

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: P195096

Luminaire Tested: **NAV-AF-06-D-UNV-RW-7060-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195096
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24161)
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-RW-7060-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 5700K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 40379 lumens
Efficiency: N/A
Efficacy: 105.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type II - Medium - Full Cutoff
BUG Rating: B5 - U0 - G5

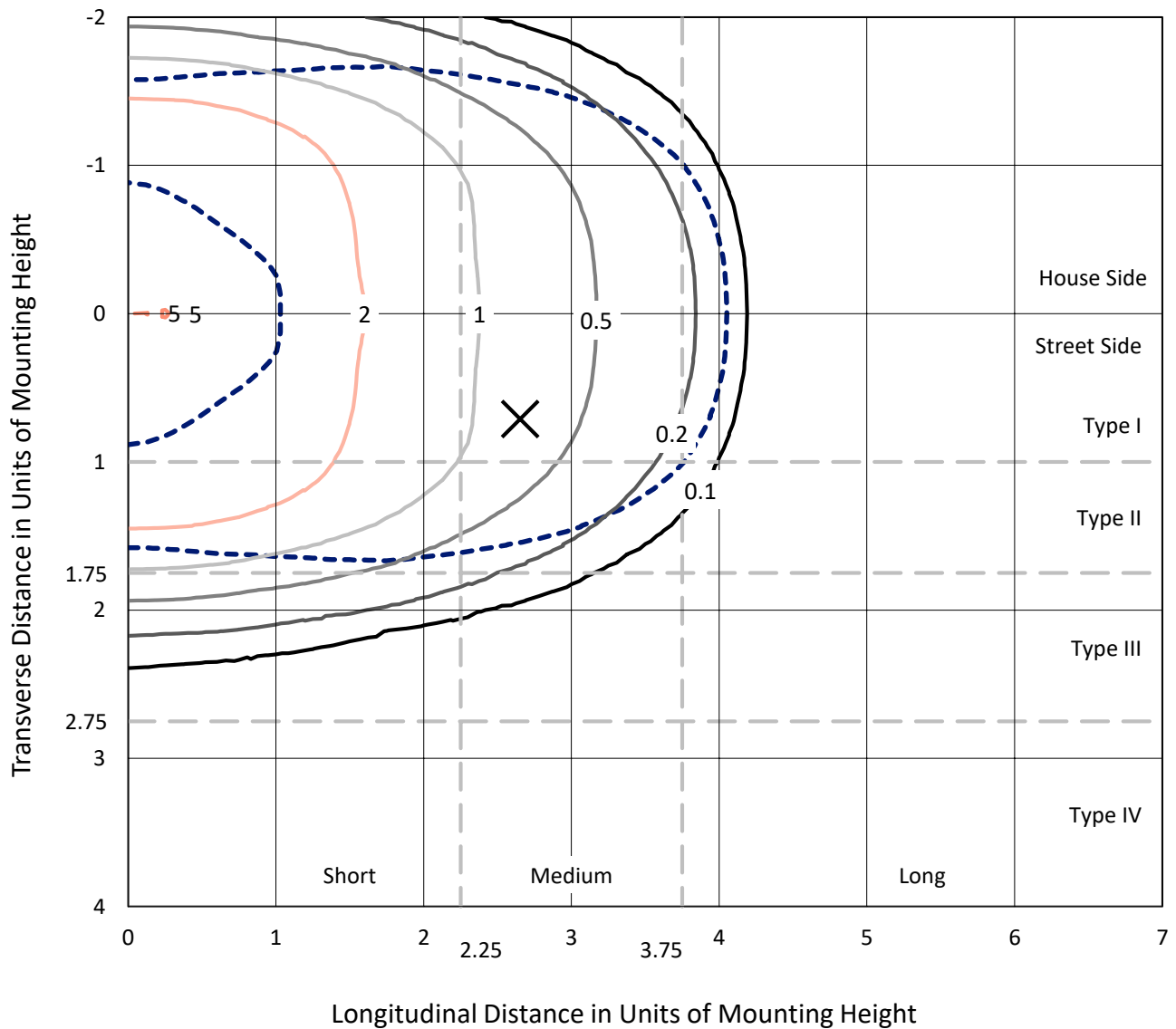
Input Watts (W): 382
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P195096
 CATALOG NUMBER: NAV-AF-06-D-UNV-RW-7060-1200

Iso-Footcandle Lines of Horizontal Illumination

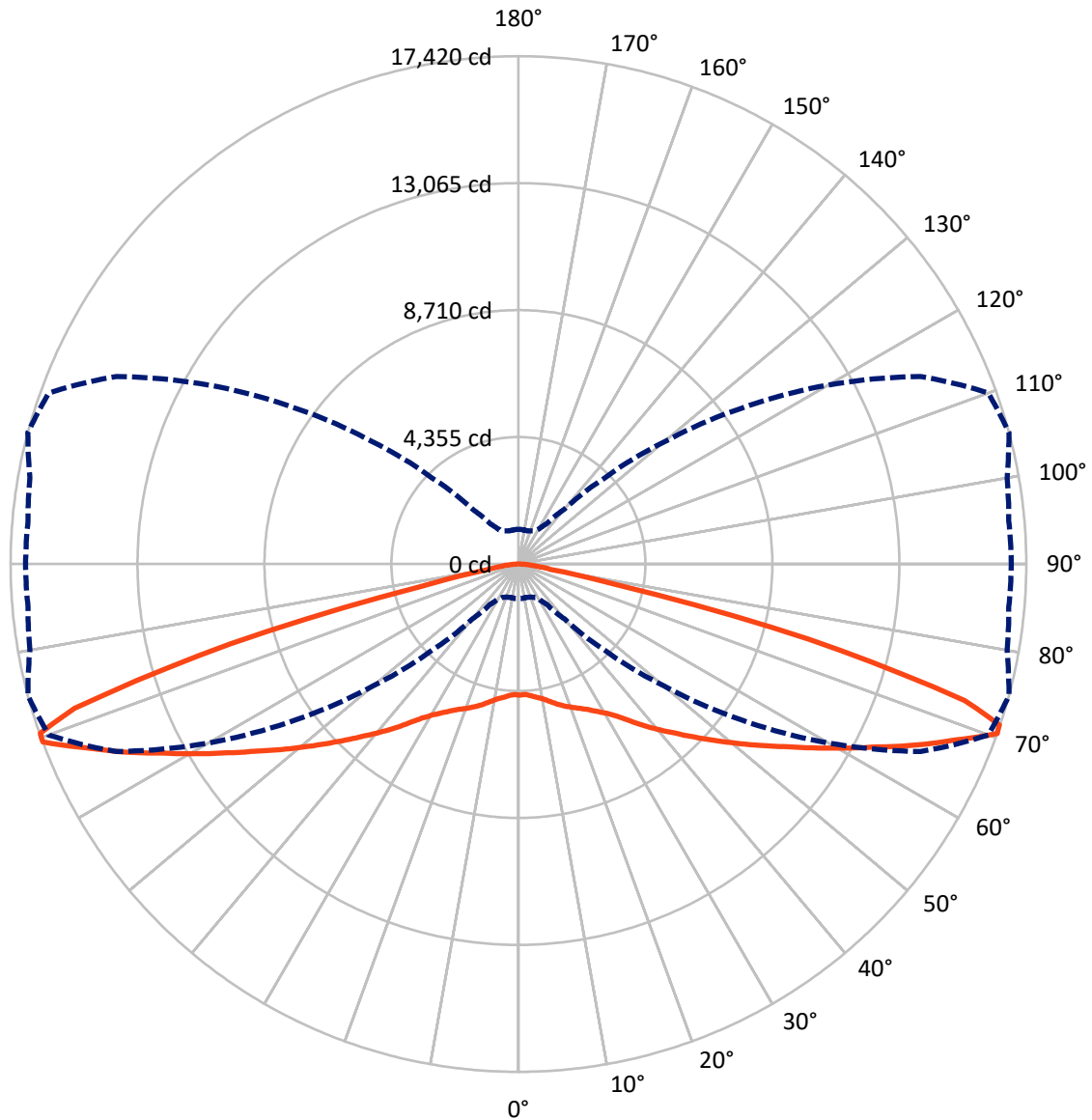
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 5 fc
 Type II - Medium - Full Cutoff

REPORT NUMBER: P195096
CATALOG NUMBER: NAV-AF-06-D-UNV-RW-7060-1200

Luminous Intensity Polar Plot



— Vertical Plane Through 75-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

REPORT NUMBER: P195096

CATALOG NUMBER: NAV-AF-06-D-UNV-RW-7060-1200

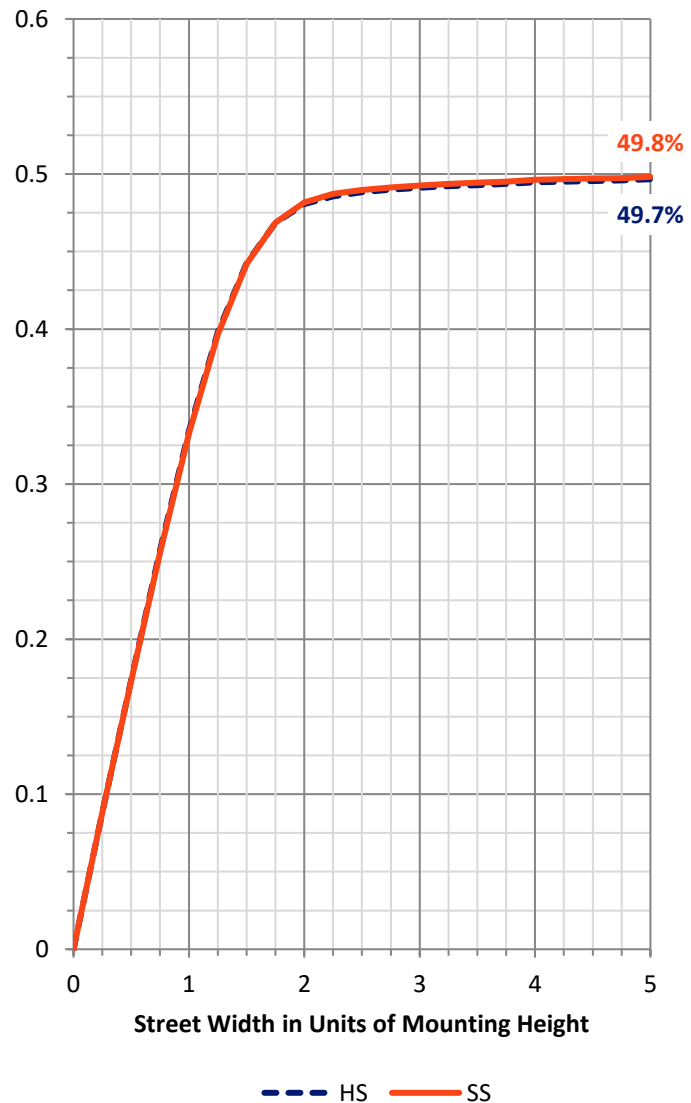
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	20189.5	0.0	20189.5
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	20189.5	0.0	20189.5
	% Fixture	50.0	0.0	50.0
Total	Lumens	40379.0	0.0	40379.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	431.3	1.1
10°-20°	1337.6	3.3
20°-30°	2512.3	6.2
30°-40°	4425.5	11.0
40°-50°	7334.4	18.2
50°-60°	10203.2	25.3
60°-70°	9632.0	23.9
70°-80°	4113.9	10.2
80°-90°	388.7	1.0
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°	40379.0	100.0
0°-180°	40379.0	100.0



REPORT NUMBER: P195096

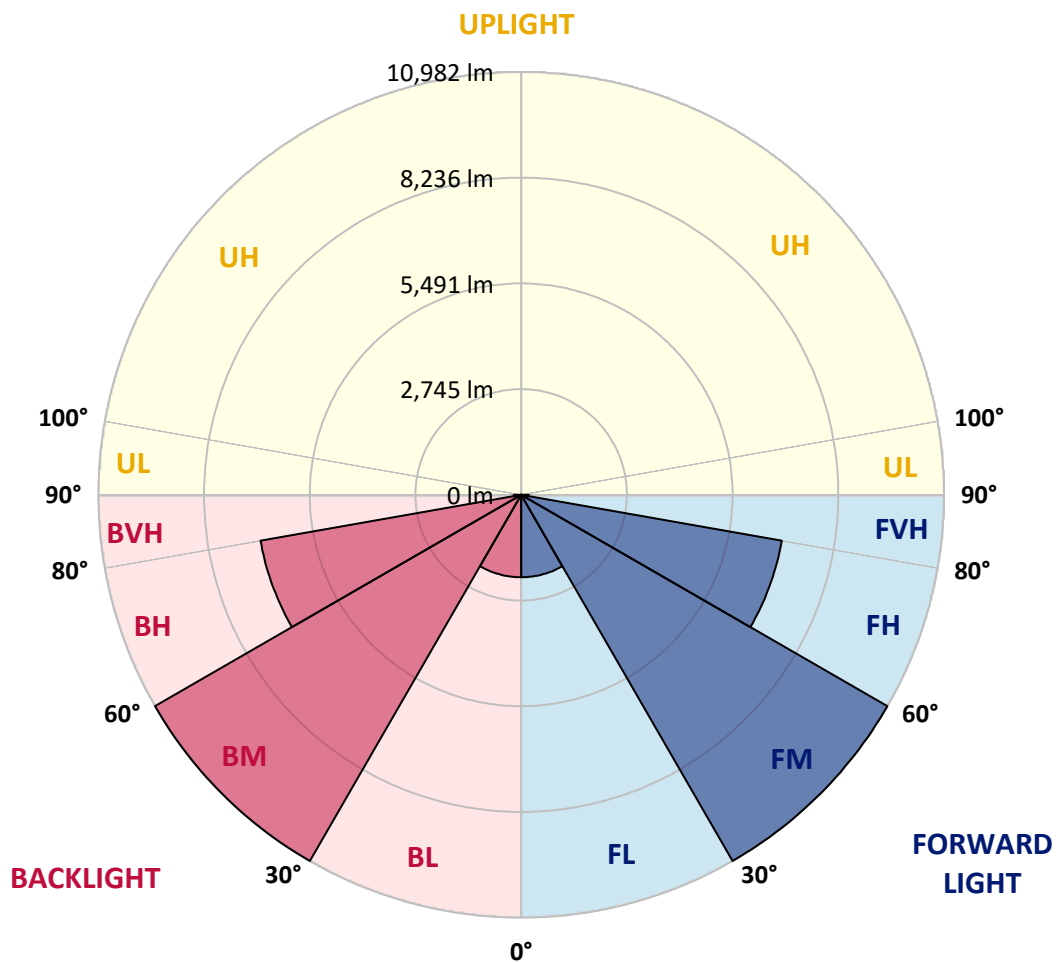
CATALOG NUMBER: NAV-AF-06-D-UNV-RW-7060-1200

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2140.6	5.3			
FM	(30°-60°)	10981.5	27.2			
FH	(60°-80°)	6873.0	17.0			G3/7500
FVH	(80°-90°)	194.4	0.5			G2/225
BL	(0°-30°)	2140.6	5.3	B3/2500		
BM	(30°-60°)	10981.5	27.2	B5		
BH	(60°-80°)	6873.0	17.0	B5		G5
BVH	(80°-90°)	194.4	0.5			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B5-U0-G5

Type II Medium





REPORT NUMBER: P195096

CATALOG NUMBER: NAV-AF-06-D-UNV-RW-7060-1200

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	4496.6	4496.6	4496.6	4496.6	4496.6	4496.6	4496.6	4496.6	4496.6	4496.6	4496.6
2.5°	4524.4	4521.9	4524.4	4516.8	4519.4	4516.8	4516.8	4506.7	4506.7	4501.7	4494.1
5°	4473.8	4478.9	4478.9	4478.9	4486.5	4486.5	4496.6	4499.1	4506.7	4514.3	4519.4
7.5°	4390.3	4392.8	4400.4	4405.5	4420.7	4440.9	4461.2	4483.9	4504.2	4529.5	4557.3
10°	4319.5	4324.5	4337.2	4349.8	4377.7	4403.0	4438.4	4473.8	4509.2	4552.3	4595.3
12.5°	4281.5	4289.1	4309.3	4329.6	4372.6	4405.5	4453.6	4509.2	4557.3	4597.8	4645.9
15°	4286.6	4289.1	4316.9	4344.8	4405.5	4451.0	4519.4	4585.2	4643.4	4688.9	4744.6
17.5°	4360.0	4365.0	4392.8	4433.3	4491.5	4549.7	4623.1	4691.4	4769.9	4823.0	4888.8
20°	4504.2	4511.8	4542.1	4585.2	4648.4	4709.2	4785.1	4855.9	4936.9	5000.2	5065.9
22.5°	4691.4	4704.1	4737.0	4790.1	4853.4	4926.8	5005.2	5078.6	5154.5	5217.8	5273.4
25°	4942.0	4957.1	4992.6	5045.7	5109.0	5187.4	5268.4	5344.3	5422.7	5470.8	5516.4
27.5°	5278.5	5303.8	5341.8	5384.8	5440.5	5524.0	5599.9	5663.1	5739.0	5792.2	5822.5
30°	5731.5	5766.9	5797.2	5842.8	5883.3	5971.8	6032.6	6083.2	6141.4	6171.7	6179.3
32.5°	6285.6	6318.5	6348.9	6381.8	6437.4	6518.4	6576.6	6604.5	6634.8	6629.8	6601.9
35°	6910.6	6935.9	6953.7	7011.9	7103.0	7156.1	7199.1	7209.2	7214.3	7161.2	7108.0
37.5°	7568.6	7598.9	7614.1	7705.2	7791.2	7852.0	7872.2	7895.0	7879.8	7791.2	7695.1
40°	8279.6	8312.5	8358.1	8436.5	8537.7	8595.9	8621.2	8618.7	8606.0	8502.3	8345.4
42.5°	8978.0	9018.5	9056.5	9193.1	9276.6	9375.3	9387.9	9385.4	9357.6	9238.6	9056.5
45°	9570.1	9618.2	9696.7	9848.5	9982.6	10101.5	10149.6	10167.3	10139.5	10013.0	9805.5
47.5°	10058.5	10091.4	10190.1	10374.8	10546.9	10721.5	10817.6	10886.0	10883.4	10792.3	10572.2
50°	10392.5	10430.5	10551.9	10759.4	10974.5	11179.5	11369.3	11523.6	11597.0	11531.2	11326.3
52.5°	10488.7	10536.8	10696.2	10944.2	11194.7	11470.5	11753.9	12027.2	12191.7	12232.2	12072.7
55°	10083.8	10137.0	10369.8	10713.9	11126.4	11533.8	11963.9	12353.6	12692.7	12849.6	12786.3
57.5°	8904.6	8942.6	9238.6	9684.0	10273.6	10989.7	11713.4	12427.0	13009.0	13416.4	13487.3
60°	7042.2	7090.3	7414.2	7884.9	8555.4	9461.3	10473.5	11642.6	12783.8	13717.5	14180.6
62.5°	4752.2	4785.1	5096.3	5526.5	6260.3	7133.3	8261.9	9742.2	11369.3	13036.8	14342.5
65°	2495.0	2495.0	2705.0	3006.2	3590.7	4372.6	5529.0	7047.3	8983.1	11065.6	13249.4
67.5°	1447.4	1444.9	1493.0	1561.3	1746.0	2062.3	2700.0	3815.9	5647.9	8072.1	10557.0
70°	1194.4	1186.8	1179.2	1179.2	1207.0	1255.1	1376.6	1682.7	2462.1	4162.6	6495.6
71°	1141.2	1136.2	1115.9	1108.3	1121.0	1146.3	1199.4	1341.1	1748.5	2839.2	4850.9
72.5°	1078.0	1065.3	1035.0	1022.3	1024.8	1035.0	1050.1	1105.8	1229.8	1614.4	2765.8
75°	981.8	951.4	913.5	895.8	888.2	885.7	885.7	900.8	928.7	974.2	1133.6
77.5°	870.5	827.5	787.0	769.3	756.6	749.0	743.9	733.8	728.8	749.0	807.2
80°	736.4	690.8	657.9	647.8	640.2	625.0	604.8	584.5	571.9	582.0	617.4
82.5°	569.3	523.8	528.9	531.4	518.7	493.4	473.2	450.4	427.6	422.6	440.3
85°	452.9	430.2	415.0	447.9	420.1	389.7	361.9	323.9	270.8	222.7	242.9
87.5°	194.8	197.4	283.4	427.6	374.5	301.1	250.5	202.4	129.1	96.2	98.7
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°	4496.6	4496.6	4496.6	4496.6	4496.6	4496.6	4496.6	4496.6
2.5°	4491.5	4491.5	4483.9	4478.9	4478.9	4478.9	4473.8	4476.4
5°	4521.9	4527.0	4532.0	4529.5	4537.1	4544.7	4542.1	4539.6
7.5°	4572.5	4587.7	4602.9	4610.5	4620.6	4630.7	4633.2	4625.6
10°	4623.1	4653.5	4676.3	4696.5	4709.2	4719.3	4726.9	4724.3
12.5°	4686.4	4729.4	4769.9	4810.4	4838.2	4853.4	4868.6	4863.5
15°	4790.1	4838.2	4888.8	4942.0	4985.0	5007.7	5030.5	5025.5
17.5°	4931.8	4974.8	5015.3	5068.5	5121.6	5146.9	5172.2	5169.7
20°	5109.0	5141.9	5164.6	5195.0	5245.6	5273.4	5296.2	5288.6
22.5°	5311.4	5321.5	5324.1	5334.2	5374.7	5407.6	5437.9	5445.5
25°	5531.5	5524.0	5508.8	5501.2	5529.0	5564.4	5602.4	5612.5
27.5°	5804.8	5779.5	5741.6	5711.2	5718.8	5764.3	5807.4	5817.5
30°	6149.0	6090.8	6009.8	5951.6	5941.5	5989.6	6035.1	6050.3
32.5°	6541.2	6462.7	6351.4	6262.8	6224.9	6267.9	6308.4	6331.2
35°	7006.8	6920.8	6786.6	6672.8	6612.0	6639.9	6710.7	6736.0
37.5°	7558.4	7439.5	7290.2	7146.0	7044.8	7049.8	7125.7	7156.1
40°	8168.3	7996.2	7806.4	7626.8	7480.0	7469.9	7538.2	7561.0
42.5°	8803.4	8583.3	8360.6	8125.2	7943.1	7910.2	7998.7	8001.3
45°	9486.6	9203.2	8927.4	8654.1	8464.3	8406.1	8492.2	8502.3
47.5°	10215.4	9861.1	9534.7	9238.6	9033.7	8942.6	9026.1	9041.3
50°	10974.5	10607.6	10228.0	9899.1	9658.7	9547.4	9646.0	9656.2
52.5°	11726.1	11379.4	11002.4	10625.3	10334.3	10207.8	10324.2	10359.6
55°	12482.7	12148.7	11794.4	11417.4	11050.4	10939.1	11065.6	11103.6
57.5°	13269.6	12948.3	12626.9	12247.3	11890.5	11721.0	11857.7	11910.8
60°	14137.6	13854.2	13550.5	13168.4	12816.7	12619.3	12735.7	12796.4
62.5°	14990.3	14932.1	14656.3	14259.0	13813.7	13616.3	13715.0	13758.0
65°	15061.2	16005.0	15992.4	15597.6	14975.2	14643.7	14671.5	14691.7
67.5°	13145.6	15311.7	16695.9	16819.8	16126.5	15607.8	15547.0	15559.7
70°	9307.0	12280.2	15218.1	17146.3	17419.6	17017.2	16885.6	16905.9
71°	7457.2	10536.8	13770.7	16364.4	17399.3	17282.9	17209.5	17262.7
72.5°	4759.8	7763.4	10911.3	14013.6	16000.0	16569.3	16652.8	16685.7
75°	1728.3	3340.2	5653.0	8099.9	10266.0	11756.4	12576.3	12642.1
77.5°	928.7	1196.9	1849.8	2763.2	3471.8	3851.3	3896.9	3914.6
80°	683.2	792.0	905.9	1035.0	1115.9	1131.1	1103.3	1045.1
82.5°	483.3	546.6	592.1	637.7	670.6	642.7	533.9	407.4
85°	280.9	308.7	334.0	356.8	361.9	341.6	225.2	184.7
87.5°	111.3	121.5	118.9	134.1	129.1	118.9	88.6	75.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)