

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: P270575

Luminaire Tested: **NAV-AF-05-D-UNV-AFL-7027-600-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270575
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-7027-600-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 70 CRI, 2700K, 615mA 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: 14447.4 lumens
Efficiency: N/A
Efficacy: 89.2 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type II - Short - Full Cutoff
BUG Rating: B1 - U0 - G2

Input Watts (W): 162
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

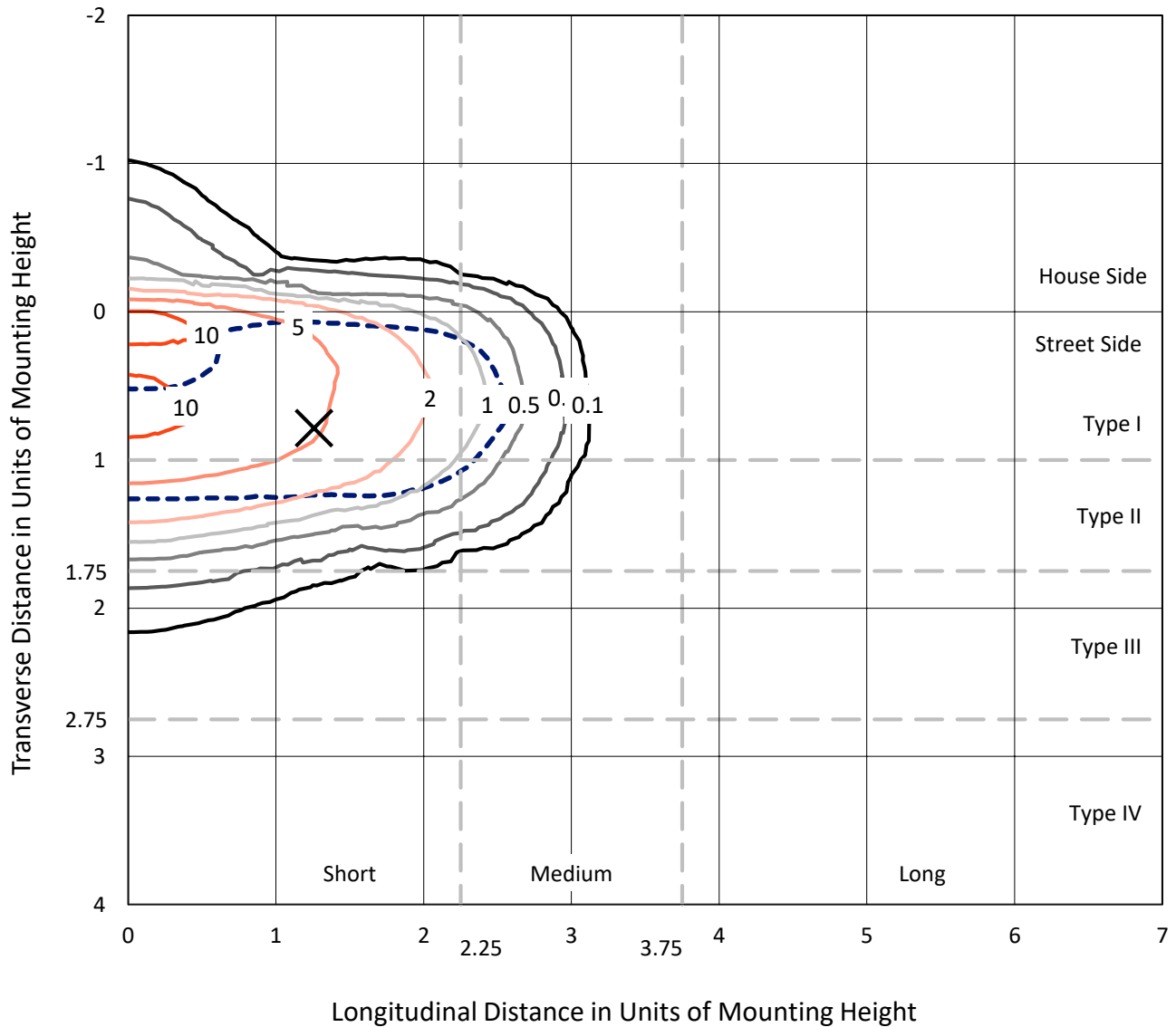


REPORT NUMBER: P270575

CATALOG NUMBER: NAV-AF-05-D-UNV-AFL-7027-600-HSS

Iso-Footcandle Lines of Horizontal Illumination

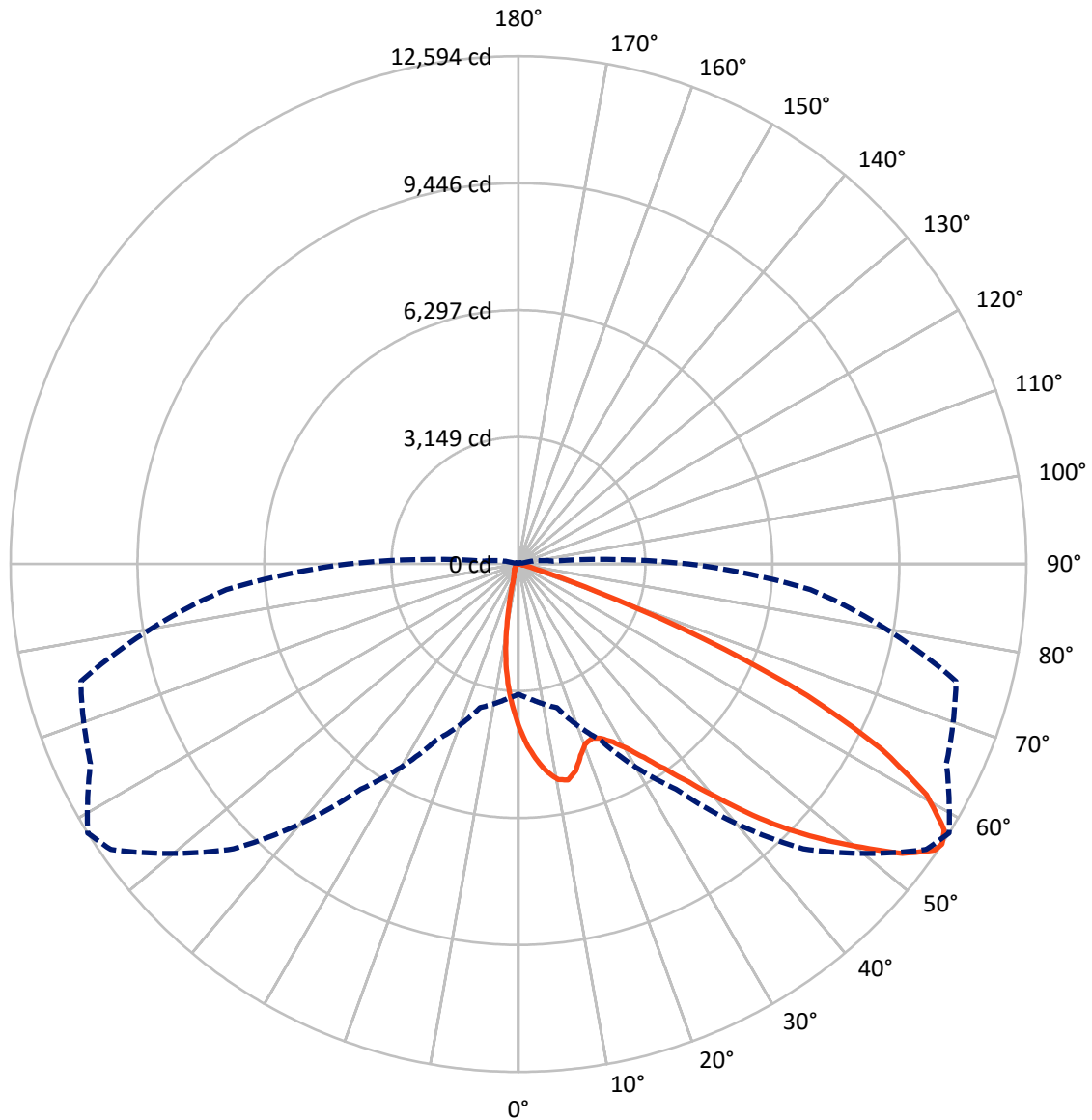
✕ Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 12.7 fc
 Type II - Short - Full Cutoff

REPORT NUMBER: P270575
CATALOG NUMBER: NAV-AF-05-D-UNV-AFL-7027-600-HSS

Luminous Intensity Polar Plot



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

REPORT NUMBER: P270575

CATALOG NUMBER: NAV-AF-05-D-UNV-AFL-7027-600-HSS

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	901.8	0.0	901.8
	% Fixture	6.2	0.0	6.2
Street Side	Lumens	13545.6	0.0	13545.6
	% Fixture	93.8	0.0	93.8
Total	Lumens	14447.4	0.0	14447.4
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	348.9	2.4
10°-20°	811.9	5.6
20°-30°	1366.2	9.5
30°-40°	2339.5	16.2
40°-50°	3530.4	24.4
50°-60°	3669.7	25.4
60°-70°	2060.1	14.3
70°-80°	282.4	2.0
80°-90°	38.3	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°	14447.4	100.0
0°-180°	14447.4	100.0

Coefficient of Utilization



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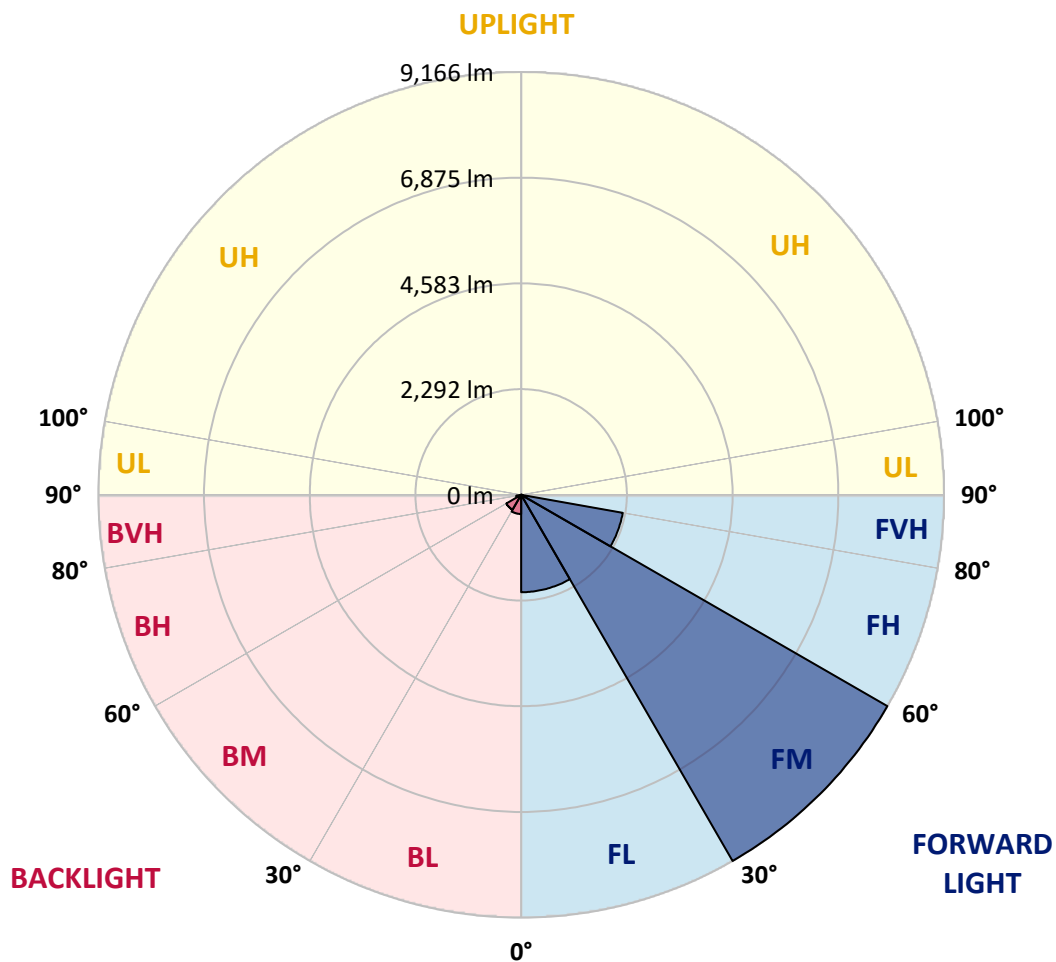
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2111.1	14.6			
FM	(30°-60°)	9166.0	63.4			
FH	(60°-80°)	2235.5	15.5			G2/5000
FVH	(80°-90°)	33.0	0.2			G1/100
BL	(0°-30°)	416.0	2.9	B1/500		
BM	(30°-60°)	373.6	2.6	B1/1000		
BH	(60°-80°)	107.0	0.7	B0/110		G0/110
BVH	(80°-90°)	5.3	0.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G2

Type II Short





REPORT NUMBER: P270575

CATALOG NUMBER: NAV-AF-05-D-UNV-AFL-7027-600-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	4090.5	4090.5	4090.5	4090.5	4090.5	4090.5	4090.5	4090.5	4090.5	4090.5	4090.5
2.5°	4921.6	4891.8	4861.0	4803.6	4750.7	4669.2	4556.7	4529.3	4441.0	4295.5	4160.0
5°	5346.0	5340.5	5319.6	5273.2	5215.9	5116.7	4989.9	4905.0	4768.5	4539.1	4277.9
7.5°	5094.6	5141.0	5216.9	5325.1	5397.7	5387.9	5290.8	5216.9	5081.4	4768.5	4393.6
10°	4294.3	4303.2	4408.0	4635.1	4994.3	5329.5	5456.1	5436.4	5311.8	4969.1	4494.9
12.5°	4012.2	4017.8	4042.1	4114.7	4348.4	4815.9	5390.1	5493.7	5483.8	5160.9	4603.1
15°	4034.3	4037.6	4044.2	4067.3	4133.6	4368.3	5055.0	5318.4	5593.9	5342.7	4708.8
17.5°	4208.4	4206.3	4185.4	4163.3	4184.1	4261.4	4713.2	4991.1	5570.7	5495.9	4796.0
20°	4547.8	4559.0	4488.4	4390.2	4339.6	4342.9	4544.6	4752.9	5440.8	5614.9	4861.0
22.5°	5025.2	5032.9	4917.2	4747.5	4598.7	4523.7	4579.9	4690.1	5290.8	5725.2	4913.9
25°	5595.2	5595.2	5433.0	5191.7	4961.2	4797.0	4748.5	4790.4	5233.5	5849.8	4966.8
27.5°	6210.2	6232.3	6020.6	5704.1	5400.0	5159.7	5007.6	4999.8	5277.6	6006.2	5026.3
30°	6879.2	6899.1	6647.7	6260.8	5900.3	5592.8	5359.2	5308.5	5446.2	6216.8	5113.4
32.5°	7545.0	7561.6	7283.7	6889.1	6469.1	6107.7	5800.0	5719.7	5749.4	6524.3	5241.3
35°	8391.5	8394.8	8043.2	7573.6	7125.0	6700.6	6311.5	6232.3	6199.2	6912.3	5425.4
37.5°	9064.9	9038.6	8815.8	8371.7	7856.9	7413.8	6956.4	6852.8	6773.4	7457.9	5710.9
40°	9223.7	9223.7	9190.6	9057.3	8648.3	8221.7	7778.7	7624.4	7449.0	8100.6	6094.5
42.5°	8810.3	8836.8	9055.0	9345.0	9348.3	9074.9	8641.8	8511.7	8203.1	8832.5	6513.3
45°	7885.6	7893.2	8416.8	9199.5	9730.8	9887.4	9567.7	9387.9	8960.4	9593.0	6896.8
47.5°	7552.7	7576.9	7799.7	8756.4	9759.5	10545.4	10456.1	10209.1	9661.4	10287.4	7255.2
50°	7041.3	7071.0	7343.3	8103.8	9501.6	10967.5	11305.9	11041.3	10299.5	10866.1	7432.5
52.5°	5817.8	5864.0	6248.7	7240.8	8856.7	10985.2	12084.1	11925.4	10953.3	11175.9	7411.6
55°	4003.4	4037.6	4486.2	5652.4	7556.1	10446.1	12419.2	12528.3	11536.4	11245.3	7310.1
56°	3229.6	3357.4	3685.9	4815.9	6815.4	9987.6	12342.1	12594.4	11709.3	11234.3	7266.1
57.5°	2135.1	2159.3	2517.6	3489.7	5472.7	8992.3	11993.7	12453.4	11931.9	11178.1	7234.1
60°	1004.1	1015.2	1144.1	1610.4	2961.8	6553.0	10861.6	11624.4	12013.6	11060.1	7233.1
62.5°	654.8	656.9	672.4	768.3	1211.4	3569.1	9004.4	10102.2	11337.9	11046.8	7212.1
65°	539.1	544.6	525.8	537.9	633.8	1345.9	6351.2	7875.7	9751.7	10736.1	6976.1
67.5°	475.1	476.2	450.8	436.4	464.1	590.8	3199.9	4967.8	7293.7	9122.3	5746.1
70°	433.3	432.1	403.3	370.3	371.4	392.4	1042.8	2063.4	4035.4	5416.5	3299.0
72.5°	384.7	386.9	370.3	324.1	308.7	277.8	392.4	556.6	1373.4	1739.4	869.6
75°	337.4	332.9	316.4	286.6	258.0	186.3	197.3	237.1	358.2	354.9	187.3
77.5°	255.7	251.3	259.0	244.7	201.7	130.1	108.1	123.4	162.1	151.1	76.0
80°	195.1	192.9	176.3	209.5	184.2	98.2	73.8	76.0	88.2	80.5	37.5
82.5°	141.2	140.0	133.4	128.9	116.8	71.7	56.2	59.5	66.1	56.2	27.6
85°	54.0	54.0	104.7	88.2	80.5	48.5	39.6	42.9	50.8	40.9	18.8
87.5°	8.9	8.9	70.5	58.4	36.4	24.3	25.3	27.6	29.7	24.3	14.4
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: P270575

CATALOG NUMBER: NAV-AF-05-D-UNV-AFL-7027-600-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	4090.5	4090.5	4090.5	4090.5	4090.5	4090.5	4090.5	4090.5	4090.5	4090.5	4090.5
2.5°	4079.5	4005.6	3843.6	3687.1	3550.5	3400.4	3324.4	3236.2	3203.1	3137.1	3143.7
5°	4121.3	3967.1	3641.9	3299.0	2984.9	2665.4	2438.2	2224.4	2105.3	1987.4	1987.4
7.5°	4164.4	3928.5	3425.9	2878.0	2348.9	1801.1	1413.2	1102.3	929.1	813.4	810.1
10°	4194.0	3878.8	3180.0	2389.8	1609.4	928.0	560.0	440.9	397.9	379.2	378.0
12.5°	4232.8	3829.3	2900.1	1814.3	894.0	440.9	349.4	330.7	323.0	318.5	318.5
15°	4265.7	3758.7	2560.6	1220.2	469.5	330.7	300.9	294.4	293.1	292.0	293.1
17.5°	4273.4	3658.3	2153.9	714.2	340.5	288.7	275.6	270.0	270.0	269.0	269.0
20°	4255.8	3526.1	1704.2	440.9	294.4	265.7	251.3	244.7	243.6	243.6	243.6
22.5°	4219.5	3357.4	1260.0	334.0	267.9	244.7	226.0	219.4	219.4	220.4	221.5
25°	4174.2	3158.0	865.2	287.6	248.0	222.7	203.9	197.3	199.6	201.7	202.7
27.5°	4116.9	2919.9	566.7	249.1	221.5	200.6	184.2	179.8	184.2	188.5	190.7
30°	4059.6	2658.7	383.5	216.0	191.8	176.3	166.5	165.4	171.9	181.8	183.0
32.5°	4022.2	2390.7	290.0	194.0	168.6	155.4	151.1	153.3	163.1	174.1	176.3
35°	4018.8	2129.6	246.9	176.3	153.3	141.2	138.9	145.4	156.6	165.4	167.5
37.5°	4070.7	1884.9	223.8	163.1	141.2	128.9	125.7	137.8	147.7	156.6	158.7
40°	4175.4	1665.5	208.3	151.1	131.2	116.8	114.7	124.5	134.4	144.4	147.7
42.5°	4306.6	1460.6	190.7	138.9	120.2	103.7	101.4	109.1	119.0	133.4	135.6
45°	4420.1	1269.8	171.9	125.7	108.1	89.3	88.2	96.9	104.7	117.9	120.2
47.5°	4516.0	1111.1	154.2	111.3	92.5	79.4	78.2	82.6	87.0	99.3	101.4
50°	4465.3	976.5	136.7	91.4	75.0	68.4	67.3	67.3	72.8	84.9	87.0
52.5°	4340.7	892.8	120.2	76.0	61.8	58.4	55.2	56.2	61.8	67.3	68.4
55°	4240.4	853.1	105.8	67.3	51.8	48.5	45.2	44.0	45.2	42.9	40.9
56°	4216.1	848.8	102.4	65.0	49.5	45.2	40.9	38.5	37.5	33.1	32.0
57.5°	4205.1	848.8	96.9	60.6	46.4	40.9	35.3	30.8	26.5	23.1	23.1
60°	4196.3	854.3	90.4	52.9	39.6	33.1	25.3	18.8	15.5	15.5	15.5
62.5°	4177.6	852.0	82.6	44.0	34.1	25.3	15.5	12.1	11.0	12.1	13.2
65°	3967.1	791.4	72.8	35.3	26.5	17.6	8.9	8.9	9.9	12.1	13.2
67.5°	3196.6	599.6	59.5	27.6	18.8	13.2	7.7	7.7	9.9	12.1	13.2
70°	1755.8	316.4	50.8	19.9	14.4	11.0	7.7	6.6	9.9	12.1	13.2
72.5°	428.9	132.3	46.4	15.5	13.2	9.9	6.6	6.6	9.9	12.1	13.2
75°	105.8	99.3	37.5	12.1	11.0	8.9	6.6	6.6	9.9	12.1	13.2
77.5°	49.5	131.2	25.3	11.0	9.9	7.7	6.6	6.6	9.9	12.1	12.1
80°	29.7	99.3	15.5	9.9	8.9	7.7	6.6	6.6	9.9	12.1	13.2
82.5°	17.6	28.7	11.0	9.9	8.9	6.6	6.6	6.6	9.9	12.1	13.2
85°	15.5	14.4	11.0	9.9	8.9	7.7	6.6	6.6	11.0	13.2	13.2
87.5°	12.1	11.0	9.9	8.9	8.9	7.7	6.6	6.6	9.9	12.1	13.2
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)