9145.6	7003.1
40°	11311.0	11311.0	11270.5	11106.9	10605.4	10082.2	9538.9	9349.6	9134.8	9933.5	7473.4
42.5°	10804.0	10836.6	11104.2	11459.7	11463.7	11128.6	10597.2	10437.8	10059.3	10831.1	7987.2
45°	9670.1	9679.4	10321.5	11281.3	11932.7	12124.8	11732.8	11512.4	10987.9	11763.8	8457.5
47.5°	9261.9	9291.6	9564.7	10737.9	11967.8	12931.7	12822.1	12519.4	11847.6	12615.3	8896.9
50°	8634.6	8671.1	9005.0	9937.7	11651.6	13449.3	13864.4	13540.0	12630.2	13325.0	9114.6
52.5°	7134.2	7191.0	7662.7	8879.2	10860.9	13471.1	14818.6	14624.0	13431.7	13704.8	9088.8
55°	4909.3	4951.3	5501.4	6931.5	9265.8	12810.0	15229.5	15363.4	14146.9	13790.1	8964.5
56°	3960.4	4117.2	4520.1	5905.5	8357.6	12247.8	15135.0	15444.5	14359.0	13776.4	8910.4
57.5°	2618.2	2647.9	3087.2	4279.4	6711.1	11027.1	14707.8	15271.5	14632.1	13707.5	8871.2
60°	1231.3	1245.0	1403.1	1974.8	3631.9	8035.8	13319.6	14254.9	14732.2	13562.9	8869.9
62.5°	802.9	805.6	824.6	942.1	1485.4	4376.8	11042.0	12388.3	13903.5	13546.7	8844.2
65°	661.1	667.7	644.8	659.6	777.3	1650.5	7788.5	9657.9	11958.4	13165.5	8554.9
67.5°	582.6	583.9	552.8	535.3	569.0	724.6	3923.9	6092.0	8944.2	11186.7	7046.3
70°	531.2	529.9	494.7	454.2	455.5	481.2	1278.6	2530.3	4948.6	6642.2	4045.6
72.5°	471.7	474.5	454.2	397.4	378.5	340.6	481.2	682.6	1684.2	2132.9	1066.5
75°	413.6	408.2	388.0	351.4	316.4	228.3	242.0	290.6	439.4	435.3	229.7
77.5°	313.6	308.2	317.6	300.0	247.4	159.4	132.5	151.4	198.6	185.2	93.2
80°	239.3	236.6	216.3	256.8	225.7	120.4	90.5	93.2	108.2	98.6	46.0
82.5°	173.1	171.7	163.5	158.1	143.3	87.9	68.9	73.0	81.0	68.9	33.7
85°	66.3	66.3	128.4	108.2	98.6	59.5	48.7	52.7	62.3	50.0	22.9
87.5°	10.8	10.8	86.4	71.7	44.6	29.7	31.1	33.7	36.6	29.7	17.5
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°	5016.1	5016.1	5016.1	5016.1	5016.1	5016.1	5016.1	5016.1	5016.1	5016.1	5016.1
2.5°	5002.7	4912.0	4713.3	4521.3	4353.8	4170.0	4076.7	3968.6	3928.0	3846.9	3855.0
5°	5054.0	4864.7	4466.1	4045.6	3660.5	3268.5	2990.0	2727.8	2581.6	2437.1	2437.1
7.5°	5106.8	4817.4	4201.1	3529.4	2880.4	2208.7	1732.9	1351.7	1139.5	997.6	993.4
10°	5143.2	4756.6	3899.6	2930.5	1973.4	1138.2	686.7	540.7	488.0	465.1	463.6
12.5°	5190.4	4695.8	3556.3	2224.9	1096.2	540.7	428.5	405.6	396.1	390.7	390.7
15°	5231.1	4609.3	3139.9	1496.3	575.9	405.6	369.1	360.8	359.5	358.2	359.5
17.5°	5240.5	4486.2	2641.1	875.8	417.7	354.1	337.9	331.1	331.1	329.8	329.8
20°	5219.0	4324.1	2089.6	540.7	360.8	325.7	308.2	300.0	298.7	298.7	298.7
22.5°	5174.2	4117.2	1544.9	409.5	328.5	300.0	277.0	269.0	269.0	270.3	271.6
25°	5118.9	3872.7	1061.1	352.8	304.2	273.1	250.1	242.0	244.7	247.4	248.7
27.5°	5048.6	3580.6	694.7	305.5	271.6	246.0	225.7	220.4	225.7	231.1	233.9
30°	4978.2	3260.3	470.4	264.9	235.1	216.3	204.2	202.7	210.8	223.0	224.3
32.5°	4932.4	2931.8	355.5	238.0	206.8	190.6	185.2	187.8	200.1	213.5	216.3
35°	4928.3	2611.5	302.8	216.3	187.8	173.1	170.3	178.5	192.0	202.7	205.4
37.5°	4991.8	2311.3	274.4	200.1	173.1	158.1	154.1	168.9	181.1	192.0	194.7
40°	5120.2	2042.3	255.5	185.2	160.8	143.3	140.6	152.7	164.8	177.1	181.1
42.5°	5281.0	1791.0	233.9	170.3	147.3	127.1	124.3	133.8	146.0	163.5	166.2
45°	5420.4	1557.1	210.8	154.1	132.5	109.6	108.2	118.9	128.4	144.6	147.3
47.5°	5538.0	1362.5	189.3	136.5	113.5	97.3	95.9	101.4	106.8	121.6	124.3
50°	5475.7	1197.6	167.7	112.2	91.8	83.8	82.5	82.5	89.2	104.1	106.8
52.5°	5322.9	1094.9	147.3	93.2	75.6	71.7	67.6	68.9	75.6	82.5	83.8
55°	5200.0	1046.3	129.7	82.5	63.5	59.5	55.4	54.1	55.4	52.7	50.0
56°	5170.3	1040.7	125.8	79.8	60.8	55.4	50.0	47.3	46.0	40.6	39.2
57.5°	5156.7	1040.7	118.9	74.3	56.8	50.0	43.3	37.9	32.5	28.3	28.3
60°	5145.9	1047.6	110.9	64.9	48.7	40.6	31.1	22.9	19.0	19.0	19.0
62.5°	5122.9	1044.9	101.4	54.1	42.0	31.1	19.0	14.8	13.6	14.8	16.2
65°	4864.7	970.4	89.2	43.3	32.5	21.6	10.8	10.8	12.1	14.8	16.2
67.5°	3919.9	735.4	73.0	33.7	22.9	16.2	9.4	9.4	12.1	14.8	16.2
70°	2153.2	388.0	62.3	24.3	17.5	13.6	9.4	8.2	12.1	14.8	16.2
72.5°	525.8	162.2	56.8	19.0	16.2	12.1	8.2	8.2	12.1	14.8	16.2
75°	129.7	121.6	46.0	14.8	13.6	10.8	8.2	8.2	12.1	14.8	16.2
77.5°	60.8	160.8	31.1	13.6	12.1	9.4	8.2	8.2	12.1	14.8	14.8
80°	36.6	121.6	19.0	12.1	10.8	9.4	8.2	8.2	12.1	14.8	16.2
82.5°	21.6	35.2	13.6	12.1	10.8	8.2	8.2	8.2	12.1	14.8	16.2
85°	19.0	17.5	13.6	12.1	10.8	9.4	8.2	8.2	13.6	16.2	16.2
87.5°	14.8	13.6	12.1	10.8	10.8	9.4	8.2	8.2	12.1	14.8	16.2
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)