

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: McGRAW-EDISON

Report Number: P299506

Luminaire Tested: **GLNA-AF-09-LED-E1-5NQ-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P299506
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24141)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: GLNA-AF-09-LED-E1-5NQ-600
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(9) 70 CRI, 4000K CCT 600mA LIGHTSQUARE WITH 16 LEDS EACH AND Type II
w/Spill Control OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 36036.4 lumens
Efficiency: N/A
Efficacy: 124.3 lumens/watt
Luminous Opening: Rectangular (W 2.5' x L: 1' x H: 0')
IES Classification: Type V - Short - Full Cutoff
BUG Rating: B5 - U0 - G3

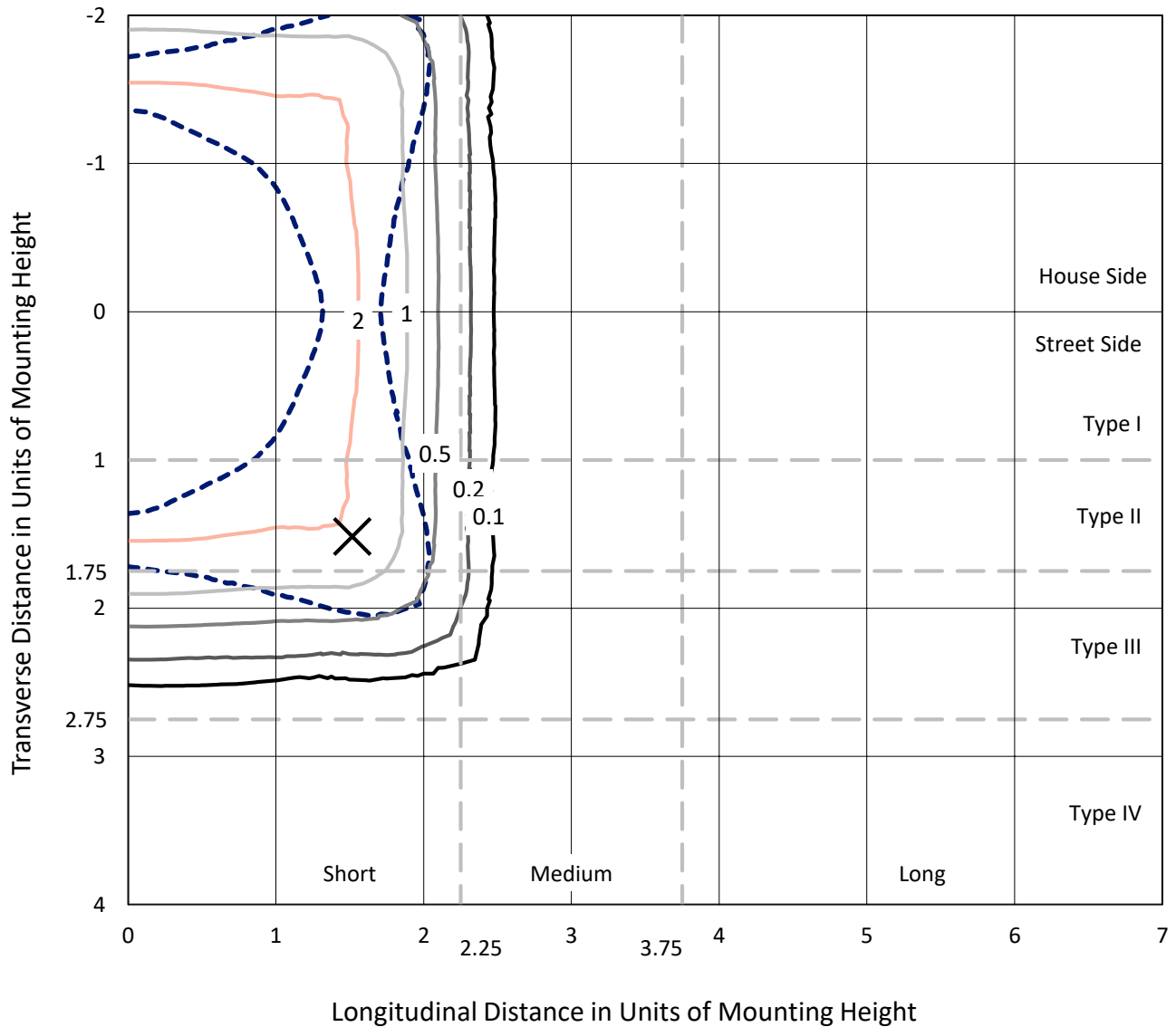
Input Watts (W): 290
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P299506
 CATALOG NUMBER: GLNA-AF-09-LED-E1-5NQ-600

Iso-Footcandle Lines of Horizontal Illumination

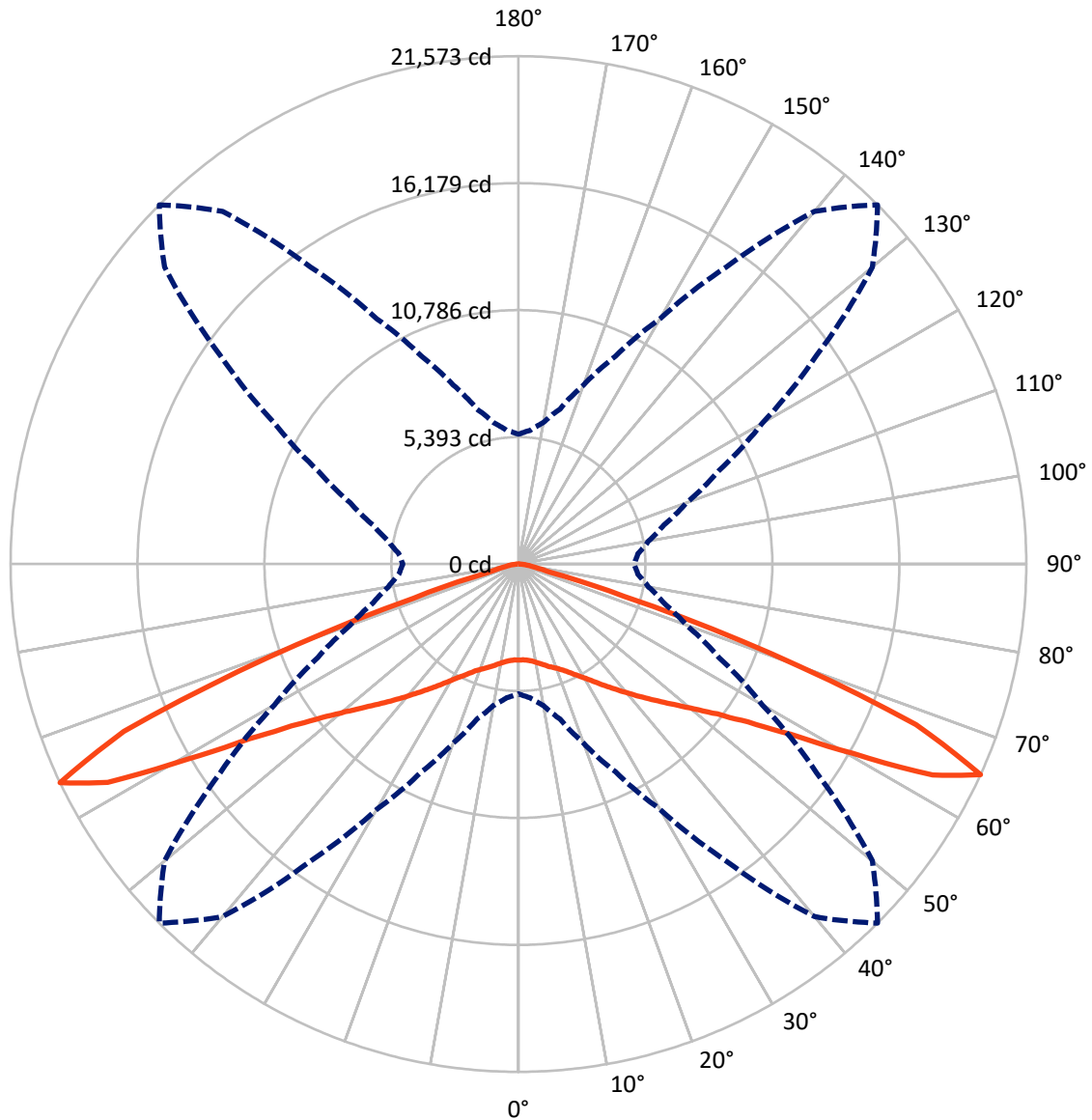
× Max cd
 - - - 1/2 Max cd



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

REPORT NUMBER: P299506
CATALOG NUMBER: GLNA-AF-09-LED-E1-5NQ-600

Luminous Intensity Polar Plot



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

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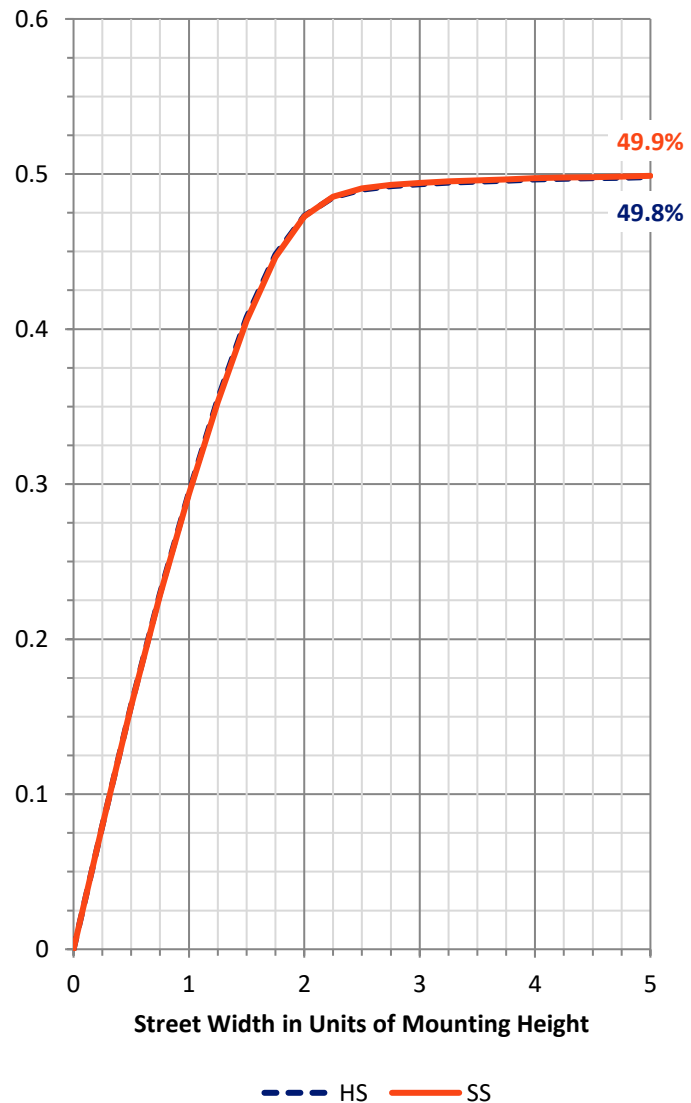
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	18018.2	0.0	18018.2
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	18018.2	0.0	18018.2
	% Fixture	50.0	0.0	50.0
Total	Lumens	36036.4	0.0	36036.4
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	397.4	1.1
10°-20°	1274.6	3.5
20°-30°	2383.3	6.6
30°-40°	4030.8	11.2
40°-50°	6590.9	18.3
50°-60°	10480.5	29.1
60°-70°	9473.7	26.3
70°-80°	1198.9	3.3
80°-90°	206.2	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°	36036.4	100.0
0°-180°	36036.4	100.0



REPORT NUMBER: P299506

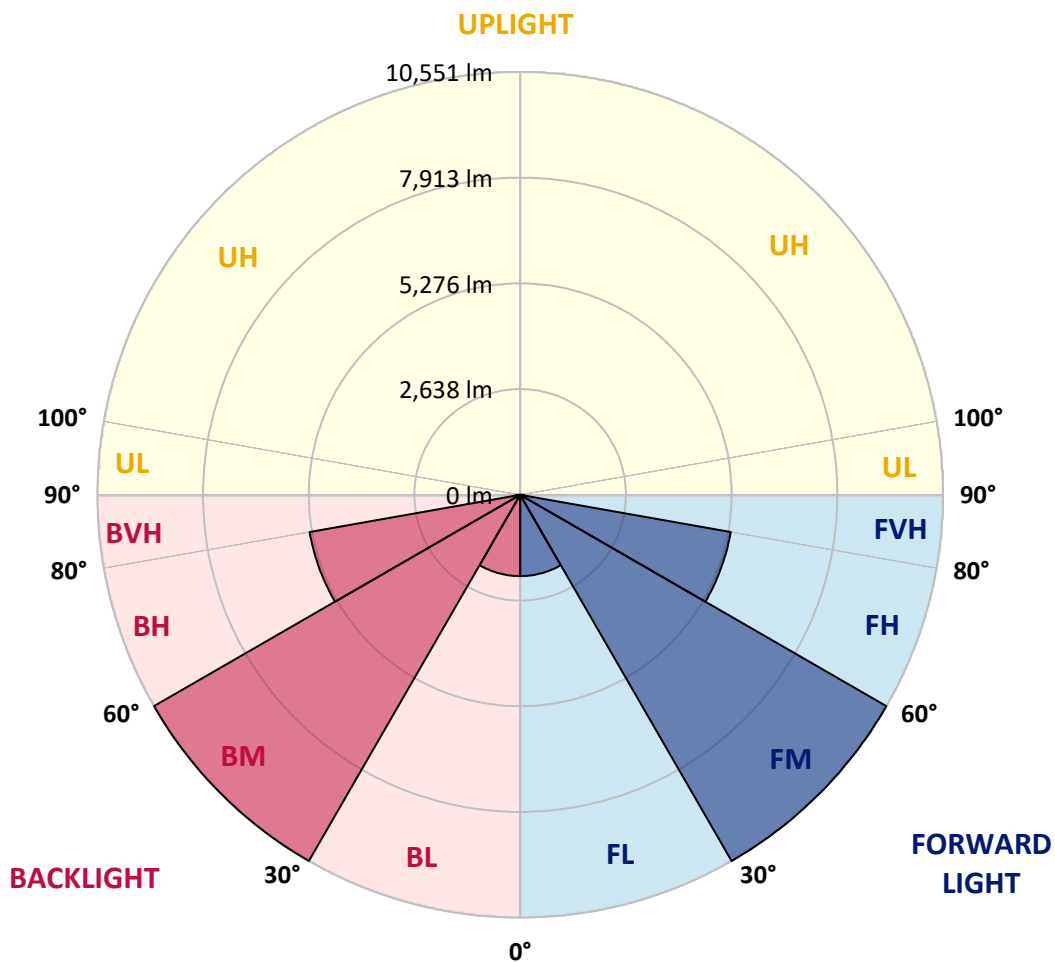
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2027.7	5.6			
FM	(30°-60°)	10551.1	29.3			
FH	(60°-80°)	5336.3	14.8			G3/7500
FVH	(80°-90°)	103.1	0.3			G2/225
BL	(0°-30°)	2027.7	5.6	B3/2500		
BM	(30°-60°)	10551.1	29.3	B5		
BH	(60°-80°)	5336.3	14.8	B5		G3/7500
BVH	(80°-90°)	103.1	0.3			G2/225
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°	4077.5	4077.5	4077.5	4077.5	4077.5	4077.5	4077.5	4077.5	4077.5	4077.5	4077.5
2.5°	4080.9	4084.3	4087.7	4084.3	4087.7	4082.6	4079.2	4084.3	4079.2	4074.2	4077.5
5°	4116.4	4118.0	4118.0	4113.0	4118.0	4114.7	4109.6	4116.4	4111.3	4106.2	4109.6
7.5°	4175.4	4182.2	4177.1	4172.1	4175.4	4172.1	4168.7	4170.4	4168.7	4163.6	4165.3
10°	4254.7	4259.8	4256.4	4254.7	4258.1	4256.4	4253.1	4251.4	4253.1	4248.0	4248.0
12.5°	4350.9	4349.3	4347.6	4349.3	4354.3	4354.3	4352.6	4354.3	4357.7	4359.4	4356.0
15°	4445.5	4448.8	4448.8	4448.8	4459.0	4467.4	4472.5	4475.8	4482.6	4484.3	4477.5
17.5°	4563.6	4563.6	4561.9	4563.6	4573.7	4587.2	4592.3	4599.0	4605.8	4610.9	4602.4
20°	4695.2	4698.6	4698.6	4702.0	4715.5	4730.7	4730.7	4734.1	4730.7	4734.1	4729.0
22.5°	4855.6	4865.7	4865.7	4867.4	4880.9	4899.5	4894.4	4899.5	4891.0	4897.8	4891.0
25°	5064.9	5080.0	5076.7	5076.7	5086.8	5098.6	5100.3	5110.4	5108.7	5117.2	5112.1
27.5°	5301.1	5324.8	5331.5	5329.8	5336.6	5348.4	5351.8	5363.6	5356.8	5363.6	5360.2
30°	5584.7	5594.8	5608.3	5613.4	5621.8	5633.6	5633.6	5635.3	5626.9	5637.0	5642.1
32.5°	5878.3	5896.9	5910.4	5940.8	5956.0	5964.4	5962.7	5966.1	5957.7	5971.2	5981.3
35°	6266.5	6280.0	6302.0	6325.6	6345.8	6344.2	6339.1	6340.8	6340.8	6352.6	6362.7
37.5°	6734.0	6737.4	6766.1	6799.8	6810.0	6799.8	6769.5	6762.7	6747.5	6762.7	6779.6
40°	7228.5	7240.3	7297.7	7319.7	7324.7	7306.2	7262.3	7237.0	7203.2	7221.8	7245.4
42.5°	7746.6	7770.3	7822.6	7861.4	7878.3	7866.5	7805.7	7766.9	7723.0	7733.1	7756.8
45°	8320.5	8349.2	8423.4	8460.6	8492.6	8474.1	8415.0	8355.9	8286.7	8291.8	8328.9
47.5°	8961.8	8990.5	9086.7	9149.1	9166.0	9162.6	9096.8	9015.8	8921.3	8917.9	8950.0
50°	9680.8	9709.5	9829.3	9925.5	9974.4	9969.4	9891.7	9777.0	9662.2	9663.9	9704.4
52.5°	10382.9	10418.3	10543.2	10708.6	10804.8	10874.0	10826.7	10718.7	10578.6	10582.0	10619.2
55°	11041.1	11100.2	11243.6	11468.1	11647.0	11841.1	11896.8	11893.4	11809.0	11832.6	11869.8
57.5°	11360.1	11447.8	11668.9	12023.3	12387.9	12782.8	13117.0	13366.8	13473.1	13633.4	13596.3
60°	10755.9	10895.9	11221.7	11743.2	12463.8	13287.4	14170.1	15032.5	15768.4	16323.7	16004.7
62.5°	8806.5	8988.8	9383.7	10052.1	11142.3	12460.5	14149.9	16188.6	18409.7	19749.7	18792.8
65°	5510.4	5699.4	6101.1	6816.7	8092.6	9731.4	12023.3	15402.2	19552.3	21572.5	19624.8
67.5°	2148.5	2251.4	2469.1	2926.5	3885.1	5343.3	7643.7	11478.2	16441.8	18212.2	16136.3
70°	1076.8	1086.9	1127.4	1211.8	1417.7	1841.3	2801.6	5321.4	9429.3	11388.8	9090.1
72.5°	778.0	779.7	800.0	837.1	902.9	997.4	1179.7	1628.7	3066.6	4686.8	2874.2
75°	595.8	602.5	614.3	634.6	670.0	717.3	783.1	938.4	1162.8	1348.5	1134.1
77.5°	459.1	472.6	481.0	499.6	521.5	553.6	572.1	631.2	734.2	773.0	761.2
80°	349.4	361.2	379.7	394.9	410.1	425.3	418.6	445.6	499.6	531.6	514.8
82.5°	222.8	236.3	290.3	303.8	310.5	320.7	308.9	310.5	334.2	354.4	334.2
85°	143.5	151.9	184.0	200.8	202.5	209.3	204.2	192.4	192.4	175.5	197.5
87.5°	65.8	67.5	82.7	97.9	101.3	91.1	89.4	86.1	69.2	65.8	70.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P299506

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	4077.5	4077.5	4077.5	4077.5	4077.5	4077.5	4077.5	4077.5
2.5°	4075.9	4079.2	4080.9	4086.0	4087.7	4087.7	4089.4	4092.7
5°	4107.9	4113.0	4114.7	4121.4	4123.1	4121.4	4124.8	4126.5
7.5°	4165.3	4173.7	4177.1	4183.9	4178.8	4185.6	4187.2	4187.2
10°	4249.7	4258.1	4259.8	4266.6	4263.2	4266.6	4266.6	4263.2
12.5°	4361.1	4362.8	4357.7	4362.8	4356.0	4359.4	4354.3	4350.9
15°	4484.3	4479.2	4467.4	4467.4	4457.3	4459.0	4457.3	4455.6
17.5°	4604.1	4594.0	4585.5	4582.2	4573.7	4572.0	4567.0	4567.0
20°	4735.8	4730.7	4725.6	4718.9	4710.4	4702.0	4700.3	4703.7
22.5°	4894.4	4892.7	4892.7	4889.3	4877.5	4869.1	4864.0	4864.0
25°	5107.0	5091.9	5091.9	5090.2	5085.1	5080.0	5069.9	5075.0
27.5°	5346.7	5338.3	5345.0	5343.3	5338.3	5338.3	5331.5	5331.5
30°	5642.1	5638.7	5648.8	5640.4	5623.5	5621.8	5615.1	5606.6
32.5°	5983.0	5979.6	5994.8	5984.7	5957.7	5942.5	5929.0	5922.2
35°	6362.7	6364.4	6383.0	6376.2	6345.8	6335.7	6312.1	6308.7
37.5°	6777.9	6804.9	6837.0	6843.7	6818.4	6811.6	6786.3	6772.8
40°	7265.6	7301.1	7350.0	7361.8	7334.8	7329.8	7294.3	7275.8
42.5°	7785.5	7846.2	7907.0	7917.1	7890.1	7863.1	7829.3	7815.8
45°	8366.0	8438.6	8517.9	8538.2	8497.7	8465.6	8421.7	8421.7
47.5°	9017.5	9108.6	9198.1	9253.8	9216.7	9182.9	9130.6	9096.8
50°	9787.1	9912.0	10028.4	10085.8	10026.8	9962.6	9871.5	9841.1
52.5°	10752.5	10887.5	10988.8	10958.4	10867.2	10777.8	10678.2	10637.7
55°	11984.5	12030.1	12030.1	11915.3	11733.0	11582.8	11425.9	11373.6
57.5°	13525.4	13349.9	13079.9	12737.2	12306.9	11932.2	11679.0	11559.2
60°	15336.3	14492.5	13538.9	12602.2	11832.6	11198.0	10821.7	10649.5
62.5°	16543.1	14335.5	12425.0	10921.3	9814.1	9049.6	8529.8	8327.2
65°	15461.2	11955.8	9397.2	7598.1	6391.4	5613.4	5098.6	4909.6
67.5°	11324.6	7491.8	5004.1	3586.4	2627.8	2096.2	1885.2	1797.4
70°	5083.4	2637.9	1616.8	1262.4	1088.6	999.1	960.3	946.8
72.5°	1532.5	1108.8	935.0	843.9	774.7	730.8	698.7	695.3
75°	924.9	769.6	683.5	629.5	585.6	550.2	533.3	528.3
77.5°	646.4	565.4	524.9	486.1	452.3	425.3	410.1	398.3
80°	454.0	415.2	396.6	374.7	352.7	327.4	305.5	295.4
82.5°	303.8	295.4	295.4	281.8	263.3	239.7	195.8	185.6
85°	195.8	194.1	197.5	192.4	178.9	153.6	126.6	119.8
87.5°	91.1	92.8	103.0	101.3	97.9	81.0	64.1	60.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)