

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: P196498

Luminaire Tested: **NAV-AF-04-D-UNV-AFL-7030-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196498
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24160)
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-7030-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(4) 70 CRI, 3000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND AUTOMOTIVE FRONTLINE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 19533.4 lumens
Efficiency: N/A
Efficacy: 114.2 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

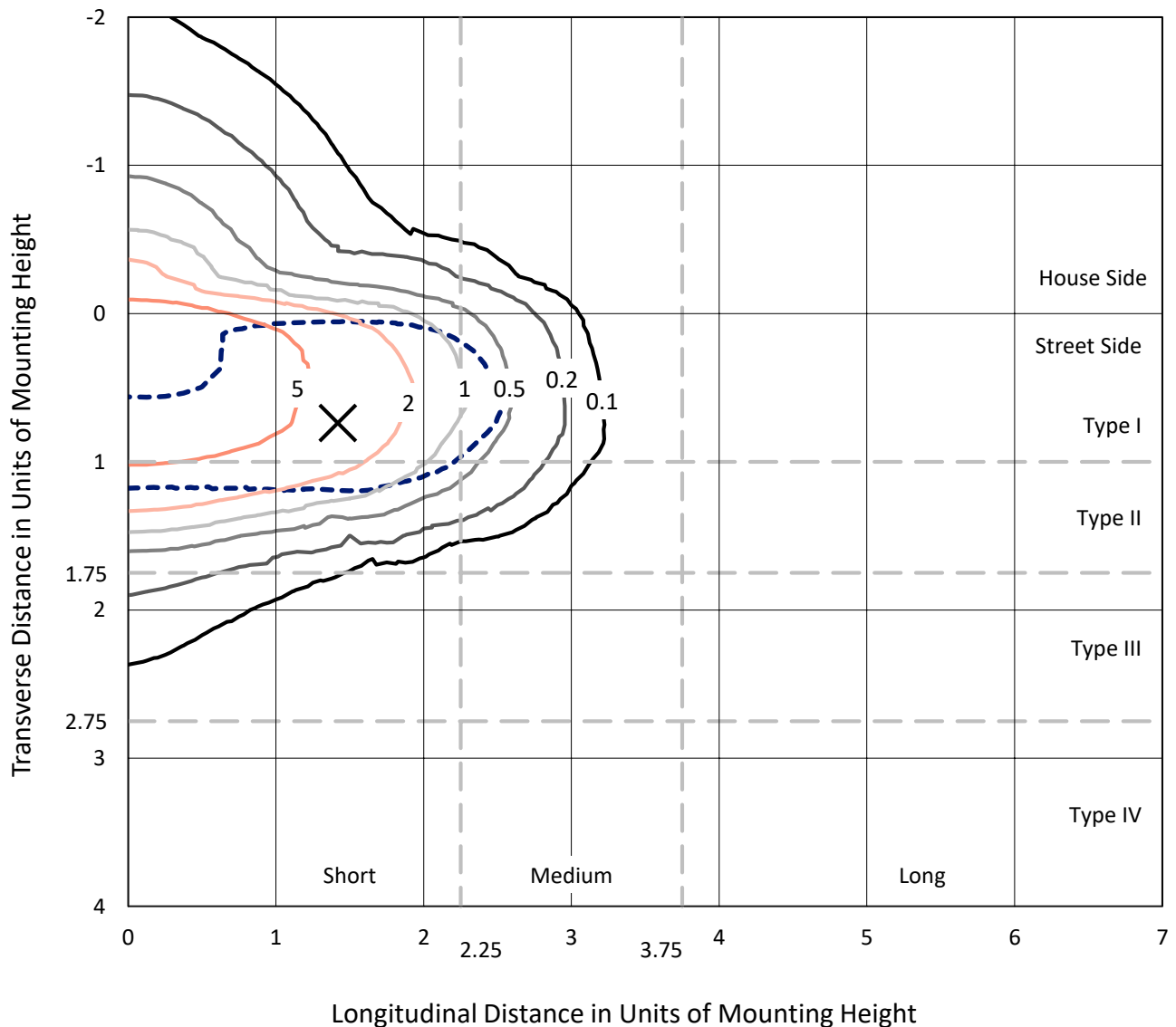
Input Watts (W): 171
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P196498
 CATALOG NUMBER: NAV-AF-04-D-UNV-AFL-7030-800

Iso-Footcandle Lines of Horizontal Illumination

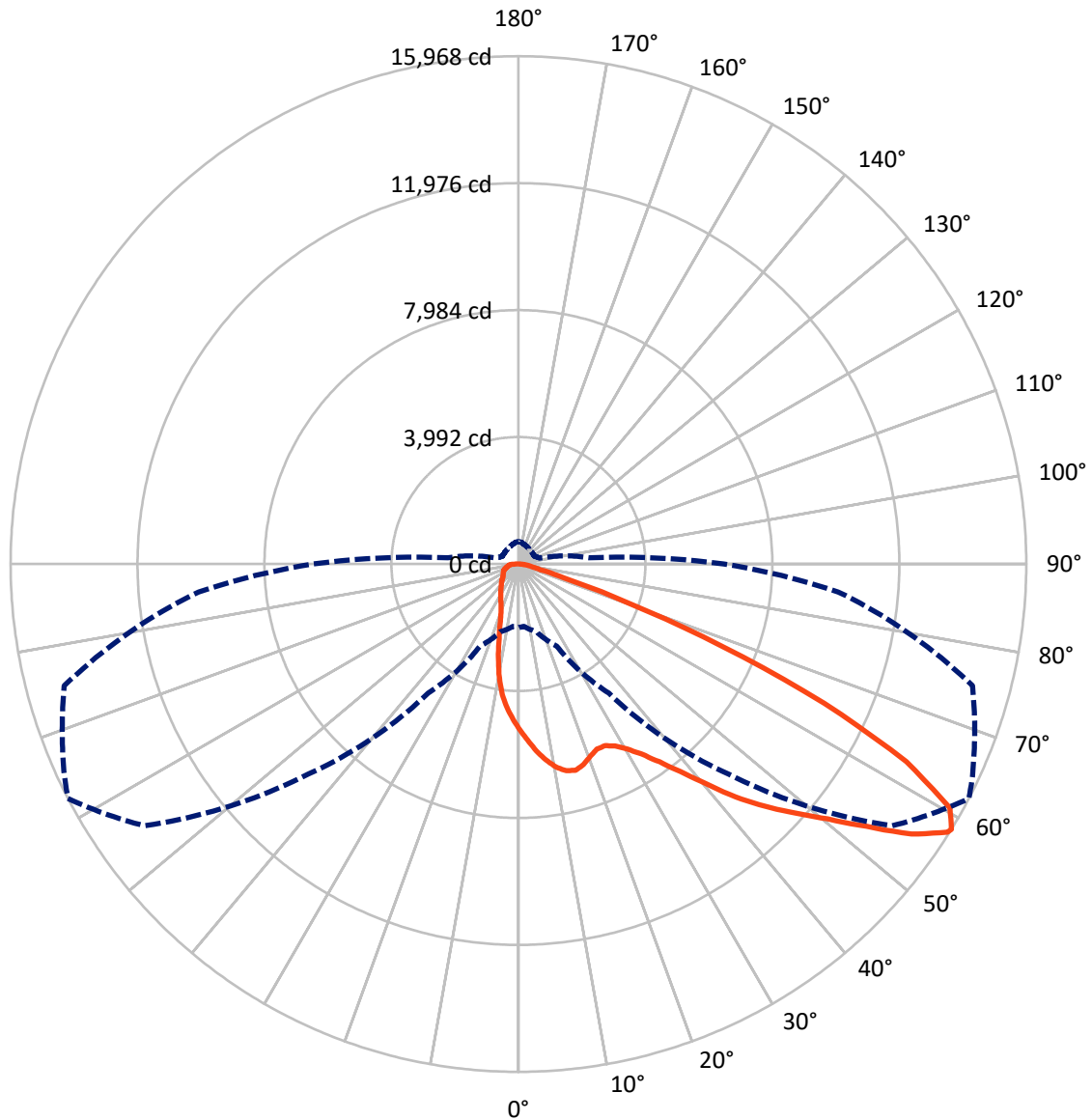
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 9.8 fc
 Type II - Short - Full Cutoff

REPORT NUMBER: P196498
CATALOG NUMBER: NAV-AF-04-D-UNV-AFL-7030-800

Luminous Intensity Polar Plot



— Vertical Plane Through 62.5-Deg Lateral - - - Horizontal Cone Through 58-Deg Vertical

REPORT NUMBER: P196498

CATALOG NUMBER: NAV-AF-04-D-UNV-AFL-7030-800

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2999.1	0.0	2999.1
	% Fixture	15.4	0.0	15.4
Street Side	Lumens	16534.3	0.0	16534.3
	% Fixture	84.6	0.0	84.6
Total	Lumens	19533.4	0.0	19533.4
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	466.2	2.4
10°-20°	1176.5	6.0
20°-30°	1906.6	9.8
30°-40°	3044.1	15.6
40°-50°	4427.7	22.7
50°-60°	4633.2	23.7
60°-70°	2824.5	14.5
70°-80°	789.9	4.0
80°-90°	264.8	1.4
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°	19533.4	100.0
0°-180°	19533.4	100.0



REPORT NUMBER: P196498

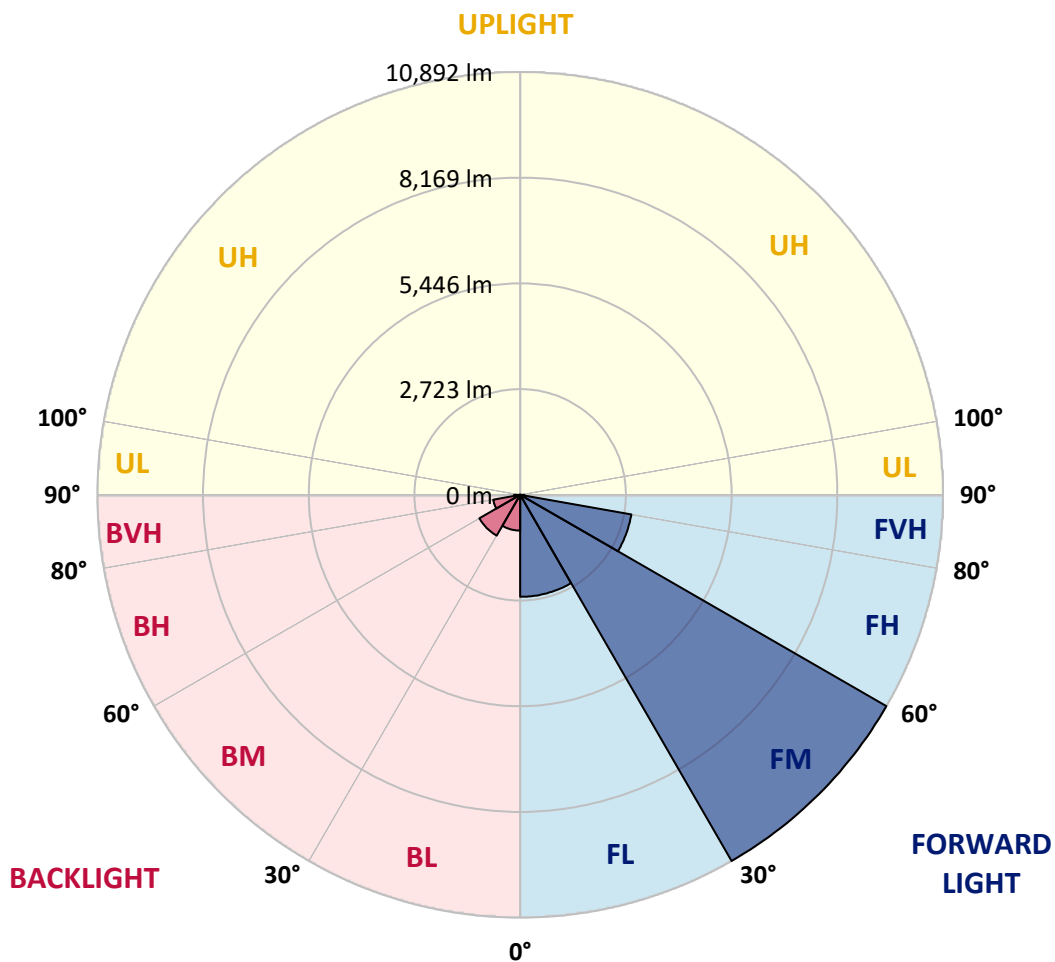
CATALOG NUMBER: NAV-AF-04-D-UNV-AFL-7030-800

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2627.3	13.5			
FM	(30°-60°)	10892.1	55.8			
FH	(60°-80°)	2908.4	14.9			G2/5000
FVH	(80°-90°)	106.5	0.5			G2/225
BL	(0°-30°)	921.9	4.7	B2/1000		
BM	(30°-60°)	1212.9	6.2	B2/2500		
BH	(60°-80°)	706.0	3.6	B2/1000		G2/1000
BVH	(80°-90°)	158.3	0.8			G2/225
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





REPORT NUMBER: P196498

CATALOG NUMBER: NAV-AF-04-D-UNV-AFL-7030-800

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	62.5°	65°	75°	85°
0°	5215.3	5215.3	5215.3	5215.3	5215.3	5215.3	5215.3	5215.3	5215.3	5215.3	5215.3
2.5°	5919.6	5916.1	5866.0	5833.1	5793.9	5703.6	5613.3	5546.1	5511.9	5381.3	5254.4
5°	6409.2	6394.6	6366.5	6331.1	6279.7	6166.3	6023.5	5900.1	5851.3	5619.4	5386.2
7.5°	6150.4	6173.5	6260.3	6357.9	6460.5	6467.8	6366.5	6220.0	6166.3	5856.2	5514.5
10°	5433.8	5424.0	5532.7	5723.1	6061.2	6395.8	6563.1	6491.0	6434.9	6080.9	5642.5
12.5°	5216.5	5214.1	5232.4	5281.1	5493.7	5952.7	6513.0	6669.3	6649.7	6318.9	5779.3
15°	5282.4	5284.9	5283.7	5289.8	5348.3	5566.9	6233.5	6729.1	6790.1	6554.5	5918.5
17.5°	5493.7	5485.1	5458.3	5428.9	5437.5	5515.6	5931.9	6626.6	6809.7	6764.5	6035.7
20°	5819.5	5819.5	5747.6	5665.7	5612.0	5629.1	5806.1	6450.7	6719.3	6942.8	6123.6
22.5°	6228.6	6234.7	6128.5	5979.5	5857.4	5811.1	5878.1	6320.1	6609.4	7107.6	6201.7
25°	6736.4	6735.2	6580.1	6366.5	6173.5	6062.5	6061.2	6326.2	6575.2	7300.3	6283.5
27.5°	7365.1	7307.7	7127.1	6823.1	6550.8	6381.2	6304.3	6480.0	6647.4	7537.2	6393.3
30°	8074.4	8015.8	7778.9	7388.3	7019.6	6771.8	6644.8	6746.2	6867.1	7838.8	6559.4
32.5°	8776.4	8789.8	8511.4	8070.8	7597.2	7247.9	7059.9	7122.2	7206.4	8207.4	6784.0
35°	9804.3	9803.1	9439.2	8888.7	8325.9	7842.4	7604.5	7637.3	7714.2	8727.5	7099.0
37.5°	10571.0	10558.7	10324.4	9837.2	9203.7	8623.8	8279.5	8284.4	8350.3	9380.7	7514.1
40°	10649.1	10646.7	10645.4	10575.9	10142.4	9595.5	9164.5	9075.5	9102.3	10074.1	7954.7
42.5°	10052.1	10141.2	10397.5	10790.7	10911.6	10624.7	10217.0	10018.0	9959.3	10870.1	8421.1
45°	9201.2	9246.4	9695.6	10579.5	11298.6	11591.6	11285.2	10865.2	10765.1	11644.1	8800.9
47.5°	8805.6	8786.2	9046.1	10009.4	11260.7	12360.6	12382.7	11694.1	11524.4	12311.8	9124.4
50°	7957.3	7931.5	8260.0	9170.6	10848.2	12742.8	13509.5	12597.5	12283.8	12946.6	9417.3
52.5°	6266.3	6242.0	6682.8	7855.8	9925.1	12599.9	14459.3	13706.0	13171.3	13558.3	9690.8
55°	4077.4	4080.0	4499.9	5709.7	8031.6	11767.3	14904.8	14986.6	14387.1	14170.0	9911.7
57.5°	2245.1	2224.3	2523.5	3266.9	5525.3	9876.3	14533.6	15909.6	15597.0	14694.9	10071.6
58°	1996.0	1971.6	2202.3	2843.3	4954.1	9342.9	14347.0	15968.1	15752.0	14781.4	10094.8
60°	1422.2	1380.7	1345.3	1603.0	2854.3	6736.4	13101.8	15588.4	15797.2	14954.9	10072.8
62.5°	1198.8	1151.3	1024.3	1014.5	1344.1	3294.9	10360.9	13690.0	14274.8	14555.6	9718.8
65°	1113.4	1065.8	898.5	838.7	912.0	1422.2	6406.8	10571.0	11352.2	13167.6	8827.6
67.5°	1052.3	996.2	816.7	738.6	753.3	850.9	2718.7	6913.4	7819.2	10268.1	7081.8
70°	997.4	935.1	752.0	661.7	649.4	647.1	1062.1	3609.9	4482.8	6719.3	4744.0
72.5°	935.1	874.1	694.7	598.2	571.3	525.0	638.5	1491.8	2044.9	3293.7	2174.3
75°	844.8	794.8	631.2	545.8	499.4	426.1	471.2	715.4	881.4	1261.1	1009.5
77.5°	743.5	703.2	566.4	501.7	439.4	347.9	360.1	484.7	544.4	710.5	584.7
80°	526.2	540.9	494.4	442.0	387.0	280.8	277.1	355.2	390.7	477.4	393.2
82.5°	362.6	373.5	402.8	349.2	312.5	218.5	203.9	246.6	265.0	288.1	190.4
85°	258.8	251.6	279.6	250.3	229.6	139.2	130.7	156.2	167.2	175.8	91.6
87.5°	157.5	156.2	161.1	129.4	119.6	70.8	64.7	74.6	79.3	76.9	43.9
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: P196498

CATALOG NUMBER: NAV-AF-04-D-UNV-AFL-7030-800

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	5215.3	5215.3	5215.3	5215.3	5215.3	5215.3	5215.3	5215.3	5215.3	5215.3	5215.3
2.5°	5206.8	5146.8	5016.3	4911.3	4797.8	4711.0	4624.4	4575.6	4521.9	4491.3	4487.8
5°	5264.1	5142.1	4863.6	4604.8	4338.8	4099.5	3865.0	3691.8	3550.1	3469.5	3464.6
7.5°	5327.6	5135.9	4706.3	4258.2	3784.5	3313.3	2897.0	2602.8	2413.5	2325.6	2319.6
10°	5376.4	5110.3	4514.6	3817.4	3066.7	2444.0	2065.6	1892.3	1834.9	1820.3	1817.7
12.5°	5435.0	5092.0	4272.8	3252.2	2343.9	1860.4	1745.8	1734.8	1746.9	1754.2	1755.5
15°	5489.9	5056.6	3946.9	2625.9	1834.9	1662.7	1665.2	1688.4	1712.7	1723.8	1724.9
17.5°	5515.6	4969.8	3518.3	2069.3	1605.3	1573.7	1601.7	1632.3	1654.1	1662.7	1662.7
20°	5515.6	4830.7	3021.4	1676.1	1485.7	1491.8	1526.1	1549.2	1554.1	1546.8	1543.1
22.5°	5492.4	4658.6	2538.1	1462.6	1388.0	1411.3	1438.1	1422.2	1364.8	1321.0	1312.3
25°	5471.7	4454.7	2072.9	1331.9	1302.6	1333.1	1322.1	1213.5	1125.6	1080.5	1073.0
27.5°	5437.5	4208.1	1684.7	1224.5	1219.6	1244.0	1135.3	1030.4	986.4	962.0	957.1
30°	5428.9	3940.8	1410.0	1129.2	1137.8	1103.6	979.1	944.9	935.1	921.7	915.6
32.5°	5457.0	3673.4	1237.9	1051.1	1059.7	947.4	899.7	904.6	903.3	886.3	880.2
35°	5533.9	3413.4	1128.0	980.3	955.9	848.5	854.5	869.2	869.2	848.5	841.2
37.5°	5668.2	3171.7	1058.4	920.5	836.3	797.1	813.1	832.5	832.5	818.0	811.8
40°	5811.1	2936.1	1006.0	872.9	760.6	761.7	777.7	792.3	798.3	800.9	796.0
42.5°	5940.4	2691.9	949.8	821.6	726.3	734.9	742.2	753.3	778.9	796.0	793.6
45°	6016.2	2446.6	888.8	758.1	703.2	706.8	704.4	724.0	754.4	780.1	780.1
47.5°	6085.7	2245.1	838.7	694.7	680.0	680.0	672.7	692.1	720.2	750.8	753.3
50°	6151.7	2114.3	803.3	645.8	650.6	647.1	644.6	662.8	700.8	737.4	743.5
52.5°	6218.8	2070.5	771.6	610.4	620.1	615.2	617.8	643.3	686.0	724.0	730.1
55°	6312.8	2098.6	738.6	585.9	590.9	589.7	599.4	628.7	666.6	704.4	706.8
57.5°	6428.9	2201.1	710.5	567.7	562.8	570.2	585.9	614.0	650.6	695.9	699.5
58°	6452.0	2225.5	705.6	562.8	556.6	567.7	583.6	610.4	648.2	695.9	699.5
60°	6487.4	2312.3	693.5	553.1	535.9	555.5	575.0	601.9	643.3	702.0	709.3
62.5°	6316.5	2329.3	689.8	542.0	513.9	538.4	561.6	592.0	638.5	722.8	738.6
65°	5724.3	2153.5	664.1	523.7	495.6	525.0	549.3	584.7	653.2	785.0	792.3
67.5°	4595.1	1788.5	601.9	495.6	474.8	509.0	539.6	584.7	659.3	794.8	799.7
70°	3159.4	1344.1	523.7	465.1	450.4	489.6	535.9	598.2	638.5	752.0	737.4
72.5°	1650.6	935.1	459.0	429.7	421.2	472.4	571.3	584.7	614.0	702.0	687.4
75°	831.4	636.0	404.0	389.4	388.2	466.3	639.7	562.8	588.5	660.5	692.1
77.5°	490.8	498.1	360.1	351.6	357.8	455.4	641.0	540.9	559.1	607.9	642.1
80°	335.8	411.4	325.9	323.5	328.5	418.8	590.9	513.9	525.0	575.0	611.7
82.5°	189.2	227.0	285.7	301.5	299.2	343.1	510.4	467.5	481.0	680.0	719.0
85°	91.6	136.7	239.3	282.0	255.1	228.3	415.0	415.0	418.8	487.1	493.2
87.5°	34.2	61.0	161.1	223.4	178.2	136.7	282.0	294.2	327.1	336.9	344.2
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)