

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: P196967

Luminaire Tested: **NAV-AF-05-D-UNV-AFL-8030-1200-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196967
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-05-D-UNV-AFL-8030-1200-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 80 CRI, 3000K, 1200mA 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: 22593 lumens
Efficiency: N/A
Efficacy: 70.6 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type II - Short - Full Cutoff
BUG Rating: B2 - U0 - G2

Input Watts (W): 320
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

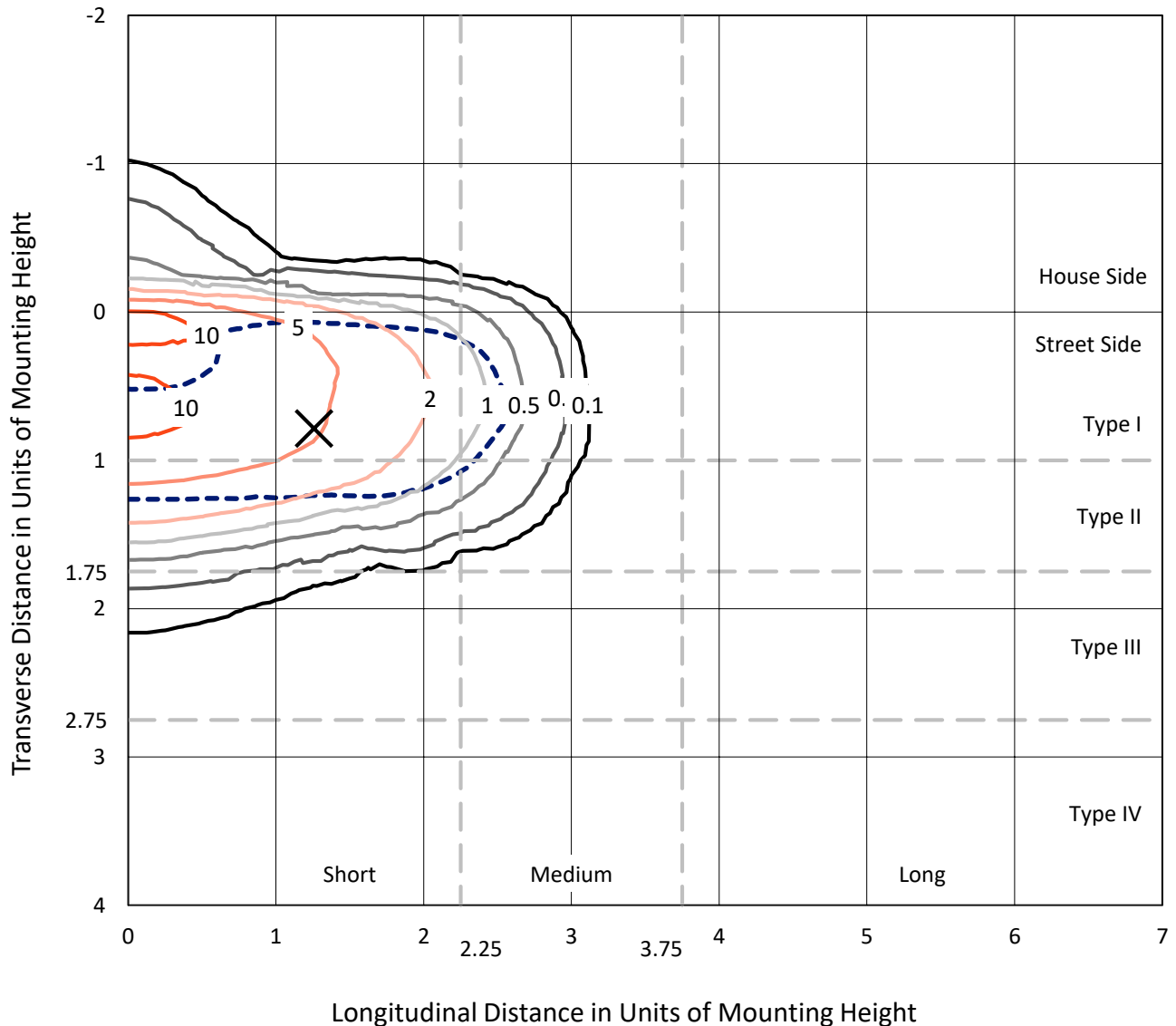


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Iso-Footcandle Lines of Horizontal Illumination

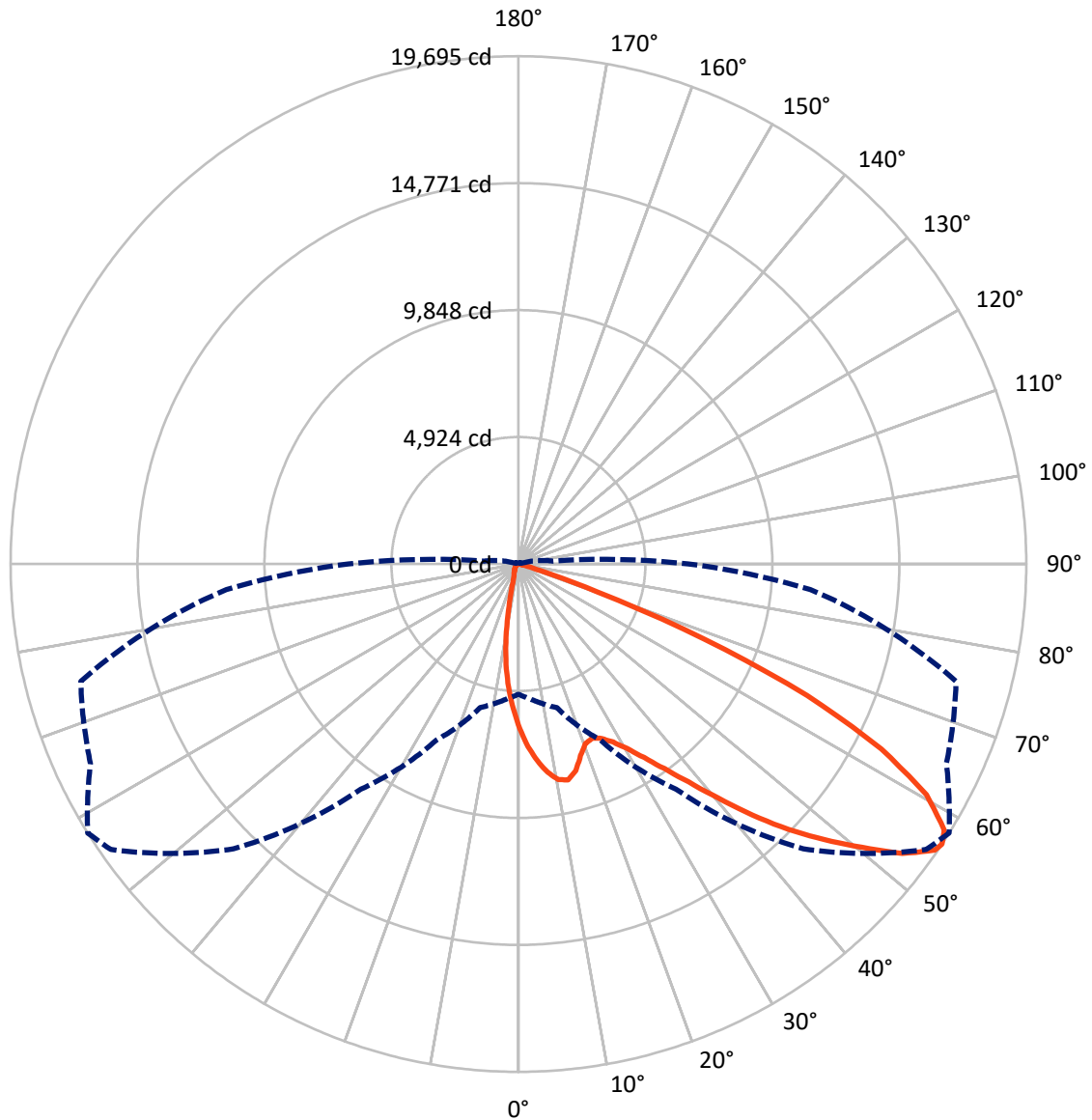
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 12.7 fc
 Type II - Short - Full Cutoff

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Luminous Intensity Polar Plot



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

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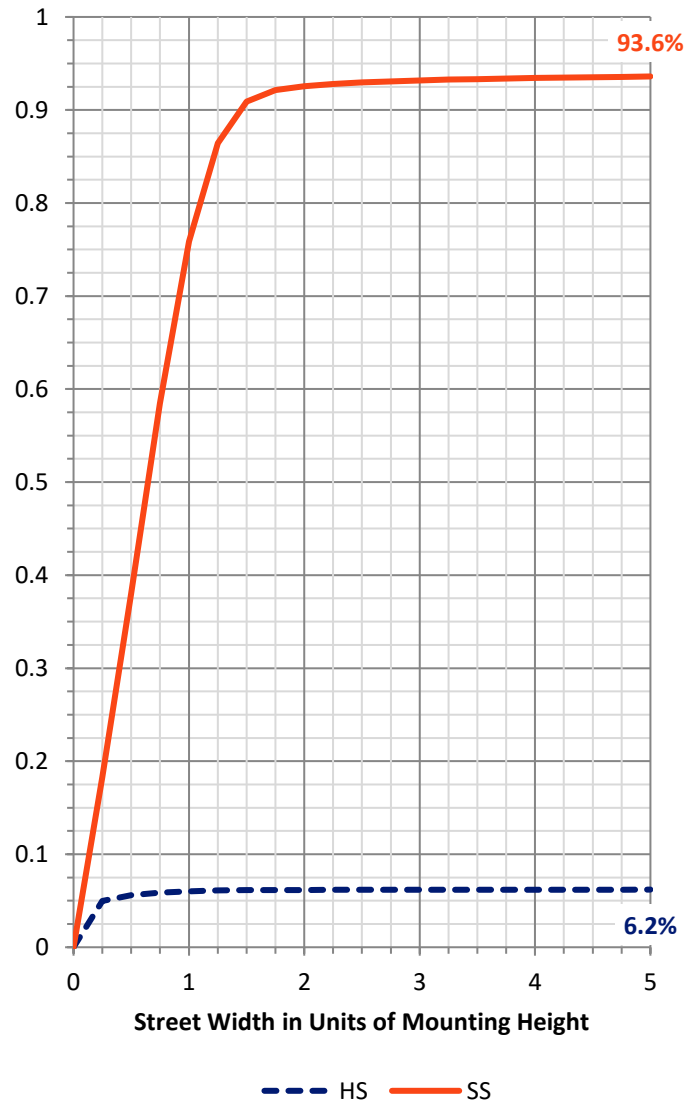
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1410.3	0.0	1410.3
	% Fixture	6.2	0.0	6.2
Street Side	Lumens	21182.7	0.0	21182.7
	% Fixture	93.8	0.0	93.8
Total	Lumens	22593.0	0.0	22593.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	545.7	2.4
10°-20°	1269.7	5.6
20°-30°	2136.5	9.5
30°-40°	3658.6	16.2
40°-50°	5520.8	24.4
50°-60°	5738.7	25.4
60°-70°	3221.6	14.3
70°-80°	441.5	2.0
80°-90°	59.8	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°	22593.0	100.0
0°-180°	22593.0	100.0

Coefficient of Utilization



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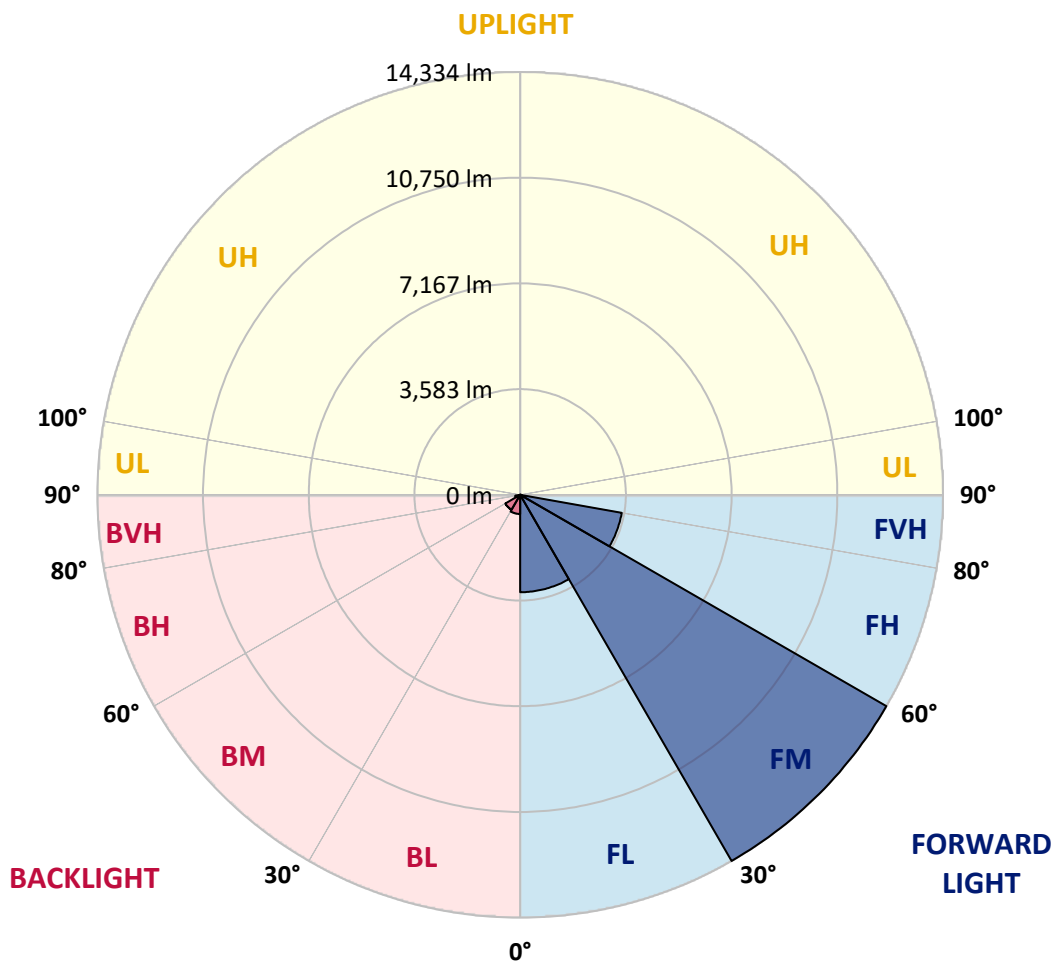
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	3301.3	14.6			
FM	(30°-60°)	14333.9	63.4			
FH	(60°-80°)	3495.9	15.5			G2/5000
FVH	(80°-90°)	51.6	0.2			G1/100
BL	(0°-30°)	650.6	2.9	B2/1000		
BM	(30°-60°)	584.2	2.6	B1/1000		
BH	(60°-80°)	167.3	0.7	B1/500		G1/500
BVH	(80°-90°)	8.3	0.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G2

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	6396.8	6396.8	6396.8	6396.8	6396.8	6396.8	6396.8	6396.8	6396.8	6396.8	6396.8
2.5°	7696.5	7649.9	7601.6	7512.0	7429.3	7301.7	7125.9	7082.8	6944.9	6717.4	6505.4
5°	8360.1	8351.5	8318.7	8246.3	8156.7	8001.6	7803.3	7670.6	7456.9	7098.3	6689.8
7.5°	7967.1	8039.5	8158.4	8327.3	8441.1	8425.6	8273.9	8158.4	7946.4	7456.9	6870.8
10°	6715.7	6729.4	6893.2	7248.3	7810.2	8334.2	8532.5	8501.4	8306.7	7770.6	7029.4
12.5°	6274.4	6283.0	6320.9	6434.7	6800.1	7531.0	8429.0	8591.1	8575.6	8070.5	7198.3
15°	6308.9	6314.0	6324.4	6360.6	6464.0	6831.1	7905.0	8317.0	8747.9	8354.9	7363.8
17.5°	6581.2	6577.8	6545.0	6510.5	6543.3	6663.9	7370.7	7805.0	8711.7	8594.5	7499.9
20°	7112.1	7129.3	7019.0	6865.6	6786.3	6791.5	7106.9	7432.7	8508.3	8780.7	7601.6
22.5°	7858.5	7870.6	7689.6	7424.1	7191.4	7074.2	7162.1	7334.5	8273.9	8953.1	7684.4
25°	8749.7	8749.7	8496.3	8118.8	7758.5	7501.7	7425.8	7491.3	8184.3	9147.8	7767.1
27.5°	9711.5	9746.0	9415.0	8920.3	8444.6	8068.8	7830.9	7818.8	8253.2	9392.6	7860.2
30°	10757.8	10788.8	10395.8	9790.8	9227.1	8746.2	8380.8	8301.5	8516.9	9721.8	7996.4
32.5°	11798.9	11824.8	11390.4	10773.3	10116.6	9551.2	9070.3	8944.4	8991.0	10202.8	8196.3
35°	13122.8	13127.9	12578.1	11843.7	11142.2	10478.6	9870.1	9746.0	9694.3	10809.5	8484.2
37.5°	14176.0	14134.6	13786.4	13091.7	12286.7	11593.8	10878.5	10716.4	10592.3	11662.8	8930.6
40°	14424.2	14424.2	14372.5	14163.9	13524.4	12857.3	12164.4	11923.0	11649.0	12667.7	9530.5
42.5°	13777.8	13819.1	14160.4	14613.8	14619.0	14191.5	13514.0	13310.6	12828.0	13812.2	10185.5
45°	12331.6	12343.6	13162.4	14386.2	15217.1	15461.9	14962.0	14681.0	14012.2	15001.6	10785.4
47.5°	11811.0	11848.9	12197.1	13693.3	15261.9	16490.9	16351.3	15965.2	15108.5	16087.6	11345.6
50°	11011.2	11057.7	11483.5	12672.9	14858.6	17151.1	17680.3	17266.6	16106.5	16992.5	11623.1
52.5°	9097.8	9170.2	9771.8	11323.2	13850.2	17178.7	18897.3	18649.0	17128.7	17476.9	11590.4
55°	6260.6	6314.0	7015.6	8839.3	11816.2	16335.8	19421.3	19591.9	18040.6	17585.5	11431.8
56°	5050.5	5250.5	5764.2	7531.0	10657.8	15618.7	19300.6	19695.3	18311.2	17568.3	11362.8
57.5°	3338.9	3376.8	3937.0	5457.3	8558.3	14062.2	18755.9	19474.7	18659.4	17480.3	11312.8
60°	1570.3	1587.6	1789.2	2518.4	4631.7	10247.6	16985.6	18178.5	18786.9	17295.9	11311.1
62.5°	1023.9	1027.3	1051.5	1201.4	1894.4	5581.4	14081.1	15798.0	17730.3	17275.2	11278.4
65°	842.9	851.5	822.2	841.2	991.1	2104.7	9932.1	12316.1	15249.8	16789.1	10909.5
67.5°	742.9	744.7	705.0	682.6	725.7	923.9	5004.0	7768.9	11405.9	14265.6	8985.8
70°	677.4	675.7	630.9	579.2	580.9	613.6	1630.6	3226.8	6310.6	8470.4	5159.1
72.5°	601.6	605.0	579.2	506.8	482.6	434.4	613.6	870.5	2147.8	2720.0	1360.0
75°	527.5	520.6	494.7	448.2	403.4	291.3	308.5	370.6	560.2	555.0	293.0
77.5°	399.9	393.0	405.1	382.7	315.4	203.4	168.9	193.1	253.4	236.2	118.9
80°	305.1	301.7	275.8	327.5	287.9	153.4	115.5	118.9	137.9	125.8	58.6
82.5°	220.6	218.9	208.6	201.7	182.7	112.0	87.9	93.1	103.4	87.9	43.1
85°	84.5	84.5	163.8	137.9	125.8	75.8	62.1	67.2	79.3	63.8	29.3
87.5°	13.8	13.8	110.3	91.4	56.9	37.9	39.6	43.1	46.5	37.9	22.4
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):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	6396.8	6396.8	6396.8	6396.8	6396.8	6396.8	6396.8	6396.8	6396.8	6396.8	6396.8
2.5°	6379.5	6264.0	6010.6	5765.9	5552.1	5317.7	5198.8	5060.9	5009.2	4905.7	4916.1
5°	6445.0	6203.7	5695.2	5159.1	4667.9	4168.0	3812.9	3478.5	3292.3	3107.9	3107.9
7.5°	6512.3	6143.4	5357.4	4500.7	3673.3	2816.6	2209.8	1723.7	1453.1	1272.1	1266.9
10°	6558.8	6065.8	4973.0	3737.0	2516.6	1451.4	875.7	689.5	622.3	593.0	591.2
12.5°	6619.1	5988.2	4535.1	2837.3	1397.9	689.5	546.4	517.1	505.1	498.2	498.2
15°	6670.8	5877.9	4004.2	1908.2	734.3	517.1	470.6	460.2	458.5	456.8	458.5
17.5°	6682.9	5721.1	3368.2	1117.0	532.6	451.6	430.9	422.3	422.3	420.6	420.6
20°	6655.3	5514.2	2664.9	689.5	460.2	415.4	393.0	382.7	380.9	380.9	380.9
22.5°	6598.4	5250.5	1970.2	522.3	418.9	382.7	353.4	343.0	343.0	344.7	346.5
25°	6527.8	4938.5	1353.1	449.9	387.8	348.2	318.9	308.5	312.0	315.4	317.2
27.5°	6438.1	4566.2	886.0	389.6	346.5	313.7	287.9	281.0	287.9	294.8	298.2
30°	6348.5	4157.6	599.9	337.9	299.9	275.8	260.3	258.6	268.9	284.4	286.1
32.5°	6289.9	3738.8	453.3	303.4	263.7	243.0	236.2	239.6	255.1	272.3	275.8
35°	6284.7	3330.2	386.1	275.8	239.6	220.6	217.2	227.5	244.8	258.6	262.0
37.5°	6365.7	2947.6	349.9	255.1	220.6	201.7	196.5	215.5	231.0	244.8	248.2
40°	6529.5	2604.6	325.8	236.2	205.1	182.7	179.3	194.8	210.3	225.8	231.0
42.5°	6734.6	2283.9	298.2	217.2	187.9	162.0	158.6	170.6	186.2	208.6	212.0
45°	6912.2	1985.7	268.9	196.5	168.9	139.6	137.9	151.7	163.8	184.4	187.9
47.5°	7062.1	1737.5	241.3	174.1	144.8	124.1	122.4	129.3	136.2	155.1	158.6
50°	6982.8	1527.2	213.7	143.1	117.2	106.9	105.1	105.1	113.8	132.7	136.2
52.5°	6788.0	1396.2	187.9	118.9	96.5	91.4	86.2	87.9	96.5	105.1	106.9
55°	6631.2	1334.2	165.5	105.1	81.0	75.8	70.7	68.9	70.7	67.2	63.8
56°	6593.3	1327.3	160.3	101.7	77.6	70.7	63.8	60.3	58.6	51.7	50.0
57.5°	6576.0	1327.3	151.7	94.8	72.4	63.8	55.2	48.3	41.4	36.2	36.2
60°	6562.2	1335.9	141.3	82.7	62.1	51.7	39.6	29.3	24.1	24.1	24.1
62.5°	6532.9	1332.4	129.3	68.9	53.4	39.6	24.1	19.0	17.2	19.0	20.7
65°	6203.7	1237.6	113.8	55.2	41.4	27.6	13.8	13.8	15.5	19.0	20.7
67.5°	4998.8	937.7	93.1	43.1	29.3	20.7	12.1	12.1	15.5	19.0	20.7
70°	2745.9	494.7	79.3	31.0	22.4	17.2	12.1	10.3	15.5	19.0	20.7
72.5°	670.5	206.8	72.4	24.1	20.7	15.5	10.3	10.3	15.5	19.0	20.7
75°	165.5	155.1	58.6	19.0	17.2	13.8	10.3	10.3	15.5	19.0	20.7
77.5°	77.6	205.1	39.6	17.2	15.5	12.1	10.3	10.3	15.5	19.0	19.0
80°	46.5	155.1	24.1	15.5	13.8	12.1	10.3	10.3	15.5	19.0	20.7
82.5°	27.6	44.8	17.2	15.5	13.8	10.3	10.3	10.3	15.5	19.0	20.7
85°	24.1	22.4	17.2	15.5	13.8	12.1	10.3	10.3	17.2	20.7	20.7
87.5°	19.0	17.2	15.5	13.8	13.8	12.1	10.3	10.3	15.5	19.0	20.7
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)