

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: P196434

Luminaire Tested: **NAV-AF-06-D-UNV-5NQ-7030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196434
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24130)
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-5NQ-7030
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 3000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V
NARROW OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 35815.2 lumens
Efficiency: N/A
Efficacy: 107.6 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type V - Short - Full Cutoff
BUG Rating: B5 - U0 - G3

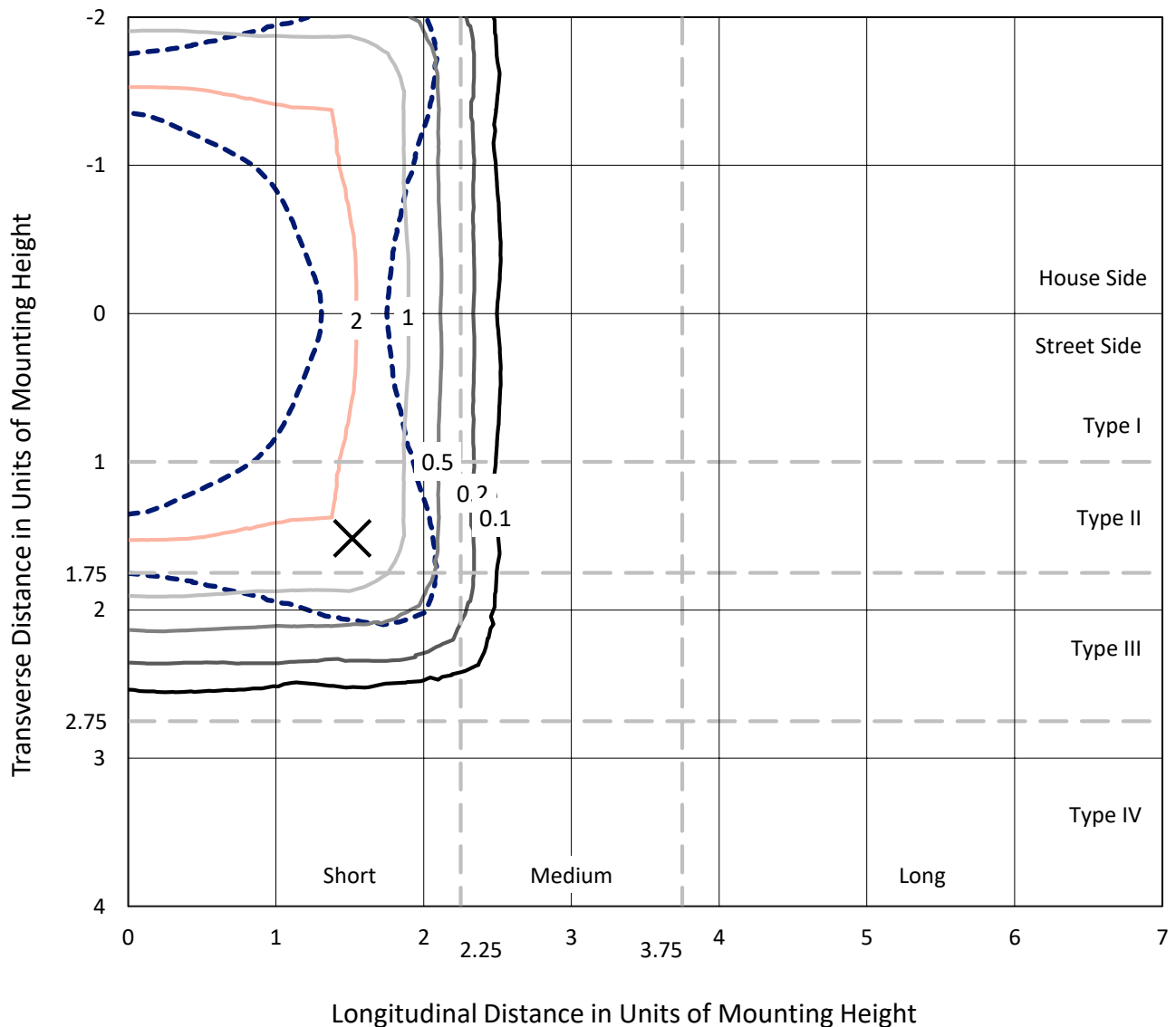
Input Watts (W): 333
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

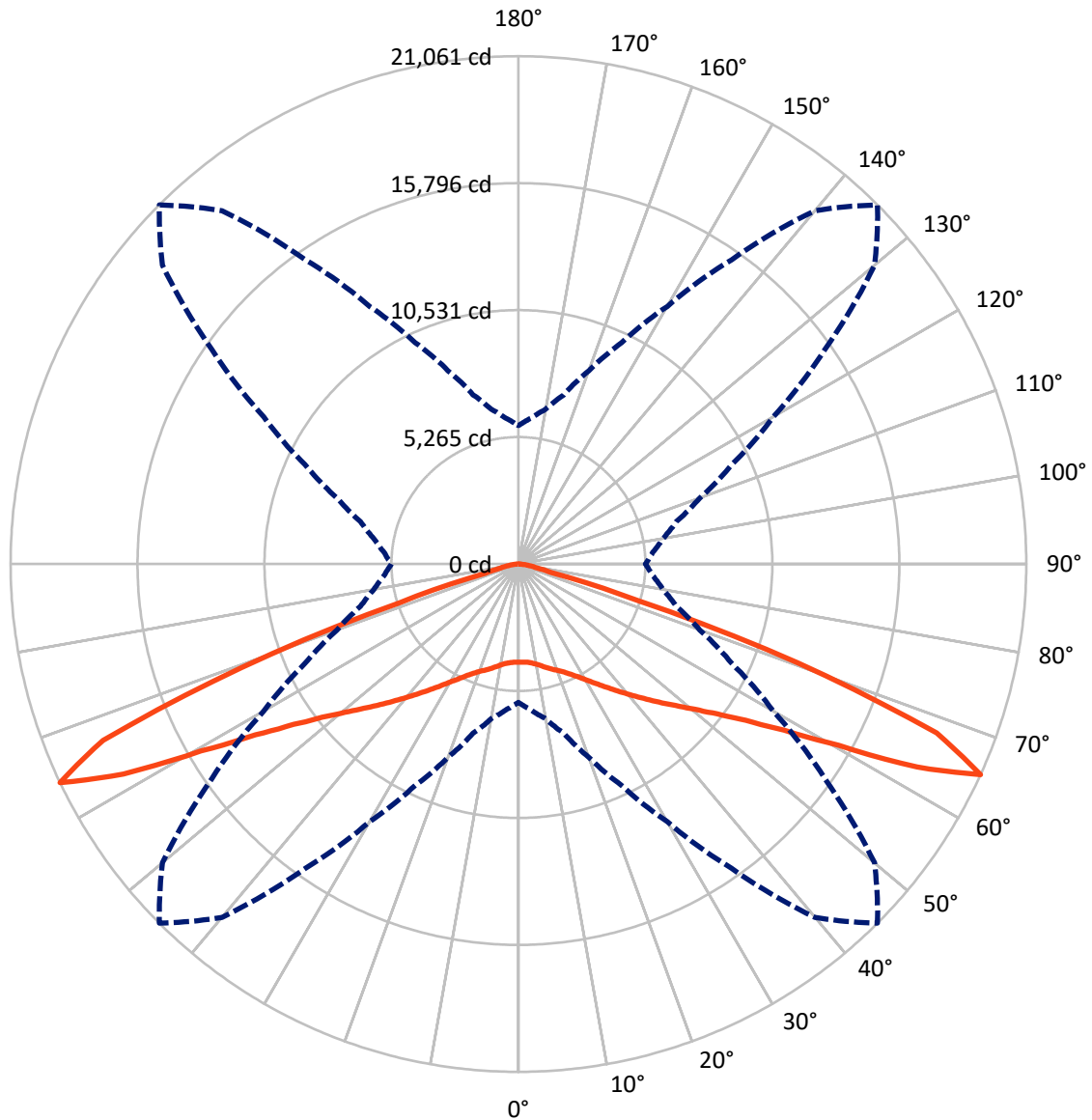
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 4.5 fc
 Type V - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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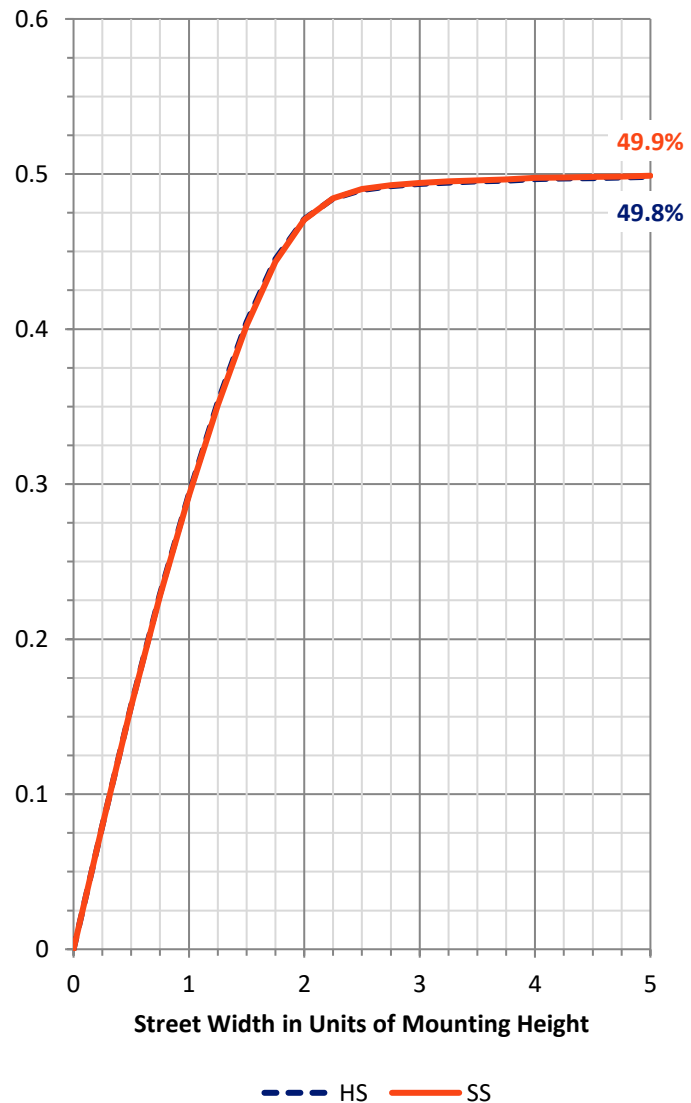
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	17907.6	0.0	17907.6
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	17907.6	0.0	17907.6
	% Fixture	50.0	0.0	50.0
Total	Lumens	35815.2	0.0	35815.2
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	396.7	1.1
10°-20°	1271.5	3.6
20°-30°	2372.0	6.6
30°-40°	3999.5	11.2
40°-50°	6496.4	18.1
50°-60°	10178.7	28.4
60°-70°	9608.2	26.8
70°-80°	1294.9	3.6
80°-90°	197.2	0.6
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°	35815.2	100.0
0°-180°	35815.2	100.0



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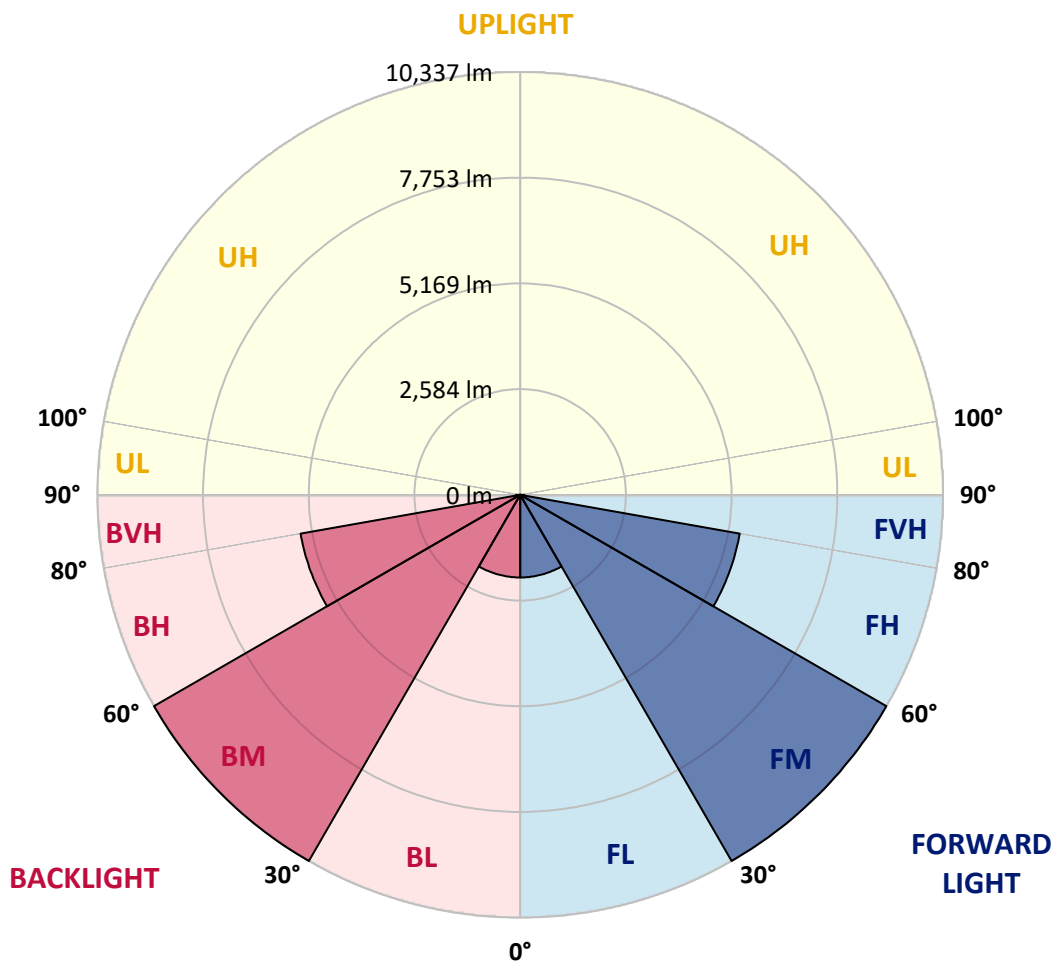
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2020.1	5.6			
FM	(30°-60°)	10337.3	28.9			
FH	(60°-80°)	5451.6	15.2			G3/7500
FVH	(80°-90°)	98.6	0.3			G1/100
BL	(0°-30°)	2020.1	5.6	B3/2500		
BM	(30°-60°)	10337.3	28.9	B5		
BH	(60°-80°)	5451.6	15.2	B5		G3/7500
BVH	(80°-90°)	98.6	0.3			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B5-U0-G3

Type V Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	4074.0	4074.0	4074.0	4074.0	4074.0	4074.0	4074.0	4074.0	4074.0	4074.0	4074.0
2.5°	4107.4	4107.4	4114.0	4111.9	4102.9	4096.2	4089.6	4080.7	4076.1	4071.6	4069.5
5°	4129.7	4129.7	4136.4	4134.2	4127.5	4118.5	4114.0	4107.4	4100.7	4096.2	4098.5
7.5°	4185.5	4187.7	4190.0	4187.7	4181.1	4174.4	4165.4	4163.3	4154.2	4147.6	4152.1
10°	4270.3	4270.3	4272.5	4274.8	4270.3	4254.7	4254.7	4250.1	4241.2	4232.3	4234.6
12.5°	4364.0	4364.0	4366.2	4366.2	4366.2	4357.3	4359.6	4357.3	4346.2	4341.6	4346.2
15°	4455.5	4457.7	4457.7	4462.1	4462.1	4464.4	4473.3	4473.3	4468.8	4466.6	4466.6
17.5°	4562.5	4567.0	4569.2	4575.9	4578.2	4582.7	4591.5	4593.8	4596.0	4589.3	4591.5
20°	4705.4	4707.6	4714.2	4716.5	4725.4	4725.4	4729.9	4727.6	4723.2	4714.2	4714.2
22.5°	4866.0	4870.4	4883.8	4883.8	4895.0	4888.3	4890.6	4883.8	4872.6	4868.1	4863.7
25°	5075.6	5082.4	5093.5	5089.1	5093.5	5082.4	5082.4	5082.4	5075.6	5069.0	5066.8
27.5°	5341.1	5330.0	5341.1	5332.3	5330.0	5321.2	5323.3	5318.8	5312.1	5310.0	5301.0
30°	5617.8	5604.5	5611.1	5613.4	5609.0	5606.6	5597.8	5591.1	5579.9	5582.2	5575.4
32.5°	5934.6	5921.3	5928.0	5930.1	5925.6	5930.1	5928.0	5912.3	5898.9	5907.8	5907.8
35°	6311.7	6302.7	6320.6	6327.3	6314.0	6307.2	6298.4	6280.4	6260.3	6273.7	6276.0
37.5°	6764.6	6753.5	6766.9	6784.7	6760.1	6746.8	6711.0	6684.3	6671.0	6677.6	6686.5
40°	7235.3	7237.6	7275.6	7280.0	7253.1	7237.6	7202.0	7161.7	7123.8	7123.8	7134.9
42.5°	7730.6	7737.3	7782.0	7797.7	7788.6	7759.7	7710.5	7661.5	7612.4	7621.4	7634.7
45°	8290.7	8281.8	8328.7	8366.5	8359.9	8350.9	8304.0	8214.7	8170.2	8167.9	8190.3
47.5°	8879.6	8897.5	8946.5	9011.2	9009.1	8986.8	8926.5	8844.0	8761.4	8768.0	8795.0
50°	9566.8	9591.4	9674.0	9738.6	9747.6	9740.9	9669.5	9573.6	9457.5	9464.1	9499.9
52.5°	10182.6	10218.3	10314.3	10448.1	10530.6	10568.5	10521.7	10432.5	10314.3	10320.9	10358.9
55°	10740.4	10796.1	10938.9	11121.9	11287.0	11441.0	11510.1	11507.8	11420.9	11441.0	11490.0
57.5°	11090.7	11168.7	11385.2	11679.7	12007.6	12317.8	12585.5	12837.5	12893.3	12998.2	12998.2
60°	10619.9	10802.8	11090.7	11594.9	12239.7	12935.7	13689.8	14423.9	14896.9	15269.4	15068.6
62.5°	8868.5	9138.5	9542.2	10207.1	11211.1	12453.8	13968.7	15675.5	17456.0	18544.7	17745.9
65°	5738.3	6077.4	6517.0	7264.3	8529.5	10129.1	12335.6	15403.3	19129.2	21061.3	19276.5
67.5°	2273.4	2503.2	2771.1	3302.1	4399.7	5970.4	8446.9	12230.7	16891.5	18714.3	16713.0
70°	1086.6	1124.5	1175.7	1289.6	1563.9	2110.6	3393.5	6026.0	10358.9	12279.7	10111.2
72.5°	785.3	792.0	816.6	854.5	934.8	1046.3	1271.7	1842.8	3571.9	5193.9	3576.4
75°	595.7	604.6	618.0	638.1	680.4	734.0	818.8	981.7	1222.6	1410.0	1220.4
77.5°	452.9	461.8	473.0	493.1	515.3	553.3	584.5	649.2	751.9	792.0	787.5
80°	330.2	345.8	363.7	381.6	397.1	414.9	417.3	448.4	506.4	544.3	533.1
82.5°	209.7	223.1	270.0	290.1	292.3	296.7	294.5	296.7	328.0	354.8	345.8
85°	133.9	142.8	167.2	189.7	185.2	194.2	194.2	189.7	176.2	151.8	180.8
87.5°	66.9	69.2	80.3	100.4	95.9	84.7	82.6	82.6	60.2	51.4	55.7
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):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	4074.0	4074.0	4074.0	4074.0	4074.0	4074.0	4074.0	4074.0
2.5°	4062.8	4067.2	4060.5	4060.5	4058.3	4062.8	4056.0	4056.0
5°	4094.1	4100.7	4098.5	4098.5	4102.9	4107.4	4105.2	4102.9
7.5°	4149.7	4154.2	4158.7	4160.9	4165.4	4163.3	4167.5	4165.4
10°	4234.6	4230.1	4236.8	4230.1	4232.3	4227.9	4230.1	4230.1
12.5°	4341.6	4335.0	4330.5	4326.0	4326.0	4317.2	4317.2	4319.3
15°	4464.4	4453.2	4444.3	4439.9	4435.4	4435.4	4428.8	4433.0
17.5°	4584.8	4573.7	4558.1	4558.1	4551.4	4547.0	4542.5	4553.6
20°	4712.1	4700.9	4691.9	4689.7	4676.3	4671.8	4674.1	4687.4
22.5°	4859.3	4852.5	4852.5	4848.2	4839.2	4832.5	4832.5	4848.2
25°	5057.8	5044.5	5046.6	5048.9	5044.5	5044.5	5040.0	5051.2
27.5°	5301.0	5289.9	5296.6	5301.0	5296.6	5303.2	5296.6	5305.5
30°	5586.7	5579.9	5586.7	5593.3	5582.2	5582.2	5577.6	5584.3
32.5°	5928.0	5919.0	5923.5	5923.5	5907.8	5894.5	5876.6	5890.0
35°	6302.7	6291.5	6300.6	6307.2	6289.4	6276.0	6249.2	6260.3
37.5°	6715.5	6720.0	6731.1	6760.1	6755.7	6733.3	6713.3	6722.1
40°	7177.4	7199.6	7248.7	7268.8	7264.3	7242.0	7215.3	7219.8
42.5°	7699.4	7728.5	7779.7	7813.2	7797.7	7766.3	7733.0	7746.3
45°	8268.3	8313.0	8379.8	8413.4	8393.3	8359.9	8313.0	8337.5
47.5°	8870.8	8960.1	9049.2	9093.8	9087.2	9040.3	8980.0	8986.8
50°	9591.4	9709.7	9823.4	9868.1	9834.5	9763.2	9678.4	9676.1
52.5°	10488.3	10615.4	10709.1	10698.0	10615.4	10503.8	10407.9	10403.4
55°	11608.2	11650.7	11637.3	11541.3	11396.3	11222.2	11099.5	11079.6
57.5°	12962.5	12819.7	12610.0	12320.0	11994.3	11664.1	11441.0	11358.4
60°	14618.1	13973.1	13223.5	12433.7	11713.1	11173.2	10831.9	10624.4
62.5°	15985.6	14118.3	12442.7	11070.5	9948.4	9281.2	8814.9	8527.1
65°	15517.1	12197.2	9769.9	8000.6	6775.7	6086.4	5593.3	5265.3
67.5°	11987.5	8150.0	5671.4	3931.1	2980.7	2523.4	2204.3	1996.8
70°	6044.0	3125.7	1894.2	1336.5	1142.3	1062.0	1008.5	977.3
72.5°	1773.8	1184.7	983.9	870.1	801.0	751.9	720.7	705.0
75°	981.7	801.0	707.2	642.6	597.9	564.5	544.3	531.0
77.5°	676.0	582.4	535.5	493.1	457.4	432.7	417.3	403.8
80°	473.0	426.1	406.0	383.7	356.9	336.8	314.5	305.7
82.5°	314.5	294.5	290.1	272.2	256.5	234.3	194.2	180.8
85°	185.2	182.9	182.9	176.2	165.1	145.0	116.1	116.1
87.5°	64.7	66.9	69.2	73.6	71.3	60.2	49.0	46.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)