

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: P194993

Luminaire Tested: **NAV-AF-05-D-UNV-5NQ-7060**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P194993
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-05-D-UNV-5NQ-7060
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 70 CRI, 5700K, 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: 30912 lumens
Efficiency: N/A
Efficacy: 110.8 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

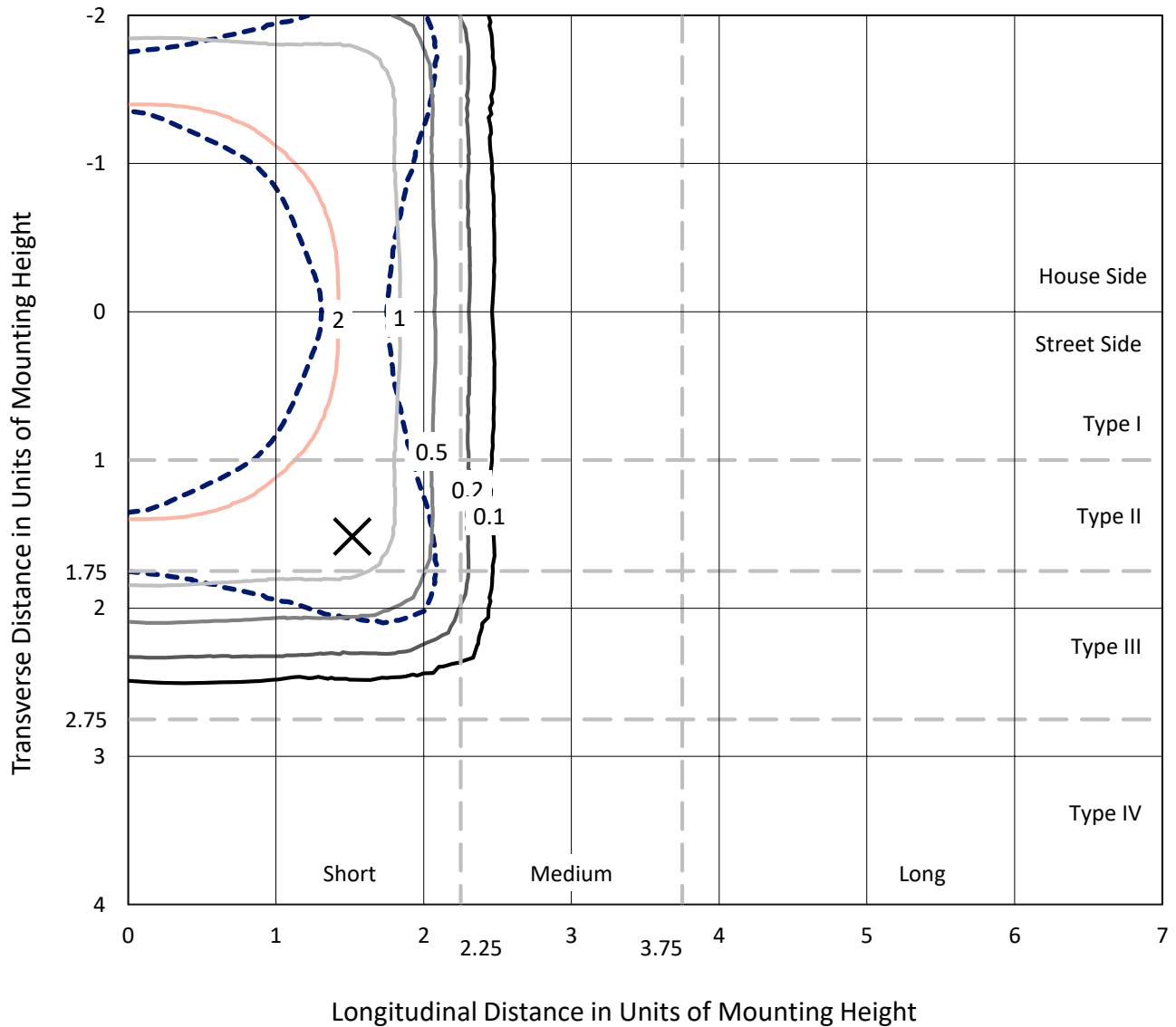
Input Watts (W): 279
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

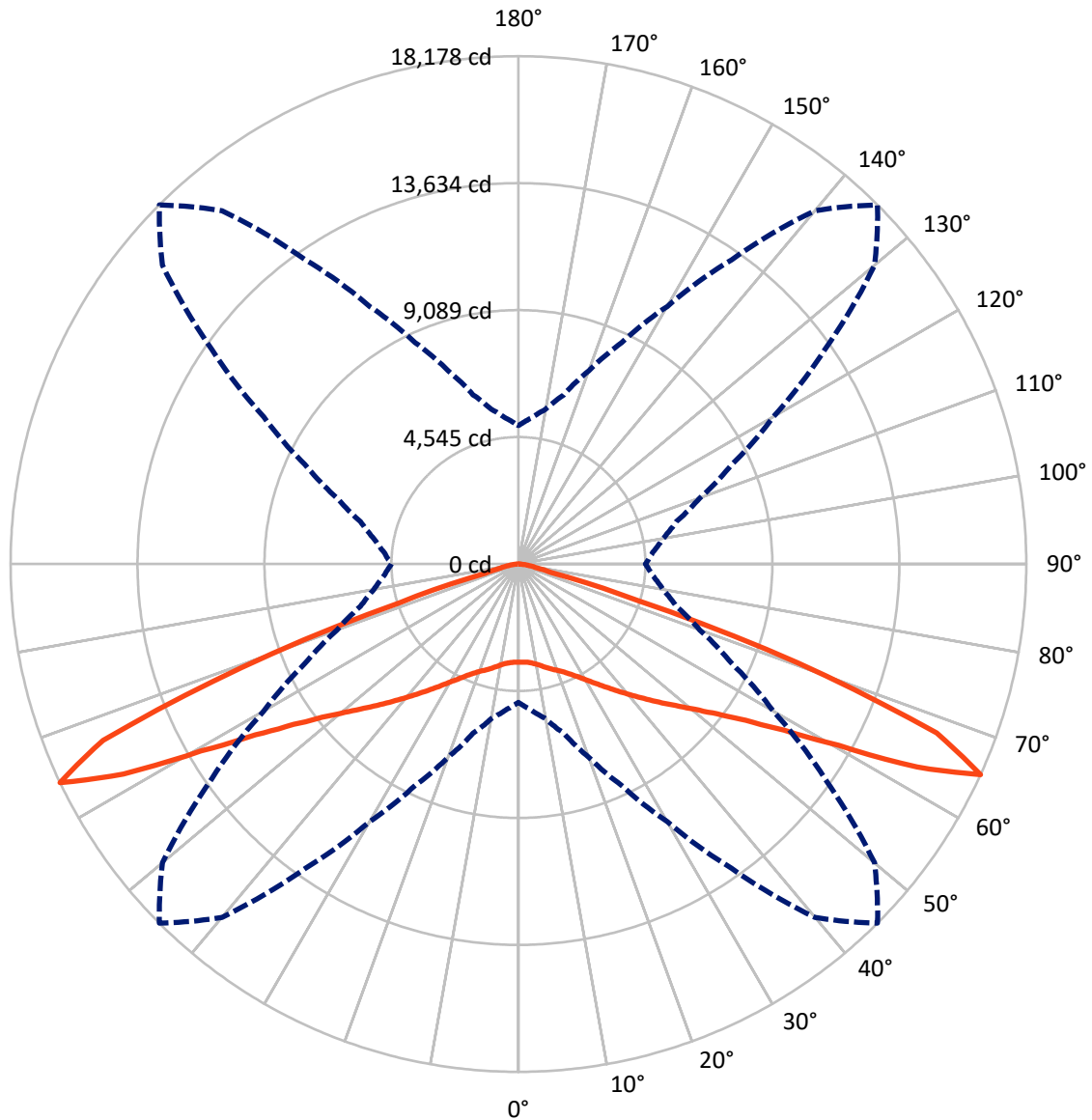
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 3.9 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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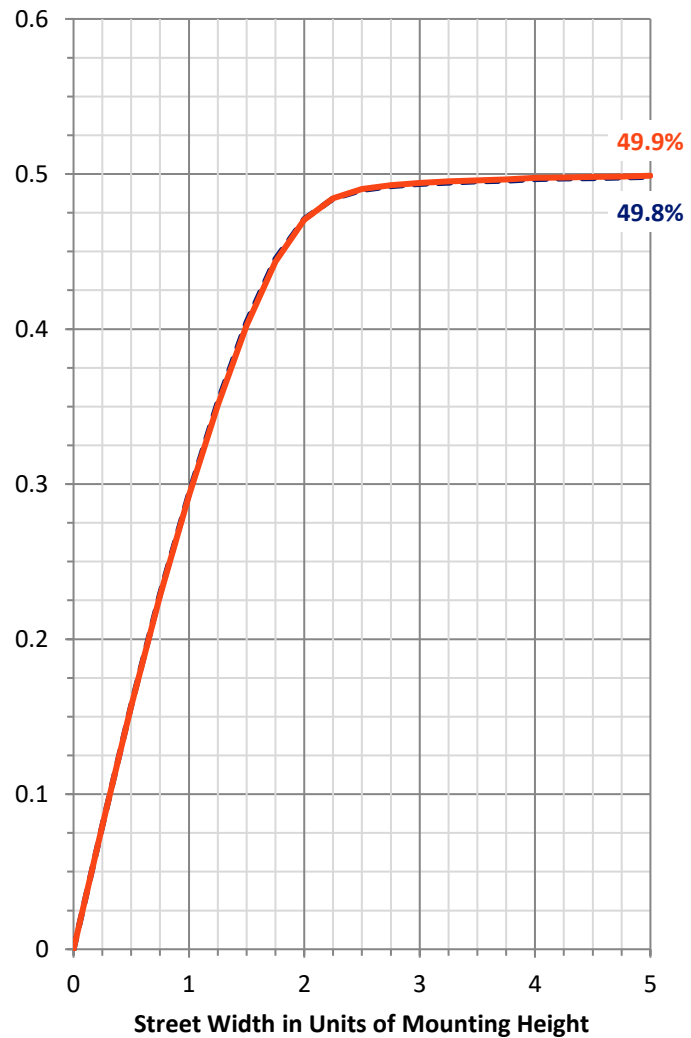
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	15456.0	0.0	15456.0
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	15456.0	0.0	15456.0
	% Fixture	50.0	0.0	50.0
Total	Lumens	30912.0	0.0	30912.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	342.4	1.1
10°-20°	1097.4	3.6
20°-30°	2047.2	6.6
30°-40°	3452.0	11.2
40°-50°	5607.0	18.1
50°-60°	8785.2	28.4
60°-70°	8292.8	26.8
70°-80°	1117.6	3.6
80°-90°	170.2	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°	30912.0	100.0
0°-180°	30912.0	100.0



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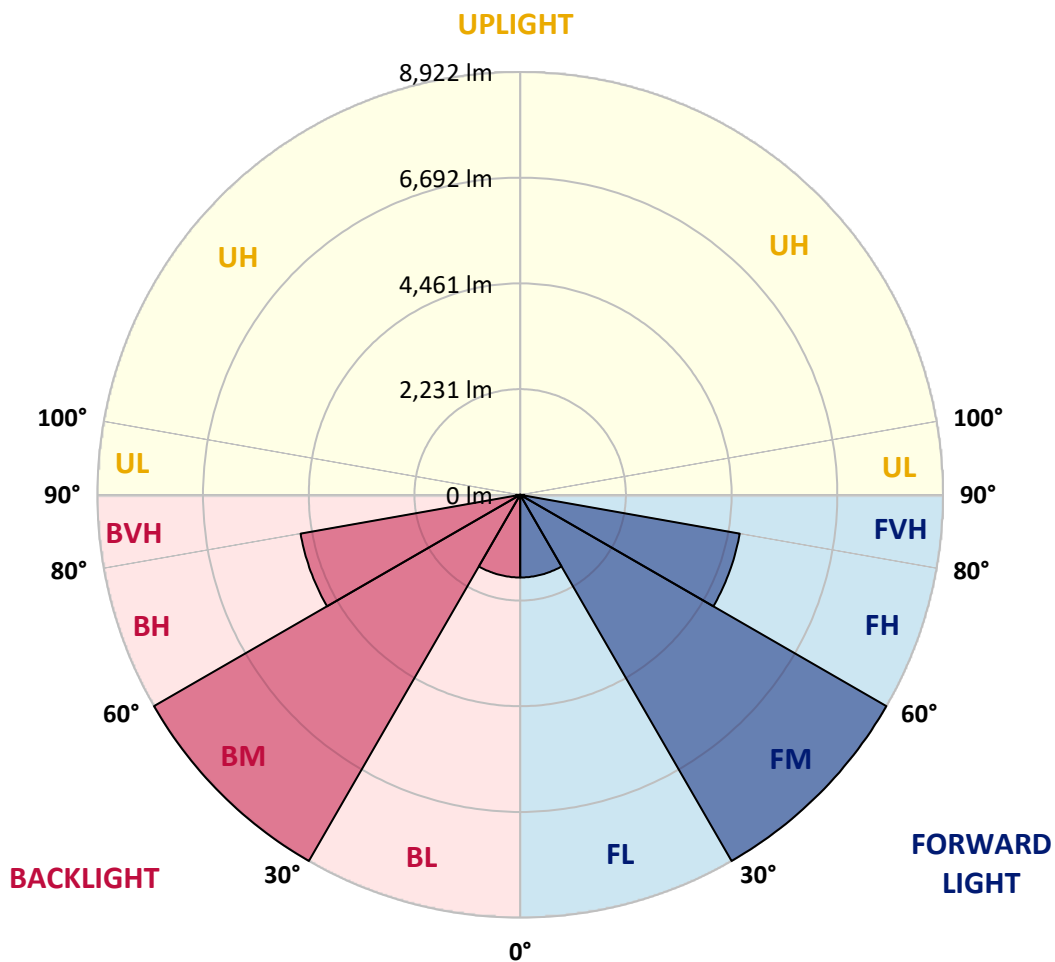
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1743.5	5.6			
FM	(30°-60°)	8922.1	28.9			
FH	(60°-80°)	4705.2	15.2			G2/5000
FVH	(80°-90°)	85.1	0.3			G1/100
BL	(0°-30°)	1743.5	5.6	B3/2500		
BM	(30°-60°)	8922.1	28.9	B5		
BH	(60°-80°)	4705.2	15.2	B4/5000		G2/5000
BVH	(80°-90°)	85.1	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





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	3516.2	3516.2	3516.2	3516.2	3516.2	3516.2	3516.2	3516.2	3516.2	3516.2	3516.2
2.5°	3545.1	3545.1	3550.9	3548.9	3541.2	3535.5	3529.7	3522.0	3518.1	3514.3	3512.4
5°	3564.3	3564.3	3570.1	3568.2	3562.4	3554.7	3550.9	3545.1	3539.3	3535.5	3537.4
7.5°	3612.5	3614.4	3616.3	3614.4	3608.6	3602.9	3595.2	3593.2	3585.5	3579.7	3583.6
10°	3685.7	3685.7	3687.6	3689.5	3685.7	3672.2	3672.2	3668.3	3660.6	3652.9	3654.8
12.5°	3766.5	3766.5	3768.5	3768.5	3768.5	3760.8	3762.7	3760.8	3751.1	3747.3	3751.1
15°	3845.5	3847.4	3847.4	3851.3	3851.3	3853.2	3860.9	3860.9	3857.0	3855.1	3855.1
17.5°	3937.9	3941.8	3943.7	3949.5	3951.4	3955.2	3962.9	3964.9	3966.8	3961.0	3962.9
20°	4061.2	4063.1	4068.9	4070.8	4078.5	4078.5	4082.3	4080.4	4076.6	4068.9	4068.9
22.5°	4199.8	4203.7	4215.2	4215.2	4224.8	4219.1	4221.0	4215.2	4205.6	4201.7	4197.9
25°	4380.8	4386.6	4396.2	4392.4	4396.2	4386.6	4386.6	4386.6	4380.8	4375.0	4373.1
27.5°	4610.0	4600.3	4610.0	4602.3	4600.3	4592.6	4594.6	4590.7	4584.9	4583.0	4575.3
30°	4848.7	4837.2	4843.0	4844.9	4841.0	4839.1	4831.4	4825.6	4816.0	4817.9	4812.2
32.5°	5122.2	5110.6	5116.4	5118.3	5114.5	5118.3	5116.4	5102.9	5091.4	5099.1	5099.1
35°	5447.6	5439.9	5455.3	5461.1	5449.5	5443.8	5436.1	5420.7	5403.3	5414.9	5416.8
37.5°	5838.5	5828.9	5840.4	5855.8	5834.7	5823.1	5792.3	5769.2	5757.6	5763.4	5771.1
40°	6244.8	6246.7	6279.5	6283.3	6260.2	6246.7	6215.9	6181.3	6148.5	6148.5	6158.2
42.5°	6672.3	6678.1	6716.6	6730.1	6722.4	6697.3	6655.0	6612.6	6570.3	6578.0	6589.5
45°	7155.6	7147.9	7188.4	7221.1	7215.3	7207.6	7167.2	7090.2	7051.7	7049.7	7069.0
47.5°	7664.0	7679.4	7721.8	7777.6	7775.7	7756.4	7704.5	7633.2	7562.0	7567.7	7590.8
50°	8257.1	8278.3	8349.5	8405.4	8413.1	8407.3	8345.7	8262.9	8162.8	8168.5	8199.3
52.5°	8788.6	8819.4	8902.2	9017.7	9089.0	9121.7	9081.3	9004.3	8902.2	8908.0	8940.7
55°	9270.0	9318.1	9441.4	9599.3	9741.8	9874.6	9934.3	9932.4	9857.3	9874.6	9917.0
57.5°	9572.3	9639.7	9826.5	10080.7	10363.7	10631.4	10862.5	11080.1	11128.2	11218.7	11218.7
60°	9166.0	9323.9	9572.3	10007.5	10564.0	11164.8	11815.7	12449.2	12857.4	13179.0	13005.7
62.5°	7654.4	7887.4	8235.9	8809.8	9676.3	10748.9	12056.4	13529.5	15066.1	16005.8	15316.5
65°	4952.7	5245.4	5624.8	6269.9	7361.7	8742.4	10646.8	13294.6	16510.4	18178.0	16637.5
67.5°	1962.2	2160.6	2391.6	2849.9	3797.3	5153.0	7290.4	10556.3	14579.0	16152.2	14424.9
70°	937.8	970.5	1014.8	1113.0	1349.9	1821.6	2928.9	5201.1	8940.7	10598.7	8727.0
72.5°	677.8	683.6	704.8	737.5	806.8	903.1	1097.6	1590.6	3082.9	4482.9	3086.8
75°	514.1	521.8	533.4	550.7	587.3	633.5	706.7	847.3	1055.2	1217.0	1053.3
77.5°	390.9	398.6	408.2	425.6	444.8	477.6	504.5	560.4	648.9	683.6	679.7
80°	285.0	298.5	313.9	329.3	342.8	358.2	360.1	387.1	437.1	469.9	460.2
82.5°	181.0	192.6	233.0	250.3	252.3	256.1	254.2	256.1	283.1	306.2	298.5
85°	115.5	123.2	144.4	163.7	159.8	167.5	167.5	163.7	152.1	130.9	156.0
87.5°	57.8	59.7	69.3	86.7	82.8	73.2	71.2	71.2	52.0	44.3	48.1
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°	3516.2	3516.2	3516.2	3516.2	3516.2	3516.2	3516.2	3516.2
2.5°	3506.6	3510.4	3504.6	3504.6	3502.7	3506.6	3500.8	3500.8
5°	3533.5	3539.3	3537.4	3537.4	3541.2	3545.1	3543.2	3541.2
7.5°	3581.7	3585.5	3589.4	3591.3	3595.2	3593.2	3597.1	3595.2
10°	3654.8	3651.0	3656.8	3651.0	3652.9	3649.1	3651.0	3651.0
12.5°	3747.3	3741.5	3737.7	3733.8	3733.8	3726.1	3726.1	3728.0
15°	3853.2	3843.6	3835.9	3832.0	3828.2	3828.2	3822.4	3826.2
17.5°	3957.2	3947.5	3934.1	3934.1	3928.3	3924.4	3920.6	3930.2
20°	4066.9	4057.3	4049.6	4047.7	4036.1	4032.3	4034.2	4045.8
22.5°	4194.0	4188.2	4188.2	4184.4	4176.7	4170.9	4170.9	4184.4
25°	4365.4	4353.9	4355.8	4357.7	4353.9	4353.9	4350.0	4359.6
27.5°	4575.3	4565.7	4571.4	4575.3	4571.4	4577.2	4571.4	4579.2
30°	4821.8	4816.0	4821.8	4827.6	4817.9	4817.9	4814.1	4819.9
32.5°	5116.4	5108.7	5112.6	5112.6	5099.1	5087.5	5072.1	5083.7
35°	5439.9	5430.3	5438.0	5443.8	5428.4	5416.8	5393.7	5403.3
37.5°	5796.2	5800.0	5809.6	5834.7	5830.8	5811.6	5794.2	5801.9
40°	6194.8	6214.0	6256.4	6273.7	6269.9	6250.6	6227.5	6231.3
42.5°	6645.4	6670.4	6714.7	6743.6	6730.1	6703.1	6674.2	6685.8
45°	7136.4	7174.9	7232.7	7261.6	7244.2	7215.3	7174.9	7196.1
47.5°	7656.3	7733.3	7810.4	7848.9	7843.1	7802.7	7750.7	7756.4
50°	8278.3	8380.3	8478.6	8517.1	8488.2	8426.6	8353.4	8351.5
52.5°	9052.4	9162.2	9243.0	9233.4	9162.2	9065.9	8983.1	8979.2
55°	10019.1	10055.6	10044.1	9961.3	9836.1	9685.9	9580.0	9562.7
57.5°	11187.9	11064.7	10883.7	10633.3	10352.2	10067.2	9874.6	9803.4
60°	12616.7	12060.2	11413.2	10731.5	10109.6	9643.6	9348.9	9169.9
62.5°	13797.1	12185.4	10739.2	9555.0	8586.4	8010.6	7608.2	7359.8
65°	13392.8	10527.4	8432.3	6905.3	5848.1	5253.1	4827.6	4544.5
67.5°	10346.4	7034.3	4895.0	3393.0	2572.6	2177.9	1902.5	1723.4
70°	5216.5	2697.8	1634.9	1153.5	985.9	916.6	870.4	843.4
72.5°	1530.9	1022.5	849.2	751.0	691.3	648.9	622.0	608.5
75°	847.3	691.3	610.4	554.6	516.1	487.2	469.9	458.3
77.5°	583.5	502.6	462.2	425.6	394.8	373.6	360.1	348.5
80°	408.2	367.8	350.5	331.2	308.1	290.8	271.5	263.8
82.5°	271.5	254.2	250.3	234.9	221.4	202.2	167.5	156.0
85°	159.8	157.9	157.9	152.1	142.5	125.2	100.1	100.1
87.5°	55.8	57.8	59.7	63.5	61.6	52.0	42.4	40.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)