

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: P195994

Luminaire Tested: **NAV-AF-04-D-UNV-AFL-800-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195994
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24283)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-04-D-UNV-AFL-800-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(4) 70 CRI, 4000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND AUTOMOTIVE FRONTLINE OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 16924.7 lumens
Efficiency: N/A
Efficacy: 99.0 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Short - Full Cutoff
BUG Rating: B1 - U0 - G2

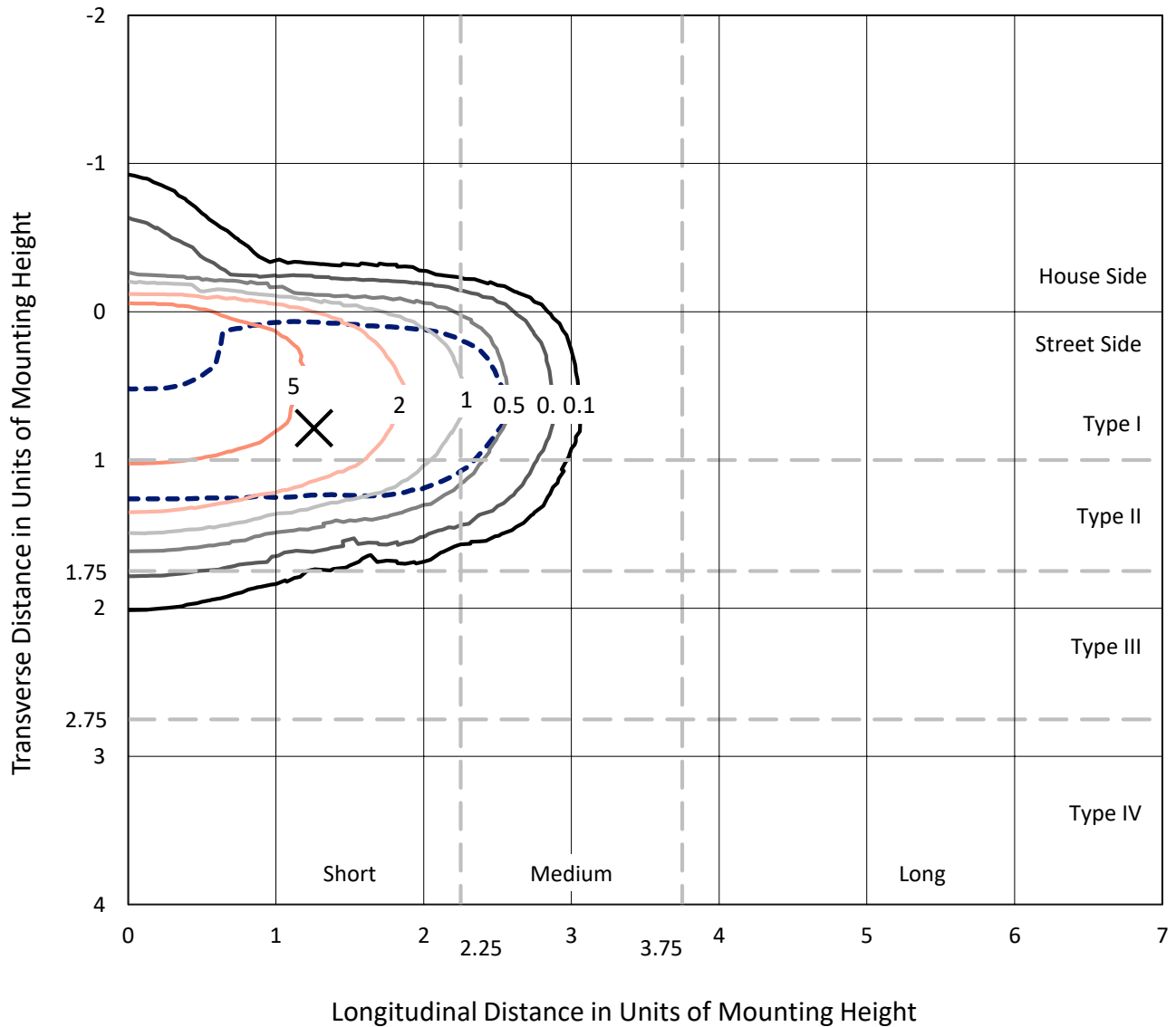
Input Watts (W): 171
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P195994
 CATALOG NUMBER: NAV-AF-04-D-UNV-AFL-800-HSS

Iso-Footcandle Lines of Horizontal Illumination

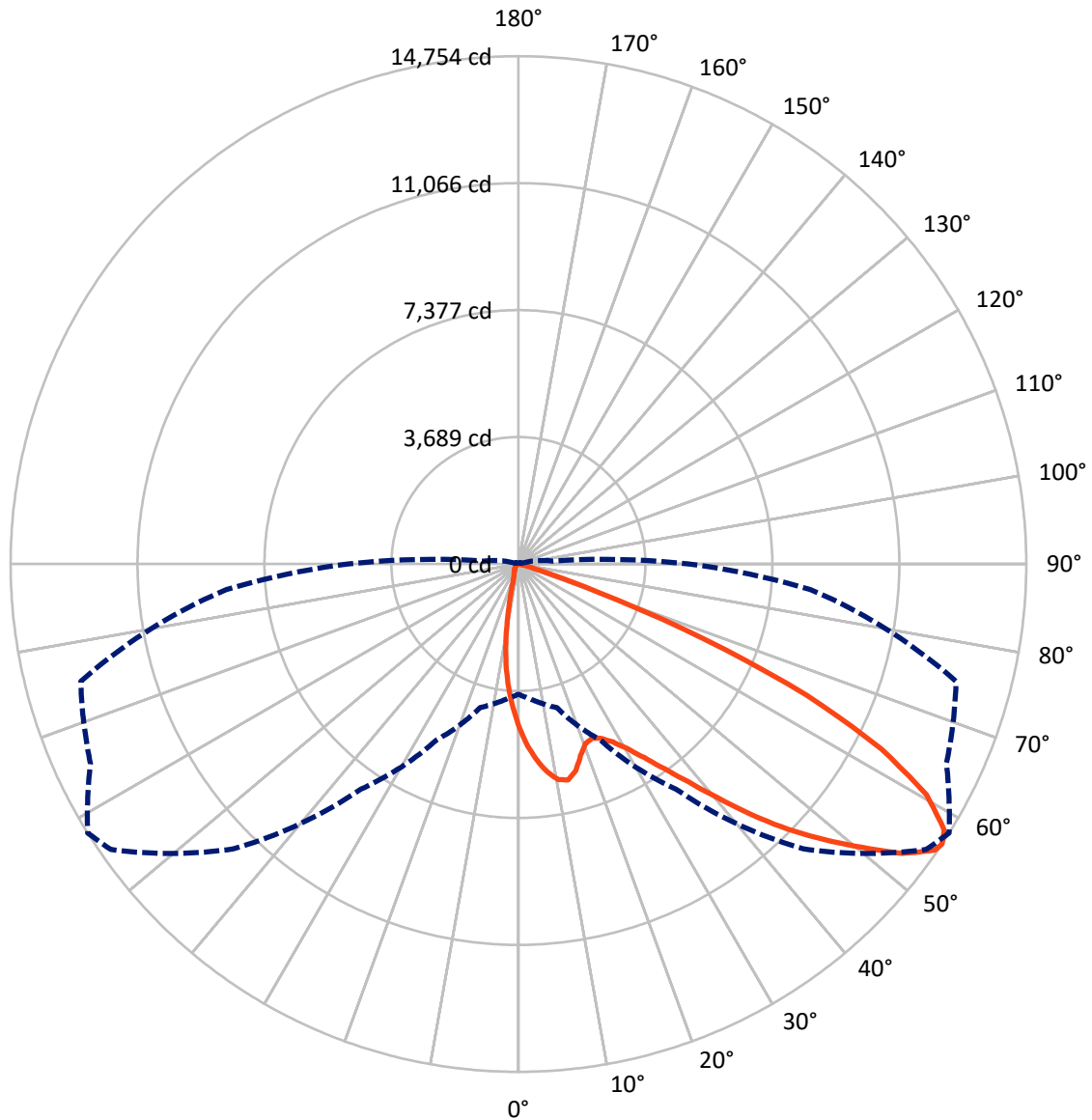
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 9.5 fc
 Type II - Short - Full Cutoff

REPORT NUMBER: P195994
CATALOG NUMBER: NAV-AF-04-D-UNV-AFL-800-HSS

Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral - - - Horizontal Cone Through 56-Deg Vertical

REPORT NUMBER: P195994

CATALOG NUMBER: NAV-AF-04-D-UNV-AFL-800-HSS

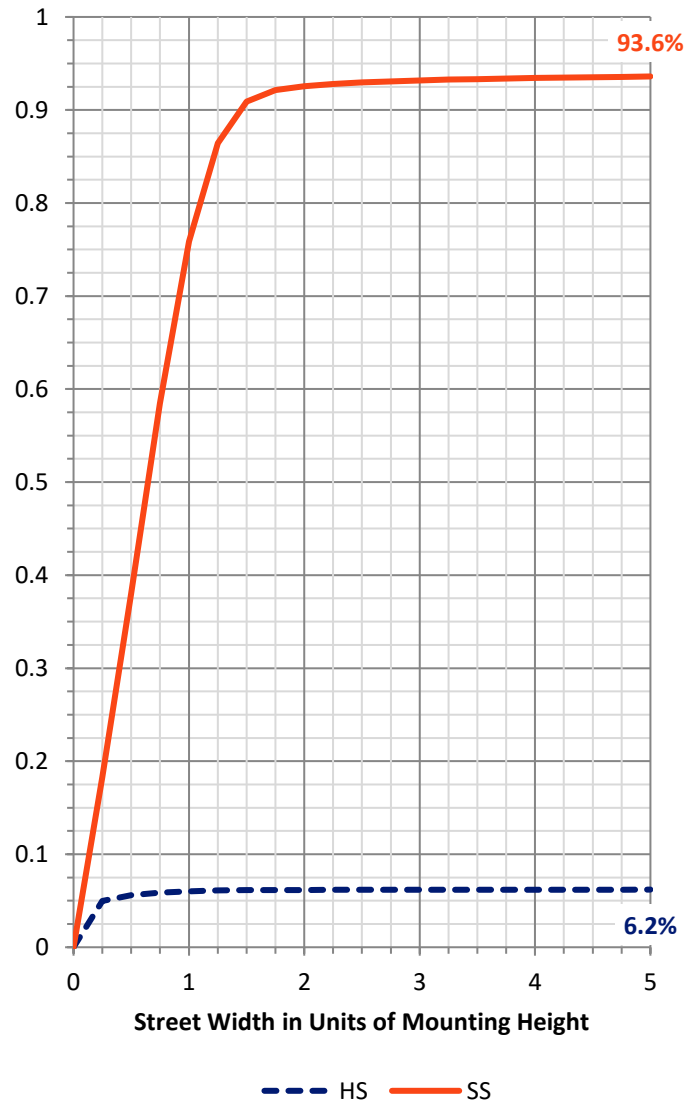
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1056.5	0.0	1056.5
	% Fixture	6.2	0.0	6.2
Street Side	Lumens	15868.3	0.0	15868.3
	% Fixture	93.8	0.0	93.8
Total	Lumens	16924.7	0.0	16924.7
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	408.8	2.4
10°-20°	951.2	5.6
20°-30°	1600.5	9.5
30°-40°	2740.7	16.2
40°-50°	4135.7	24.4
50°-60°	4299.0	25.4
60°-70°	2413.4	14.3
70°-80°	330.8	2.0
80°-90°	44.8	0.3
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°	16924.7	100.0
0°-180°	16924.7	100.0

Coefficient of Utilization



REPORT NUMBER: P195994

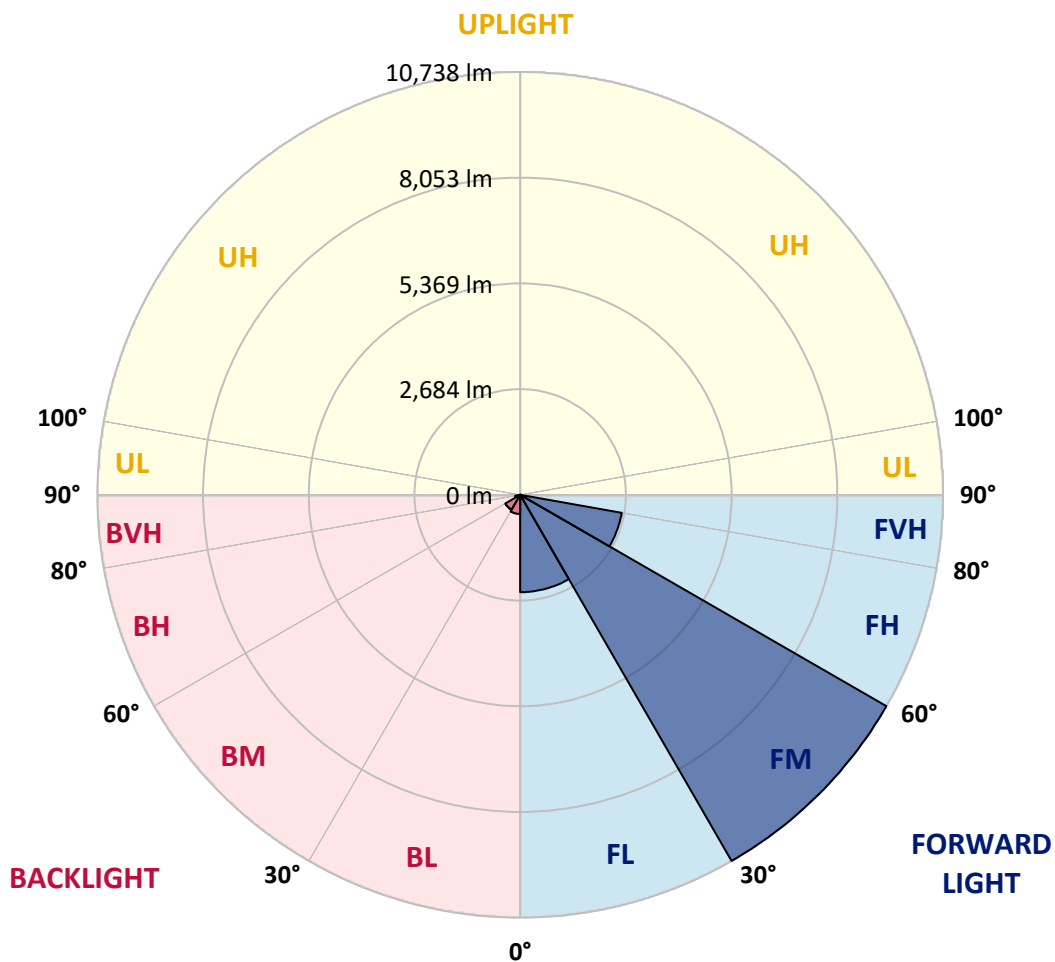
CATALOG NUMBER: NAV-AF-04-D-UNV-AFL-800-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2473.1	14.6			
FM	(30°-60°)	10737.7	63.4			
FH	(60°-80°)	2618.8	15.5			G2/5000
FVH	(80°-90°)	38.6	0.2			G1/100
BL	(0°-30°)	487.3	2.9	B1/500		
BM	(30°-60°)	437.6	2.6	B1/1000		
BH	(60°-80°)	125.3	0.7	B1/500		G1/500
BVH	(80°-90°)	6.2	0.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G2

Type II Short





REPORT NUMBER: P195994

CATALOG NUMBER: NAV-AF-04-D-UNV-AFL-800-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	4791.9	4791.9	4791.9	4791.9	4791.9	4791.9	4791.9	4791.9	4791.9	4791.9	4791.9
2.5°	5765.6	5730.7	5694.5	5627.4	5565.4	5469.8	5338.1	5305.8	5202.5	5032.1	4873.2
5°	6262.6	6256.2	6231.7	6177.4	6110.3	5994.1	5845.6	5746.1	5586.0	5317.4	5011.4
7.5°	5968.2	6022.5	6111.6	6238.2	6323.4	6311.7	6198.1	6111.6	5952.8	5586.0	5147.0
10°	5030.8	5041.1	5163.8	5429.8	5850.8	6243.3	6391.8	6368.6	6222.6	5821.0	5265.8
12.5°	4700.3	4706.7	4735.0	4820.3	5094.1	5641.6	6314.3	6435.7	6424.0	6045.7	5392.4
15°	4726.0	4729.9	4737.7	4764.8	4842.2	5117.3	5921.8	6230.4	6553.2	6258.8	5516.3
17.5°	4930.1	4927.5	4902.9	4877.1	4901.7	4992.0	5521.5	5846.9	6526.1	6438.2	5618.4
20°	5327.7	5340.7	5258.1	5143.1	5083.8	5087.6	5323.9	5567.9	6373.7	6577.7	5694.5
22.5°	5886.9	5896.0	5760.3	5561.5	5387.2	5299.4	5365.3	5494.4	6198.1	6706.9	5756.5
25°	6554.5	6554.5	6364.7	6081.9	5812.0	5619.6	5562.8	5611.8	6131.0	6852.7	5818.4
27.5°	7275.0	7300.8	7052.9	6682.3	6325.9	6044.4	5866.2	5857.2	6182.6	7036.2	5888.2
30°	8058.8	8082.0	7787.6	7334.5	6912.2	6551.9	6278.2	6218.7	6380.1	7282.8	5990.2
32.5°	8838.7	8858.1	8532.7	8070.5	7578.4	7154.9	6794.6	6700.4	6735.2	7643.0	6140.0
35°	9830.5	9834.3	9422.4	8872.4	8346.8	7849.6	7393.8	7300.8	7262.1	8097.6	6355.6
37.5°	10619.4	10588.4	10327.6	9807.2	9204.2	8685.1	8149.2	8027.8	7934.8	8736.7	6690.1
40°	10805.3	10805.3	10766.6	10610.4	10131.3	9631.6	9112.4	8931.7	8726.4	9489.5	7139.4
42.5°	10321.2	10352.1	10607.8	10947.4	10951.3	10631.0	10123.5	9971.2	9609.6	10346.9	7630.1
45°	9237.8	9246.8	9860.1	10776.9	11399.4	11582.7	11208.3	10997.7	10496.7	11237.9	8079.5
47.5°	8847.8	8876.1	9137.0	10257.8	11432.9	12353.6	12249.0	11959.7	11317.9	12051.4	8499.1
50°	8248.7	8283.4	8602.4	9493.4	11130.7	12848.2	13244.6	12934.6	12065.6	12729.3	8707.1
52.5°	6815.3	6869.5	7320.2	8482.3	10375.4	12868.8	14156.2	13970.2	12831.4	13092.1	8682.5
55°	4689.9	4729.9	5255.5	6621.7	8851.7	12237.4	14548.7	14676.6	13514.4	13173.6	8563.7
56°	3783.4	3933.2	4318.0	5641.6	7983.9	11700.2	14458.4	14754.0	13717.2	13160.6	8512.1
57.5°	2501.2	2529.6	2949.3	4088.1	6411.1	10534.1	14050.3	14588.7	13978.0	13094.8	8474.6
60°	1176.4	1189.3	1340.4	1886.5	3469.6	7676.6	12724.2	13617.7	14073.6	12956.6	8473.3
62.5°	767.0	769.6	787.7	900.0	1419.1	4181.1	10548.4	11834.5	13282.0	12941.1	8448.8
65°	631.5	637.9	615.9	630.1	742.5	1576.7	7440.3	9226.1	11423.9	12577.0	8172.5
67.5°	556.6	557.8	528.1	511.4	543.6	692.1	3748.6	5819.8	8544.3	10686.6	6731.4
70°	507.5	506.2	472.6	433.8	435.2	459.7	1221.5	2417.2	4727.4	6345.3	3864.8
72.5°	450.6	453.3	433.8	379.6	361.5	325.4	459.7	652.1	1608.9	2037.6	1018.9
75°	395.2	389.9	370.6	335.7	302.2	218.2	231.2	277.6	419.6	415.8	219.5
77.5°	299.6	294.4	303.4	286.6	236.3	152.4	126.5	144.6	189.9	176.9	89.1
80°	228.5	226.0	206.6	245.3	215.6	114.9	86.5	89.1	103.3	94.2	43.9
82.5°	165.3	164.0	156.2	151.1	136.9	83.9	65.9	69.8	77.4	65.9	32.3
85°	63.3	63.3	122.7	103.3	94.2	56.8	46.4	50.3	59.4	47.8	22.0
87.5°	10.3	10.3	82.7	68.4	42.7	28.4	29.7	32.3	34.9	28.4	16.8
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: P195994

CATALOG NUMBER: NAV-AF-04-D-UNV-AFL-800-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	4791.9	4791.9	4791.9	4791.9	4791.9	4791.9	4791.9	4791.9	4791.9	4791.9	4791.9
2.5°	4779.0	4692.5	4502.6	4319.3	4159.2	3983.6	3894.5	3791.2	3752.4	3675.0	3682.7
5°	4828.0	4647.3	4266.3	3864.8	3496.8	3122.3	2856.3	2605.8	2466.3	2328.1	2328.1
7.5°	4878.5	4602.1	4013.2	3371.5	2751.7	2109.9	1655.4	1291.3	1088.5	953.0	949.1
10°	4913.2	4543.9	3725.3	2799.5	1885.3	1087.3	655.9	516.5	466.2	444.2	442.9
12.5°	4958.4	4485.8	3397.3	2125.4	1047.2	516.5	409.3	387.4	378.4	373.2	373.2
15°	4997.2	4403.2	2999.6	1429.5	550.0	387.4	352.5	344.7	343.5	342.2	343.5
17.5°	5006.2	4285.8	2523.1	836.8	399.1	338.3	322.8	316.4	316.4	315.1	315.1
20°	4985.6	4130.8	1996.3	516.5	344.7	311.2	294.4	286.6	285.4	285.4	285.4
22.5°	4943.0	3933.2	1475.9	391.3	313.7	286.6	264.7	257.0	257.0	258.3	259.5
25°	4890.0	3699.5	1013.6	337.1	290.5	260.9	238.9	231.2	233.7	236.3	237.6
27.5°	4822.9	3420.5	663.7	291.8	259.5	235.0	215.6	210.5	215.6	220.9	223.4
30°	4755.7	3114.6	449.4	253.1	224.6	206.6	195.0	193.6	201.4	213.1	214.3
32.5°	4711.8	2800.7	339.6	227.3	197.5	182.1	176.9	179.5	191.1	204.0	206.6
35°	4707.9	2494.8	289.3	206.6	179.5	165.3	162.6	170.4	183.3	193.6	196.3
37.5°	4768.7	2208.0	262.1	191.1	165.3	151.1	147.2	161.4	173.0	183.3	186.0
40°	4891.3	1951.1	244.1	176.9	153.6	136.9	134.3	145.9	157.5	169.2	173.0
42.5°	5045.0	1710.9	223.4	162.6	140.8	121.4	118.8	127.9	139.4	156.2	158.9
45°	5178.0	1487.6	201.4	147.2	126.5	104.5	103.3	113.6	122.7	138.2	140.8
47.5°	5290.3	1301.6	180.8	130.4	108.4	93.0	91.7	96.9	102.0	116.2	118.8
50°	5231.0	1144.1	160.1	107.2	87.8	80.1	78.8	78.8	85.2	99.4	102.0
52.5°	5085.0	1046.0	140.8	89.1	72.3	68.4	64.5	65.9	72.3	78.8	80.1
55°	4967.6	999.4	124.0	78.8	60.7	56.8	53.0	51.7	53.0	50.3	47.8
56°	4939.1	994.3	120.1	76.2	58.1	53.0	47.8	45.2	43.9	38.8	37.4
57.5°	4926.2	994.3	113.6	71.0	54.2	47.8	41.3	36.1	31.0	27.1	27.1
60°	4915.9	1000.8	105.9	62.0	46.4	38.8	29.7	22.0	18.1	18.1	18.1
62.5°	4893.9	998.2	96.9	51.7	40.0	29.7	18.1	14.2	12.9	14.2	15.4
65°	4647.3	927.1	85.2	41.3	31.0	20.7	10.3	10.3	11.7	14.2	15.4
67.5°	3744.7	702.5	69.8	32.3	22.0	15.4	9.0	9.0	11.7	14.2	15.4
70°	2056.9	370.6	59.4	23.2	16.8	12.9	9.0	7.8	11.7	14.2	15.4
72.5°	502.3	155.0	54.2	18.1	15.4	11.7	7.8	7.8	11.7	14.2	15.4
75°	124.0	116.2	43.9	14.2	12.9	10.3	7.8	7.8	11.7	14.2	15.4
77.5°	58.1	153.6	29.7	12.9	11.7	9.0	7.8	7.8	11.7	14.2	14.2
80°	34.9	116.2	18.1	11.7	10.3	9.0	7.8	7.8	11.7	14.2	15.4
82.5°	20.7	33.6	12.9	11.7	10.3	7.8	7.8	7.8	11.7	14.2	15.4
85°	18.1	16.8	12.9	11.7	10.3	9.0	7.8	7.8	12.9	15.4	15.4
87.5°	14.2	12.9	11.7	10.3	10.3	9.0	7.8	7.8	11.7	14.2	15.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)