

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: P196656

Luminaire Tested: **NAV-AF-06-D-UNV-SL4-7030-1200-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196656
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24285)
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-SL4-7030-1200-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 3000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV
SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 31133.4 lumens
Efficiency: N/A
Efficacy: 81.5 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B2 - U0 - G5

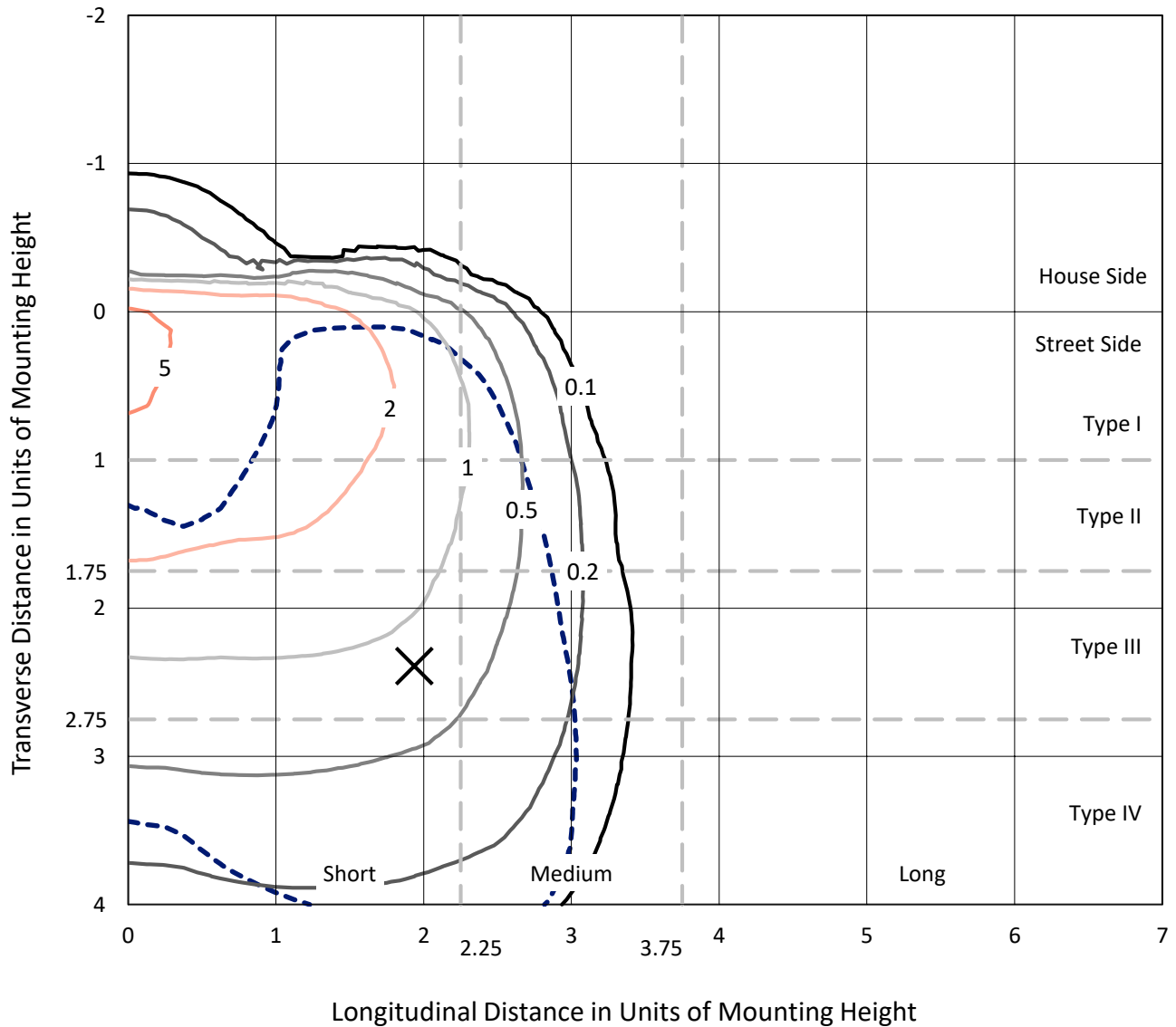
Input Watts (W): 382
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P196656
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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

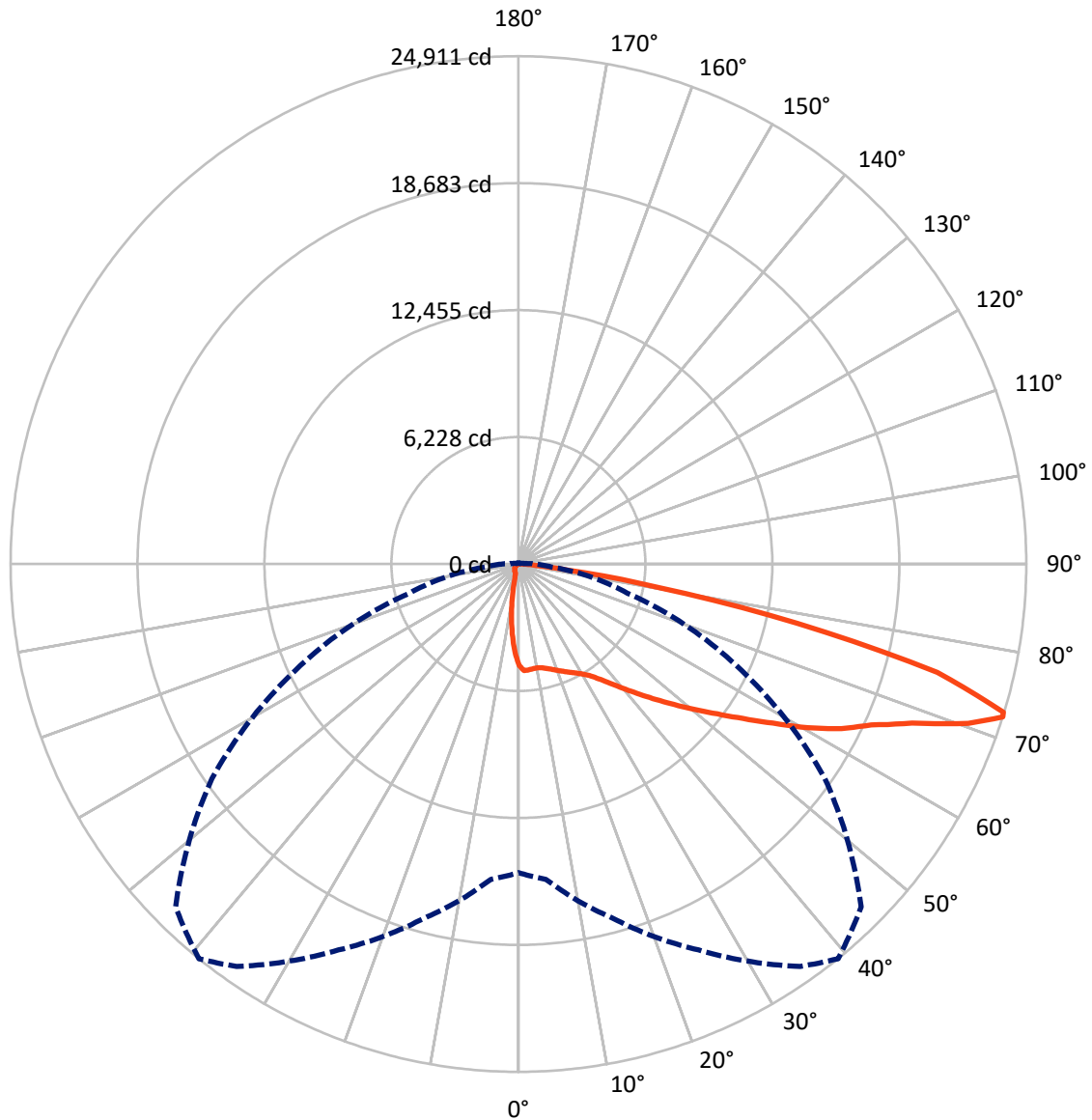


Based on 30 foot mounting height. Maximum calculated value = 5.8 fc
 Type IV - Short - Non-Cutoff

REPORT NUMBER: P196656

CATALOG NUMBER: NAV-AF-06-D-UNV-SL4-7030-1200-HSS

Luminous Intensity Polar Plot



— Vertical Plane Through 39-Deg Lateral - - - Horizontal Cone Through 72-Deg Vertical

REPORT NUMBER: P196656

CATALOG NUMBER: NAV-AF-06-D-UNV-SL4-7030-1200-HSS

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2040.4	0.0	2040.4
	% Fixture	6.6	0.0	6.6
Street Side	Lumens	29093.0	0.0	29093.0
	% Fixture	93.4	0.0	93.4
Total	Lumens	31133.4	0.0	31133.4
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	405.3	1.3
10°-20°	981.3	3.2
20°-30°	1629.7	5.2
30°-40°	2597.4	8.3
40°-50°	4287.3	13.8
50°-60°	6474.7	20.8
60°-70°	8434.3	27.1
70°-80°	5699.2	18.3
80°-90°	624.2	2.0
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°	31133.4	100.0
0°-180°	31133.4	100.0



REPORT NUMBER: P196656

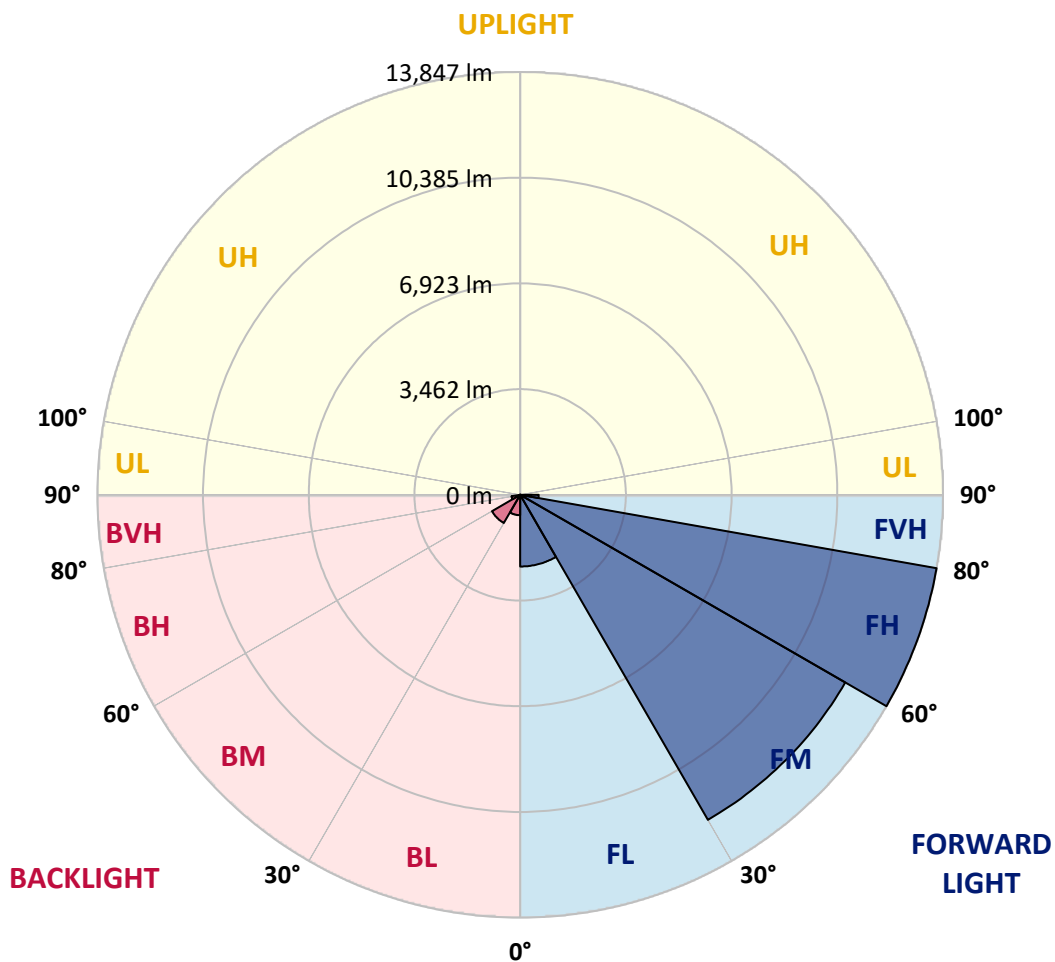
CATALOG NUMBER: NAV-AF-06-D-UNV-SL4-7030-1200-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2348.2	7.5			
FM	(30°-60°)	12291.9	39.5			
FH	(60°-80°)	13846.7	44.5			G5
FVH	(80°-90°)	606.2	1.9			G4/750
BL	(0°-30°)	668.1	2.1	B2/1000		
BM	(30°-60°)	1067.6	3.4	B2/2500		
BH	(60°-80°)	286.8	0.9	B1/500		G1/500
BVH	(80°-90°)	18.0	0.1			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G5

Type IV Short





REPORT NUMBER: P196656

CATALOG NUMBER: NAV-AF-06-D-UNV-SL4-7030-1200-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	39°	45°	55°	65°	75°	85°
0°	4983.1	4983.1	4983.1	4983.1	4983.1	4983.1	4983.1	4983.1	4983.1	4983.1	4983.1
2.5°	5306.1	5316.0	5303.8	5281.7	5249.9	5230.3	5203.4	5144.7	5071.3	5007.6	4934.1
5°	5347.8	5352.7	5338.0	5296.4	5247.4	5220.5	5186.2	5122.6	5046.8	4958.6	4826.4
7.5°	5360.0	5357.5	5340.5	5289.0	5213.2	5178.9	5120.2	5041.9	4963.5	4882.8	4733.4
10°	5355.2	5355.2	5342.9	5293.9	5208.3	5176.4	5110.4	5027.1	4929.2	4848.5	4689.4
12.5°	5338.0	5347.8	5340.5	5313.5	5249.9	5225.5	5166.7	5083.5	4990.4	4907.3	4738.3
15°	5360.0	5374.7	5389.4	5379.6	5342.9	5320.8	5267.1	5181.4	5105.4	5017.4	4836.3
17.5°	5448.1	5479.9	5514.2	5516.6	5477.5	5438.4	5377.2	5289.0	5215.6	5134.8	4939.1
20°	5614.7	5639.1	5702.7	5715.0	5636.5	5580.3	5494.6	5391.8	5318.4	5249.9	5034.5
22.5°	5861.8	5888.6	5940.1	5923.0	5790.7	5724.7	5617.0	5499.6	5423.6	5384.6	5144.7
25°	6236.2	6243.6	6255.8	6179.9	5962.1	5888.6	5756.6	5624.3	5563.2	5558.2	5301.3
27.5°	6676.8	6686.5	6632.7	6463.9	6153.1	6057.6	5908.3	5788.3	5758.9	5795.6	5499.6
30°	7180.9	7183.4	7034.1	6760.0	6373.3	6268.1	6113.8	5981.7	6008.6	6099.2	5754.0
32.5°	7697.5	7672.9	7467.4	7109.9	6674.3	6547.1	6414.9	6282.7	6361.1	6544.6	6126.0
35°	8169.8	8159.9	7917.7	7501.6	7065.9	6953.4	6857.8	6718.4	6845.6	7144.3	6632.7
37.5°	8642.1	8634.8	8358.3	7925.0	7548.0	7467.4	7396.3	7288.6	7496.8	7934.7	7310.6
40°	9163.5	9151.2	8811.0	8394.9	8108.5	8064.5	8022.9	7976.4	8331.2	8940.6	8155.1
42.5°	9807.1	9753.2	9290.8	8906.5	8725.3	8737.6	8739.9	8786.5	9342.1	10137.5	9151.2
45°	10546.2	10426.4	9772.9	9454.6	9403.3	9476.7	9550.2	9743.5	10519.4	11515.5	10252.6
47.5°	11263.4	11070.0	10328.5	10044.5	10149.7	10301.5	10477.8	10854.7	11841.0	12957.0	11251.2
50°	11880.2	11681.9	10879.2	10644.1	10979.5	11204.6	11517.9	12088.2	13236.1	14176.0	11880.2
52.5°	12364.8	12208.1	11461.7	11304.9	11899.8	12208.1	12700.1	13449.0	14552.8	14978.7	12320.7
55°	12722.1	12643.8	12019.6	12041.7	12922.7	13368.2	13980.2	14826.9	15664.0	15602.8	12651.1
57.5°	13126.0	13064.7	12604.5	12910.5	14153.9	14729.0	15436.3	16116.8	16471.7	16104.5	12974.2
60°	13539.5	13559.2	13314.5	13963.0	15676.2	16312.6	16929.4	17098.2	17164.3	16613.6	13314.5
62.5°	13852.9	13936.0	13958.1	15098.6	17237.8	17781.1	18047.9	17928.0	17913.3	17296.5	13287.4
65°	14212.7	14430.4	14792.7	16344.4	18657.3	19014.6	19205.5	19379.4	19012.2	17499.6	11980.5
67.5°	14834.2	15176.9	15992.0	17871.6	20297.1	20825.8	21366.6	21183.0	19176.2	15436.3	9126.8
70°	15671.4	16089.8	17529.0	19866.4	22521.8	23407.9	23860.7	21038.8	16280.7	10666.2	4814.2
72°	15142.7	15522.0	18003.8	20884.5	24098.1	24910.7	23777.4	18351.3	11801.8	5528.8	1612.8
72.5°	14628.7	15020.3	17852.1	20872.3	24254.7	24876.3	23236.5	17291.6	10443.4	4302.7	1111.1
75°	10149.7	10644.1	15304.2	18762.5	21902.6	21219.8	17778.6	10470.5	3783.8	739.1	367.1
77.5°	5247.4	5629.2	9283.3	13258.1	15265.0	13980.2	10507.1	4542.6	1047.6	391.5	242.3
80°	3252.7	3441.2	4341.9	6532.4	7929.9	6936.3	4635.6	1835.7	670.7	232.5	193.4
82.5°	1683.9	1828.2	2733.8	2636.0	2929.7	2435.3	1710.8	1537.1	413.6	144.4	198.2
85°	553.2	587.4	1679.0	1752.4	1253.1	842.0	758.7	1466.0	119.9	93.0	169.0
87.5°	73.4	85.7	589.9	1003.4	616.8	381.9	455.3	516.5	41.6	51.4	46.6
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: P196656

CATALOG NUMBER: NAV-AF-06-D-UNV-SL4-7030-1200-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	4983.1	4983.1	4983.1	4983.1	4983.1	4983.1	4983.1	4983.1	4983.1	4983.1	4983.1
2.5°	4885.2	4853.4	4753.0	4652.7	4537.6	4432.4	4349.2	4295.3	4319.8	4239.0	4251.3
5°	4745.6	4665.0	4444.6	4207.2	3950.3	3710.5	3519.5	3377.5	3350.7	3228.3	3233.1
7.5°	4611.1	4479.0	4121.6	3730.0	3304.1	2959.1	2645.7	2371.6	2273.6	2173.3	2114.6
10°	4537.6	4356.5	3850.0	3279.6	2680.0	2173.3	1732.9	1387.7	1243.4	1138.1	1086.7
12.5°	4559.7	4319.8	3646.7	2870.9	2082.8	1439.2	979.0	726.9	638.8	589.9	572.7
15°	4633.1	4327.2	3463.2	2472.0	1515.0	871.4	575.1	492.0	484.6	482.2	479.7
17.5°	4701.7	4334.6	3269.9	2055.9	1013.3	555.6	462.6	455.3	455.3	455.3	455.3
20°	4772.7	4336.9	3057.0	1620.2	665.7	455.3	435.6	430.8	435.6	435.6	435.6
22.5°	4855.8	4354.1	2851.3	1196.8	492.0	428.3	416.1	413.6	416.1	416.1	413.6
25°	4958.6	4390.8	2628.6	856.6	445.4	411.2	398.9	396.5	398.9	396.5	396.5
27.5°	5095.8	4439.8	2369.2	614.4	425.9	394.1	381.9	381.9	381.9	379.3	379.3
30°	5271.9	4498.5	2021.7	484.6	406.3	377.0	367.1	367.1	364.7	362.2	362.2
32.5°	5524.0	4594.0	1642.2	438.1	384.3	354.9	345.2	347.6	345.2	342.6	340.3
35°	5881.3	4743.3	1267.9	413.6	362.2	332.9	323.1	323.1	323.1	318.2	318.2
37.5°	6388.0	4970.9	949.7	389.2	340.3	310.9	298.6	298.6	296.2	291.2	293.7
40°	7014.6	5257.2	687.8	367.1	318.2	286.4	276.5	271.6	266.8	261.9	261.9
42.5°	7768.4	5536.2	516.5	345.2	296.2	266.8	254.6	249.6	239.9	234.9	232.5
45°	8612.8	5832.4	428.3	318.2	271.6	244.7	234.9	225.2	212.9	205.6	203.1
47.5°	9324.9	6013.5	381.9	291.2	247.2	222.7	212.9	198.2	183.5	178.6	178.6
50°	9753.2	5937.5	342.6	264.3	222.7	200.7	188.5	169.0	159.1	154.2	151.8
52.5°	9993.2	5712.5	310.9	242.3	200.7	176.2	159.1	141.9	137.0	132.2	132.2
55°	10157.1	5386.9	276.5	220.2	181.2	154.2	134.6	122.4	117.5	115.0	112.5
57.5°	10313.7	4990.4	244.7	200.7	161.4	137.0	115.0	110.2	100.3	97.9	97.9
60°	10360.3	4444.6	215.3	178.6	144.4	119.9	100.3	93.0	83.2	80.8	80.8
62.5°	9768.0	3536.6	190.8	151.8	127.3	102.8	88.1	78.3	68.5	68.5	68.5
65°	8162.4	2401.0	164.0	132.2	112.5	88.1	75.8	63.6	58.8	58.8	58.8
67.5°	5685.6	1338.8	139.6	112.5	95.5	73.4	63.6	53.9	51.4	53.9	53.9
70°	2562.5	531.1	117.5	93.0	78.3	61.1	53.9	46.6	51.4	51.4	51.4
72°	768.5	283.8	97.9	75.8	63.6	53.9	46.6	44.0	48.9	51.4	51.4
72.5°	570.3	254.6	93.0	73.4	63.6	51.4	44.0	44.0	48.9	51.4	51.4
75°	293.7	173.7	71.0	53.9	46.6	41.6	36.7	41.6	48.9	48.9	48.9
77.5°	230.1	141.9	58.8	41.6	39.2	36.7	34.3	39.2	44.0	44.0	44.0
80°	215.3	93.0	46.6	39.2	34.3	31.8	31.8	34.3	39.2	41.6	41.6
82.5°	217.9	75.8	41.6	36.7	31.8	29.4	29.4	31.8	36.7	39.2	39.2
85°	139.6	51.4	36.7	31.8	29.4	26.9	26.9	29.4	34.3	36.7	36.7
87.5°	46.6	39.2	31.8	29.4	24.5	24.5	24.5	24.5	29.4	31.8	34.3
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)