

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: P270645

Luminaire Tested: **NAV-AF-06-D-UNV-5NQ-7027**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270645
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-7027
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 2700K, 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: 32173 lumens
Efficiency: N/A
Efficacy: 96.6 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 - G2

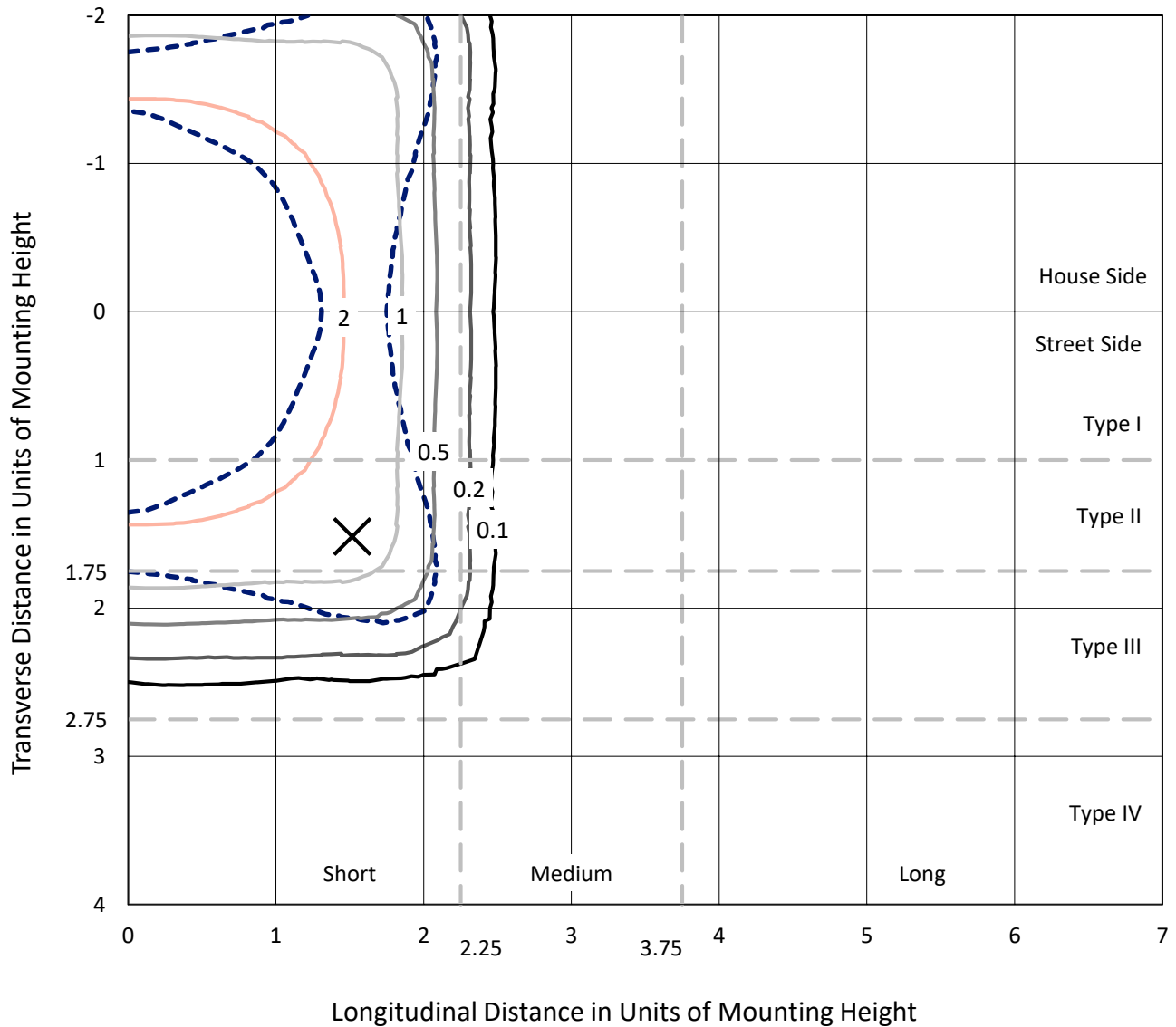
Input Watts (W): 333
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P270645
 CATALOG NUMBER: NAV-AF-06-D-UNV-5NQ-7027

Iso-Footcandle Lines of Horizontal Illumination

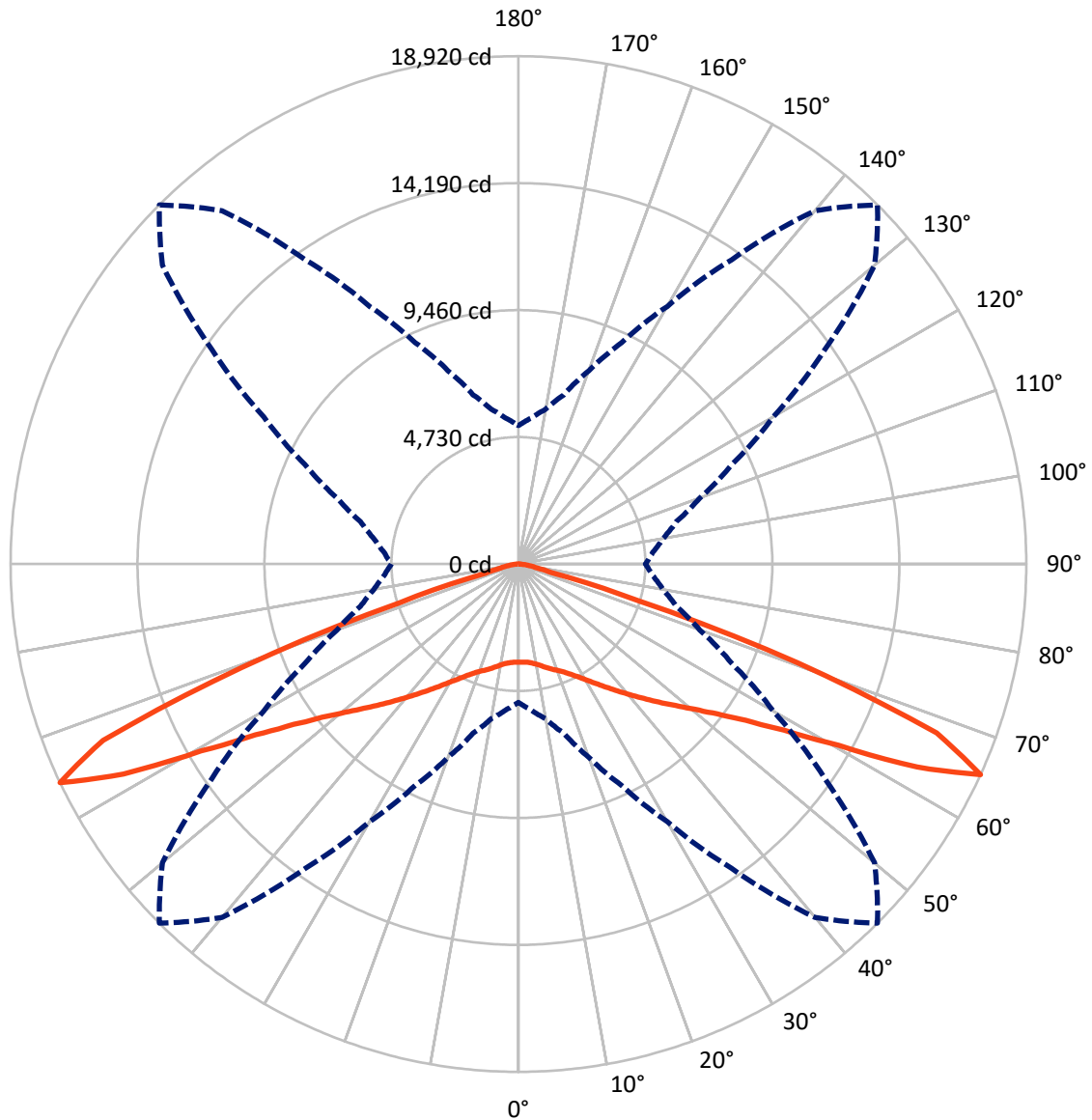
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 4.1 fc
 Type V - Short - Full Cutoff

REPORT NUMBER: P270645
CATALOG NUMBER: NAV-AF-06-D-UNV-5NQ-7027

Luminous Intensity Polar Plot



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

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 CATALOG NUMBER: NAV-AF-06-D-UNV-5NQ-7027

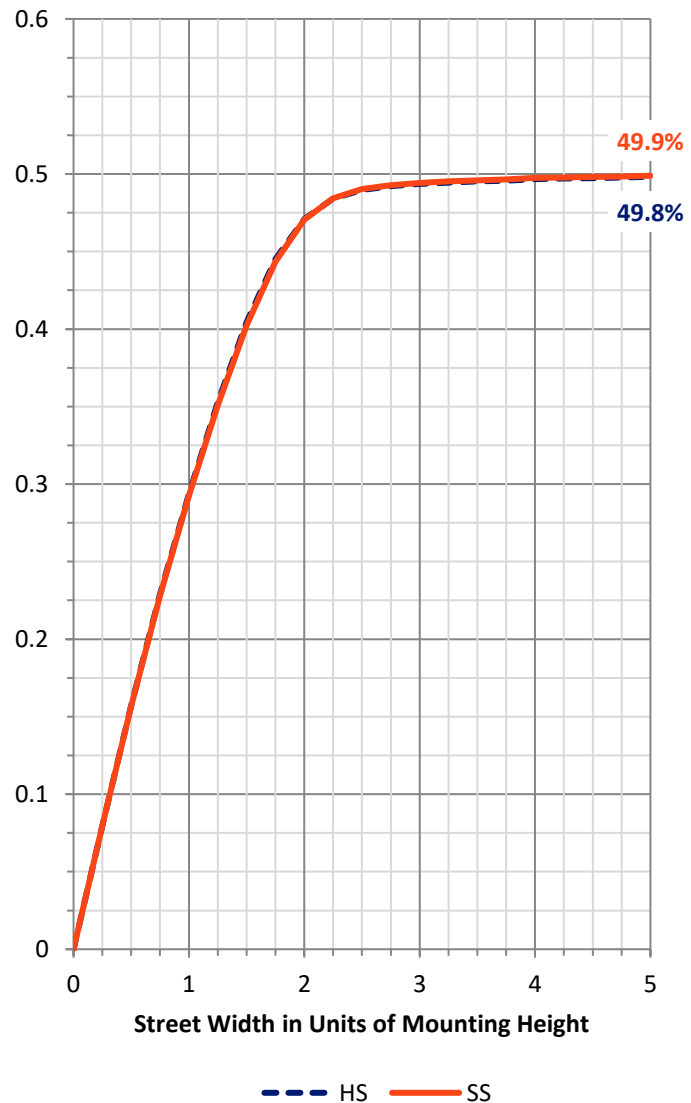
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	16086.5	0.0	16086.5
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	16086.5	0.0	16086.5
	% Fixture	50.0	0.0	50.0
Total	Lumens	32173.0	0.0	32173.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	356.4	1.1
10°-20°	1142.2	3.6
20°-30°	2130.8	6.6
30°-40°	3592.8	11.2
40°-50°	5835.7	18.1
50°-60°	9143.6	28.4
60°-70°	8631.1	26.8
70°-80°	1163.2	3.6
80°-90°	177.2	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°	32173.0	100.0
0°-180°	32173.0	100.0



REPORT NUMBER: P270645

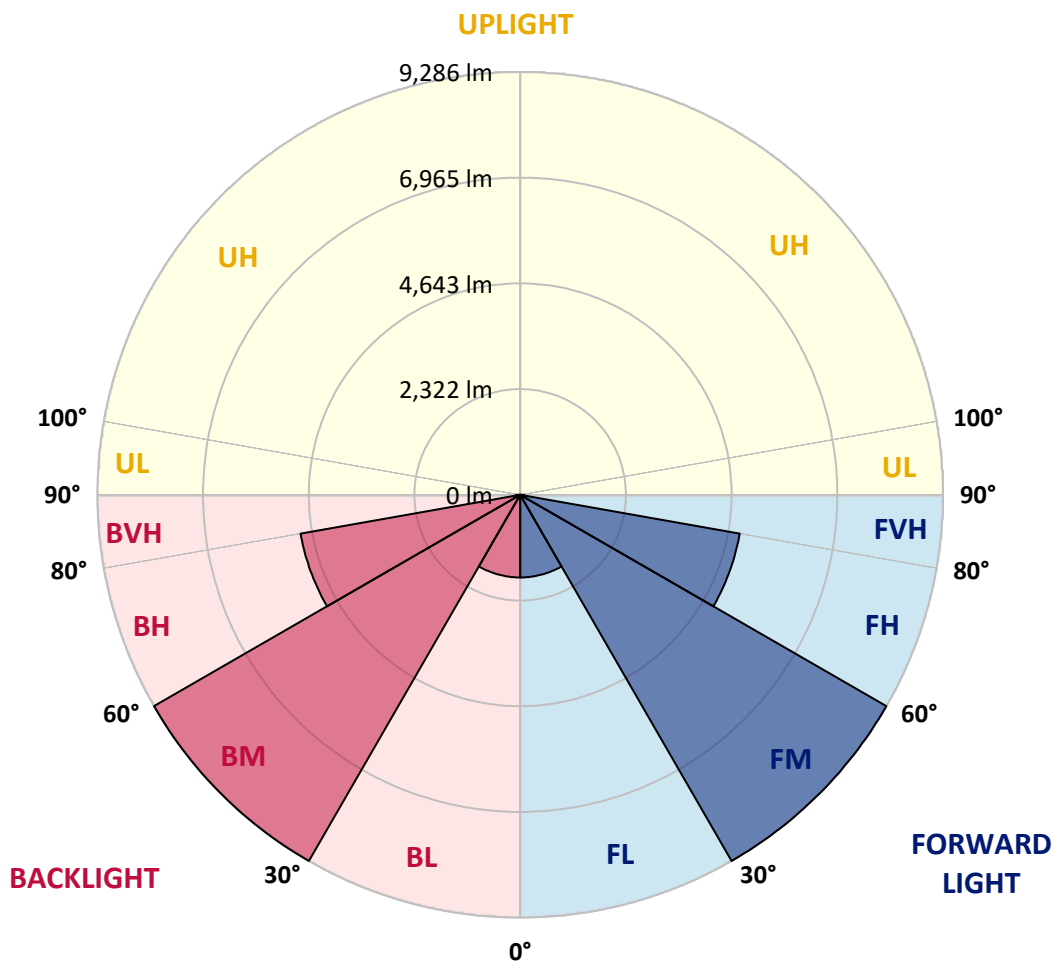
CATALOG NUMBER: NAV-AF-06-D-UNV-5NQ-7027

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1814.7	5.6			
FM	(30°-60°)	9286.1	28.9			
FH	(60°-80°)	4897.2	15.2			G2/5000
FVH	(80°-90°)	88.6	0.3			G1/100
BL	(0°-30°)	1814.7	5.6	B3/2500		
BM	(30°-60°)	9286.1	28.9	B5		
BH	(60°-80°)	4897.2	15.2	B4/5000		G2/5000
BVH	(80°-90°)	88.6	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-G2

Type V Short





REPORT NUMBER: P270645

CATALOG NUMBER: NAV-AF-06-D-UNV-5NQ-7027

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	3659.7	3659.7	3659.7	3659.7	3659.7	3659.7	3659.7	3659.7	3659.7	3659.7	3659.7
2.5°	3689.7	3689.7	3695.6	3693.7	3685.7	3679.6	3673.7	3665.7	3661.6	3657.5	3655.7
5°	3709.7	3709.7	3715.7	3713.8	3707.8	3699.7	3695.6	3689.7	3683.7	3679.6	3681.7
7.5°	3759.9	3761.8	3763.9	3761.8	3755.9	3749.9	3741.8	3739.9	3731.7	3725.8	3729.9
10°	3836.0	3836.0	3838.0	3840.1	3836.0	3822.0	3822.0	3817.9	3809.9	3801.9	3804.0
12.5°	3920.2	3920.2	3922.2	3922.2	3922.2	3914.2	3916.3	3914.2	3904.2	3900.1	3904.2
15°	4002.4	4004.4	4004.4	4008.3	4008.3	4010.4	4018.4	4018.4	4014.3	4012.4	4012.4
17.5°	4098.5	4102.6	4104.5	4110.6	4112.6	4116.7	4124.6	4126.6	4128.6	4122.6	4124.6
20°	4226.9	4228.9	4234.8	4236.9	4244.9	4244.9	4248.9	4246.8	4242.9	4234.8	4234.8
22.5°	4371.2	4375.1	4387.1	4387.1	4397.2	4391.2	4393.3	4387.1	4377.1	4373.0	4369.1
25°	4559.4	4565.5	4575.5	4571.6	4575.5	4565.5	4565.5	4565.5	4559.4	4553.5	4551.5
27.5°	4797.9	4788.0	4797.9	4790.0	4788.0	4780.1	4781.9	4777.9	4771.9	4770.0	4761.9
30°	5046.5	5034.6	5040.5	5042.5	5038.6	5036.4	5028.5	5022.5	5012.5	5014.5	5008.4
32.5°	5331.1	5319.1	5325.2	5327.0	5323.0	5327.0	5325.2	5311.0	5299.0	5307.0	5307.0
35°	5669.8	5661.7	5677.8	5683.8	5671.9	5665.8	5657.9	5641.7	5623.7	5635.7	5637.8
37.5°	6076.7	6066.7	6078.7	6094.7	6072.6	6060.7	6028.5	6004.5	5992.6	5998.5	6006.5
40°	6499.5	6501.6	6535.7	6539.7	6515.5	6501.6	6469.6	6433.4	6399.3	6399.3	6409.3
42.5°	6944.4	6950.5	6990.6	7004.7	6996.5	6970.6	6926.4	6882.4	6838.3	6846.3	6858.3
45°	7447.6	7439.6	7481.7	7515.7	7509.7	7501.7	7459.5	7379.3	7339.3	7337.3	7357.4
47.5°	7976.6	7992.7	8036.7	8094.8	8092.9	8072.9	8018.7	7944.6	7870.4	7876.3	7900.6
50°	8593.9	8616.0	8690.2	8748.2	8756.3	8750.3	8686.2	8600.0	8495.7	8501.6	8533.8
52.5°	9147.1	9179.2	9265.4	9385.6	9459.7	9493.7	9451.7	9371.6	9265.4	9271.3	9305.5
55°	9648.2	9698.2	9826.5	9990.9	10139.2	10277.5	10339.6	10337.5	10259.5	10277.5	10321.5
57.5°	9962.8	10032.9	10227.4	10491.9	10786.5	11065.1	11305.6	11532.0	11582.1	11676.3	11676.3
60°	9539.9	9704.2	9962.8	10415.8	10995.0	11620.2	12297.6	12957.1	13382.0	13716.6	13536.2
62.5°	7966.6	8209.2	8571.8	9169.1	10071.0	11187.3	12548.2	14081.4	15680.8	16658.8	15941.2
65°	5154.7	5459.4	5854.3	6525.6	7662.1	9099.0	11081.1	13836.9	17183.9	18919.5	17316.2
67.5°	2042.2	2248.6	2489.3	2966.3	3952.3	5363.2	7587.9	10986.9	15173.7	16811.2	15013.4
70°	976.1	1010.1	1056.1	1158.5	1404.9	1896.0	3048.4	5413.2	9305.5	11030.9	9082.9
72.5°	705.4	711.5	733.6	767.6	839.7	939.9	1142.4	1655.4	3208.7	4665.7	3212.7
75°	535.1	543.1	555.2	573.2	611.2	659.4	735.5	881.9	1098.3	1266.6	1096.3
77.5°	406.8	414.8	424.9	443.0	462.9	497.0	525.1	583.2	675.4	711.5	707.4
80°	296.6	310.6	326.7	342.8	356.7	372.7	374.9	402.8	454.9	488.9	478.9
82.5°	188.4	200.4	242.5	260.6	262.6	266.5	264.6	266.5	294.6	318.7	310.6
85°	120.3	128.3	150.2	170.4	166.4	174.5	174.5	170.4	158.3	136.4	162.4
87.5°	60.1	62.2	72.1	90.2	86.1	76.1	74.2	74.2	54.1	46.2	50.0
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°	3659.7	3659.7	3659.7	3659.7	3659.7	3659.7	3659.7	3659.7
2.5°	3649.6	3653.6	3647.6	3647.6	3645.6	3649.6	3643.5	3643.5
5°	3677.8	3683.7	3681.7	3681.7	3685.7	3689.7	3687.7	3685.7
7.5°	3727.7	3731.7	3735.8	3737.8	3741.8	3739.9	3743.7	3741.8
10°	3804.0	3799.9	3805.9	3799.9	3801.9	3797.9	3799.9	3799.9
12.5°	3900.1	3894.2	3890.1	3886.1	3886.1	3878.2	3878.2	3880.0
15°	4010.4	4000.3	3992.3	3988.4	3984.3	3984.3	3978.4	3982.2
17.5°	4118.5	4108.6	4094.6	4094.6	4088.5	4084.6	4080.6	4090.5
20°	4232.9	4222.8	4214.8	4212.8	4200.7	4196.7	4198.8	4210.7
22.5°	4365.1	4359.0	4359.0	4355.2	4347.1	4341.1	4341.1	4355.2
25°	4543.4	4531.5	4533.4	4535.5	4531.5	4531.5	4527.5	4537.5
27.5°	4761.9	4751.9	4758.0	4761.9	4758.0	4763.9	4758.0	4766.0
30°	5018.6	5012.5	5018.6	5024.5	5014.5	5014.5	5010.4	5016.4
32.5°	5325.2	5317.1	5321.1	5321.1	5307.0	5295.1	5279.0	5291.0
35°	5661.7	5651.7	5659.9	5665.8	5649.8	5637.8	5613.7	5623.7
37.5°	6032.6	6036.6	6046.6	6072.6	6068.7	6048.6	6030.6	6038.5
40°	6447.5	6467.4	6511.5	6529.6	6525.6	6505.5	6481.5	6485.6
42.5°	6916.4	6942.6	6988.5	7018.6	7004.7	6976.5	6946.6	6958.5
45°	7427.5	7467.6	7527.6	7557.8	7539.7	7509.7	7467.6	7489.6
47.5°	7968.7	8048.9	8128.9	8169.0	8163.1	8120.9	8066.8	8072.9
50°	8616.0	8722.3	8824.4	8864.6	8834.4	8770.3	8694.2	8692.1
52.5°	9421.7	9535.9	9620.0	9610.1	9535.9	9435.6	9349.5	9345.4
55°	10427.7	10465.9	10453.8	10367.6	10237.4	10081.0	9970.7	9952.9
57.5°	11644.3	11516.0	11327.6	11067.1	10774.5	10477.9	10277.5	10203.3
60°	13131.5	12552.1	11878.7	11169.3	10521.9	10036.9	9730.4	9544.0
62.5°	14359.9	12682.5	11177.3	9944.7	8936.7	8337.3	7918.5	7659.9
65°	13939.1	10956.8	8776.4	7187.0	6086.6	5467.4	5024.5	4729.8
67.5°	10768.4	7321.2	5094.6	3531.3	2677.6	2266.8	1980.1	1793.7
70°	5429.4	2807.8	1701.6	1200.6	1026.1	954.0	905.9	877.9
72.5°	1593.4	1064.2	883.8	781.6	719.5	675.4	647.4	633.3
75°	881.9	719.5	635.3	577.3	537.1	507.1	488.9	477.0
77.5°	607.3	523.2	481.0	443.0	410.9	388.7	374.9	362.7
80°	424.9	382.8	364.7	344.7	320.6	302.5	282.5	274.6
82.5°	282.5	264.6	260.6	244.5	230.4	210.5	174.5	162.4
85°	166.4	164.3	164.3	158.3	148.3	130.3	104.3	104.3
87.5°	58.1	60.1	62.2	66.1	64.0	54.1	44.0	42.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)