

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: P196486

Luminaire Tested: **NAV-AF-04-D-UNV-AFL-7030-1200-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196486
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-7030-1200-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(4) 70 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: 21726.2 lumens
Efficiency: N/A
Efficacy: 84.2 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Short - Full Cutoff
BUG Rating: B2 - U0 - G2

Input Watts (W): 258
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

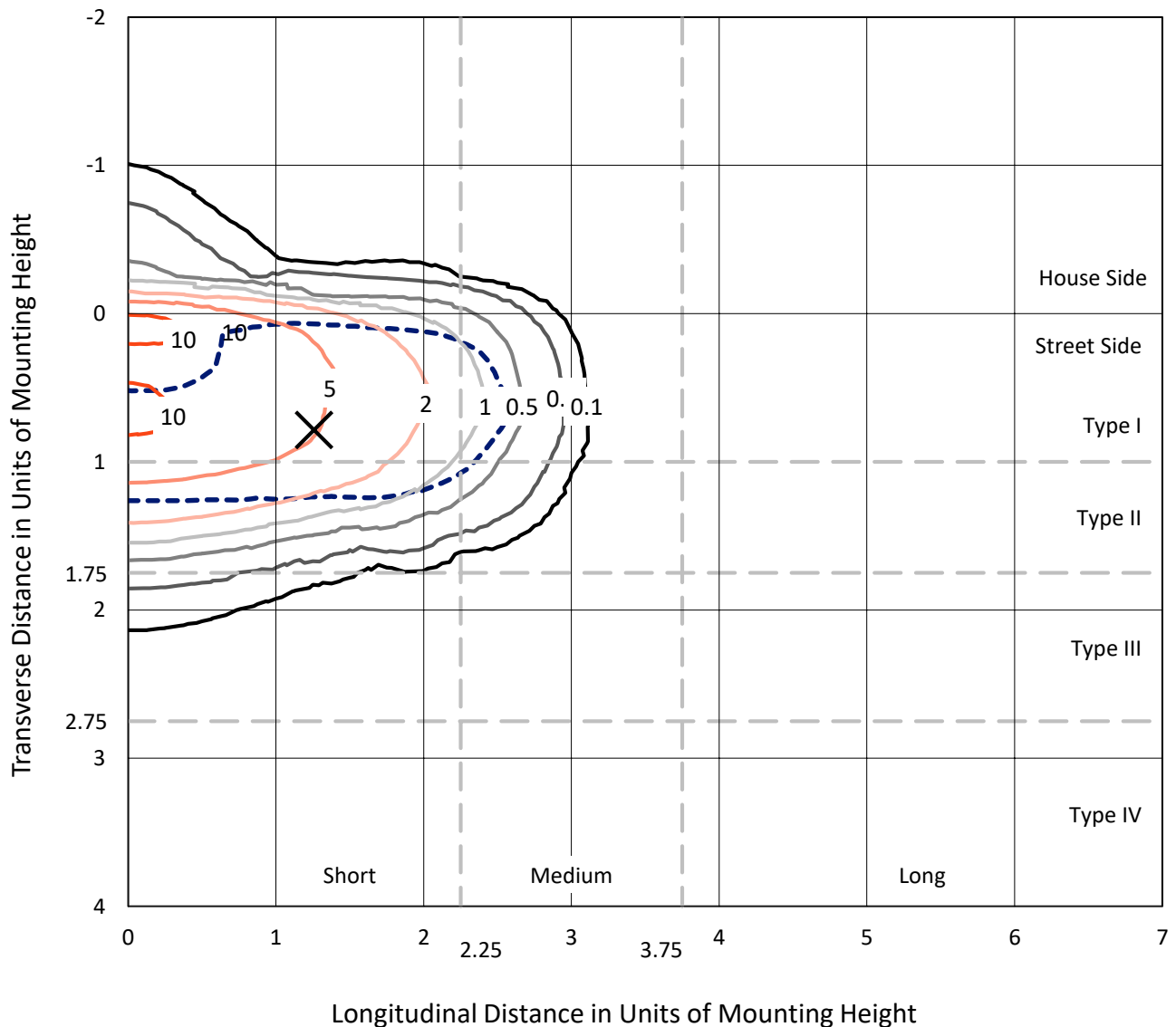


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

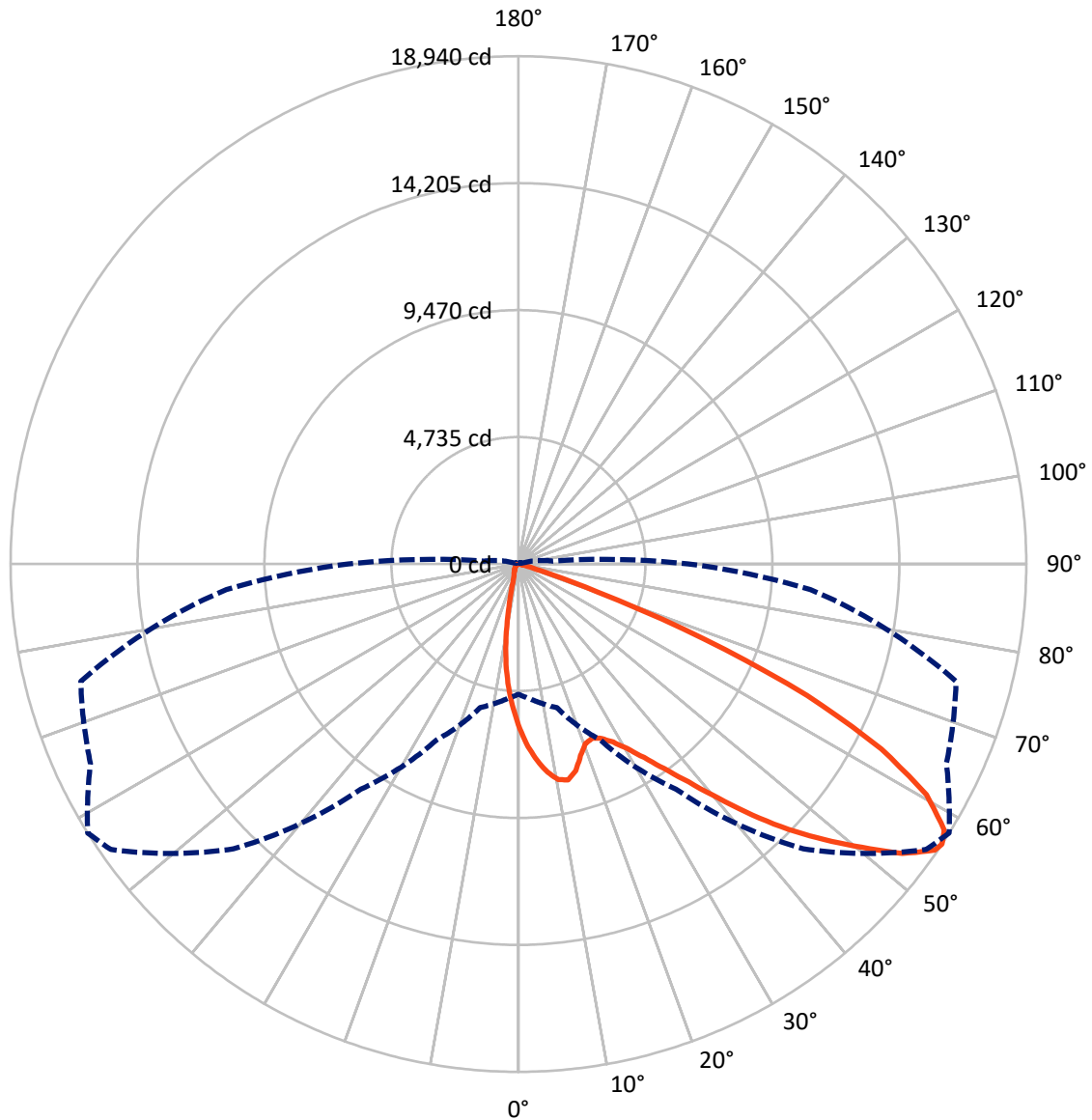


Based on 25 foot mounting height. Maximum calculated value = 12.2 fc
 Type II - Short - Full Cutoff

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Luminous Intensity Polar Plot



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

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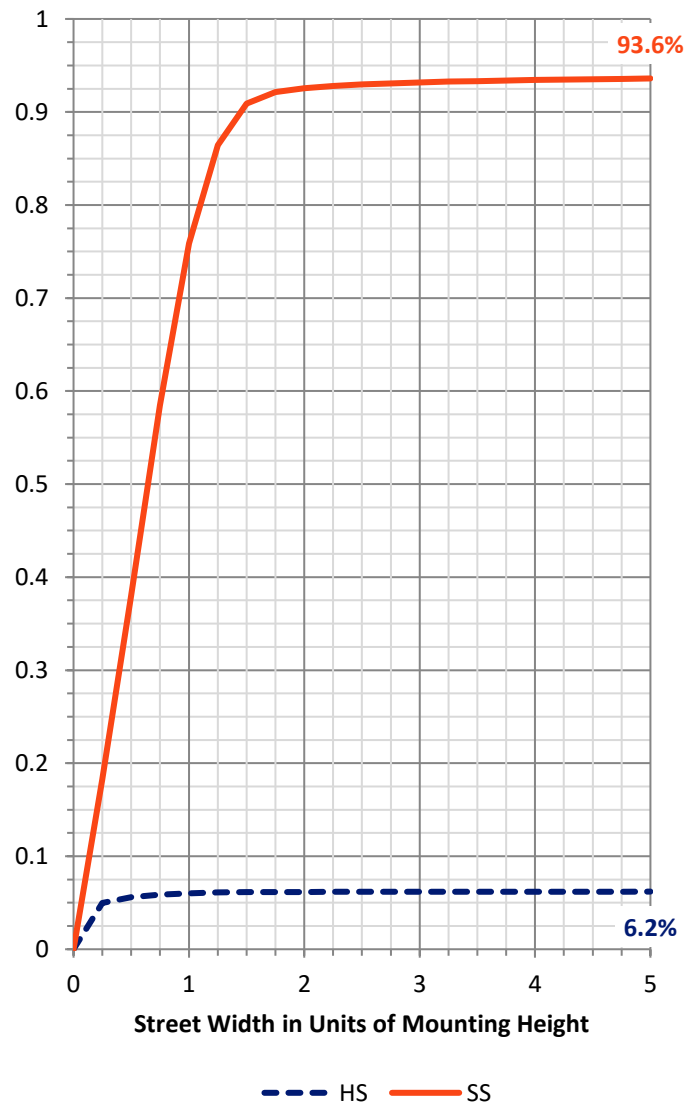
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1356.2	0.0	1356.2
	% Fixture	6.2	0.0	6.2
Street Side	Lumens	20370.1	0.0	20370.1
	% Fixture	93.8	0.0	93.8
Total	Lumens	21726.2	0.0	21726.2
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	524.7	2.4
10°-20°	1221.0	5.6
20°-30°	2054.5	9.5
30°-40°	3518.2	16.2
40°-50°	5309.0	24.4
50°-60°	5518.6	25.4
60°-70°	3098.0	14.3
70°-80°	424.6	2.0
80°-90°	57.5	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°	21726.2	100.0
0°-180°	21726.2	100.0

Coefficient of Utilization



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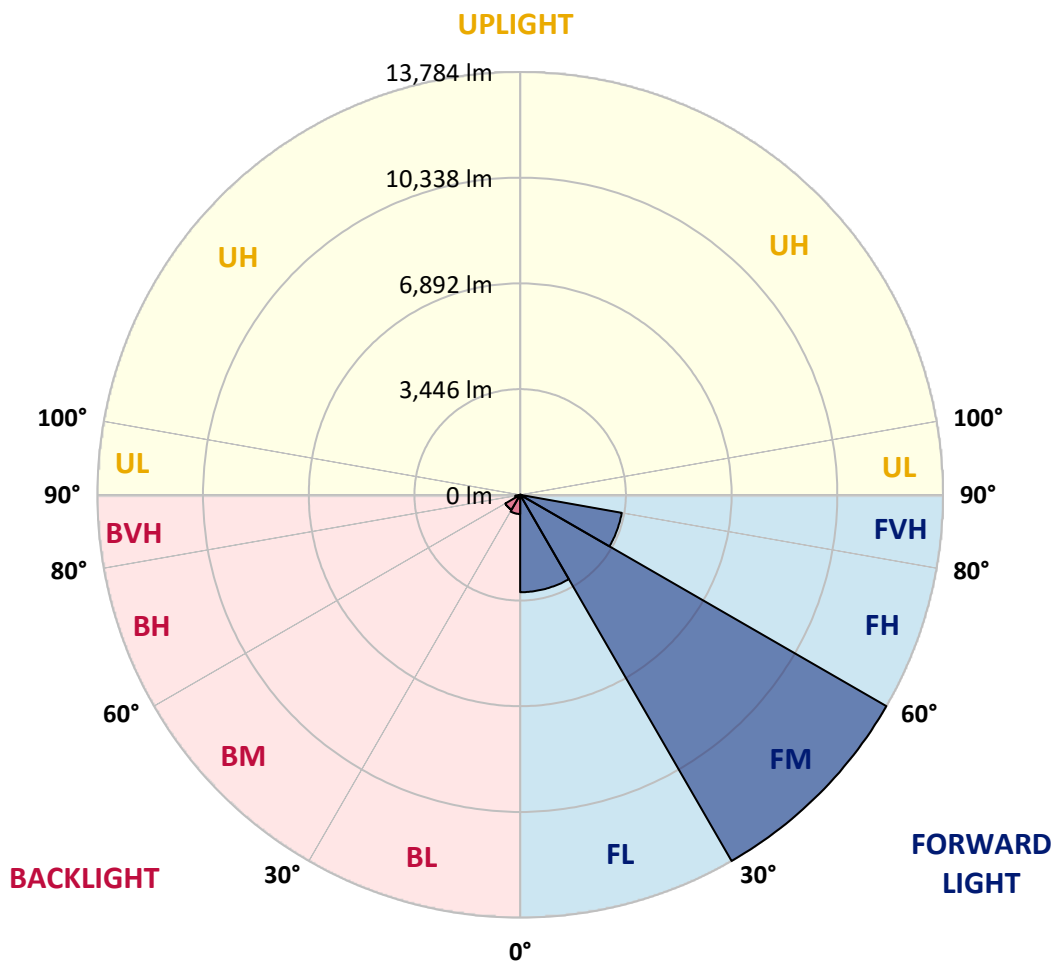
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	3174.7	14.6			
FM (30°-60°)	13784.0	63.4			
FH (60°-80°)	3361.8	15.5			G2/5000
FVH (80°-90°)	49.6	0.2			G1/100
BL (0°-30°)	625.6	2.9	B2/1000		
BM (30°-60°)	561.8	2.6	B1/1000		
BH (60°-80°)	160.9	0.7	B1/500		G1/500
BVH (80°-90°)	8.0	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°	6151.3	6151.3	6151.3	6151.3	6151.3	6151.3	6151.3	6151.3	6151.3	6151.3	6151.3
2.5°	7401.2	7356.4	7310.0	7223.7	7144.3	7021.5	6852.5	6811.1	6678.5	6459.6	6255.7
5°	8039.3	8031.1	7999.5	7929.9	7843.7	7694.6	7503.9	7376.3	7170.8	6826.0	6433.1
7.5°	7661.4	7731.0	7845.4	8007.8	8117.3	8102.3	7956.5	7845.4	7641.5	7170.8	6607.2
10°	6458.0	6471.2	6628.8	6970.2	7510.6	8014.5	8205.2	8175.4	7988.0	7472.5	6759.7
12.5°	6033.7	6041.9	6078.4	6187.8	6539.2	7242.0	8105.6	8261.4	8246.6	7760.9	6922.1
15°	6066.8	6071.7	6081.7	6116.6	6216.0	6569.1	7601.7	7997.9	8412.3	8034.4	7081.3
17.5°	6328.8	6325.3	6293.9	6260.8	6292.2	6408.3	7087.8	7505.6	8377.5	8264.8	7212.2
20°	6839.3	6855.8	6749.7	6602.2	6525.9	6531.0	6834.2	7147.5	8181.9	8443.8	7310.0
22.5°	7557.0	7568.6	7394.5	7139.3	6915.4	6802.8	6887.2	7053.1	7956.5	8609.5	7389.5
25°	8413.9	8413.9	8170.3	7807.3	7460.9	7213.9	7140.9	7203.9	7870.3	8796.9	7469.2
27.5°	9338.9	9372.0	9053.8	8578.1	8120.5	7759.3	7530.4	7518.9	7936.6	9032.3	7558.7
30°	10345.1	10374.9	9997.0	9415.2	8873.2	8410.7	8059.3	7983.0	8190.2	9348.9	7689.5
32.5°	11346.2	11371.1	10953.5	10360.0	9728.5	9184.8	8722.2	8601.3	8646.0	9811.4	7881.9
35°	12619.3	12624.3	12095.4	11389.4	10714.7	10076.6	9491.4	9372.0	9322.3	10394.8	8158.7
37.5°	13632.1	13592.3	13257.5	12589.5	11815.4	11149.1	10461.1	10305.4	10185.9	11215.4	8588.0
40°	13870.8	13870.8	13821.1	13620.5	13005.5	12364.0	11697.7	11465.5	11202.1	12181.7	9164.8
42.5°	13249.3	13288.9	13617.2	14053.2	14058.1	13647.0	12995.6	12799.9	12335.8	13282.3	9794.8
45°	11858.5	11870.0	12657.4	13834.3	14633.3	14868.6	14388.0	14117.7	13474.6	14426.0	10371.6
47.5°	11357.8	11394.3	11729.2	13167.9	14676.4	15858.2	15723.9	15352.7	14528.9	15470.3	10910.3
50°	10588.8	10633.4	11043.0	12186.7	14288.5	16493.1	17002.0	16604.1	15488.6	16340.6	11177.2
52.5°	8748.8	8818.5	9397.0	10888.8	13318.8	16519.7	18172.2	17933.6	16471.6	16806.4	11145.6
55°	6020.4	6071.7	6746.4	8500.2	11362.9	15709.1	18676.1	18840.2	17348.4	16910.8	10993.2
56°	4856.8	5049.1	5543.0	7242.0	10248.9	15019.6	18560.1	18939.8	17608.7	16894.2	10926.9
57.5°	3210.8	3247.1	3786.0	5247.9	8230.0	13522.7	18036.3	18727.6	17943.5	16809.6	10878.8
60°	1510.1	1526.7	1720.7	2421.7	4454.0	9854.4	16333.9	17481.1	18066.1	16632.3	10877.2
62.5°	984.7	987.9	1011.0	1155.3	1821.7	5367.3	13540.9	15191.9	17050.0	16612.5	10845.6
65°	810.6	818.9	790.7	808.9	953.1	2023.9	9551.1	11843.4	14664.8	16145.0	10491.0
67.5°	714.4	716.0	678.0	656.4	697.8	888.5	4812.0	7470.8	10968.3	13718.3	8641.1
70°	651.4	649.8	606.7	557.0	558.7	590.1	1568.1	3103.1	6068.5	8145.4	4961.3
72.5°	578.5	581.8	557.0	487.3	464.2	417.7	590.1	837.0	2065.3	2615.6	1307.9
75°	507.2	500.6	475.8	431.0	387.9	280.1	296.7	356.4	538.7	533.7	281.8
77.5°	384.6	377.9	389.5	367.9	303.3	195.6	162.5	185.6	243.6	227.0	114.4
80°	293.4	290.1	265.2	315.0	276.9	147.5	111.0	114.4	132.6	121.1	56.4
82.5°	212.2	210.6	200.6	193.9	175.7	107.7	84.5	89.5	99.4	84.5	41.4
85°	81.2	81.2	157.5	132.6	121.1	72.9	59.6	64.7	76.3	61.3	28.2
87.5°	13.2	13.2	106.1	87.9	54.7	36.5	38.1	41.4	44.8	36.5	21.6
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°	6151.3	6151.3	6151.3	6151.3	6151.3	6151.3	6151.3	6151.3	6151.3	6151.3	6151.3
2.5°	6134.8	6023.7	5780.1	5544.7	5339.2	5113.7	4999.2	4866.7	4817.0	4717.5	4727.4
5°	6197.7	5965.7	5476.7	4961.3	4488.8	4008.0	3666.6	3345.1	3166.0	2988.7	2988.7
7.5°	6262.4	5907.6	5151.8	4328.0	3532.4	2708.5	2125.1	1657.6	1397.3	1223.2	1218.4
10°	6307.2	5833.2	4782.2	3593.6	2420.1	1395.7	842.1	662.9	598.4	570.3	568.5
12.5°	6365.2	5758.5	4361.2	2728.4	1344.3	662.9	525.4	497.2	485.6	479.0	479.0
15°	6414.9	5652.4	3850.7	1835.0	706.2	497.2	452.6	442.6	441.0	439.2	441.0
17.5°	6426.5	5501.5	3239.0	1074.1	512.2	434.3	414.4	406.1	406.1	404.5	404.5
20°	6400.0	5302.7	2562.6	662.9	442.6	399.5	377.9	367.9	366.3	366.3	366.3
22.5°	6345.2	5049.1	1894.7	502.3	402.8	367.9	339.8	329.9	329.9	331.5	333.1
25°	6277.3	4749.1	1301.2	432.6	373.0	334.9	306.7	296.7	300.0	303.3	305.1
27.5°	6191.1	4391.0	852.0	374.6	333.1	301.7	276.9	270.2	276.9	283.4	286.8
30°	6105.0	3998.2	576.9	324.9	288.5	265.2	250.3	248.7	258.6	273.4	275.2
32.5°	6048.6	3595.2	436.0	291.7	253.6	233.7	227.0	230.4	245.3	261.9	265.2
35°	6043.5	3202.5	371.3	265.2	230.4	212.2	208.9	218.8	235.4	248.7	252.0
37.5°	6121.5	2834.5	336.5	245.3	212.2	193.9	189.0	207.1	222.2	235.4	238.7
40°	6279.0	2504.7	313.2	227.0	197.2	175.7	172.4	187.3	202.2	217.1	222.2
42.5°	6476.3	2196.3	286.8	208.9	180.8	155.8	152.5	164.1	178.9	200.6	203.9
45°	6647.0	1909.6	258.6	189.0	162.5	134.3	132.6	145.9	157.5	177.3	180.8
47.5°	6791.2	1670.9	232.0	167.3	139.2	119.3	117.7	124.3	131.0	149.1	152.5
50°	6715.0	1468.7	205.5	137.5	112.7	102.8	101.1	101.1	109.4	127.7	131.0
52.5°	6527.5	1342.7	180.8	114.4	92.9	87.9	82.9	84.5	92.9	101.1	102.8
55°	6376.8	1283.0	159.1	101.1	77.9	72.9	68.0	66.3	68.0	64.7	61.3
56°	6340.4	1276.3	154.2	97.8	74.7	68.0	61.3	58.0	56.4	49.7	48.1
57.5°	6323.7	1276.3	145.9	91.1	69.6	61.3	53.0	46.4	39.8	34.9	34.9
60°	6310.5	1284.7	135.9	79.5	59.6	49.7	38.1	28.2	23.2	23.2	23.2
62.5°	6282.3	1281.3	124.3	66.3	51.4	38.1	23.2	18.2	16.6	18.2	19.8
65°	5965.7	1190.2	109.4	53.0	39.8	26.6	13.2	13.2	15.0	18.2	19.8
67.5°	4807.1	901.7	89.5	41.4	28.2	19.8	11.6	11.6	15.0	18.2	19.8
70°	2640.6	475.8	76.3	29.8	21.6	16.6	11.6	10.0	15.0	18.2	19.8
72.5°	644.8	199.0	69.6	23.2	19.8	15.0	10.0	10.0	15.0	18.2	19.8
75°	159.1	149.1	56.4	18.2	16.6	13.2	10.0	10.0	15.0	18.2	19.8
77.5°	74.7	197.2	38.1	16.6	15.0	11.6	10.0	10.0	15.0	18.2	18.2
80°	44.8	149.1	23.2	15.0	13.2	11.6	10.0	10.0	15.0	18.2	19.8
82.5°	26.6	43.0	16.6	15.0	13.2	10.0	10.0	10.0	15.0	18.2	19.8
85°	23.2	21.6	16.6	15.0	13.2	11.6	10.0	10.0	16.6	19.8	19.8
87.5°	18.2	16.6	15.0	13.2	13.2	11.6	10.0	10.0	15.0	18.2	19.8
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)