

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: P270592

Luminaire Tested: **NAV-AF-05-D-UNV-SL2-7027-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270592
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24258)
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-SL2-7027-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 70 CRI, 2700K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II
SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 21309.9 lumens
Efficiency: N/A
Efficacy: 76.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type II - Medium - Semi-Cutoff
BUG Rating: B2 - U0 - G4

Input Watts (W): 279
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

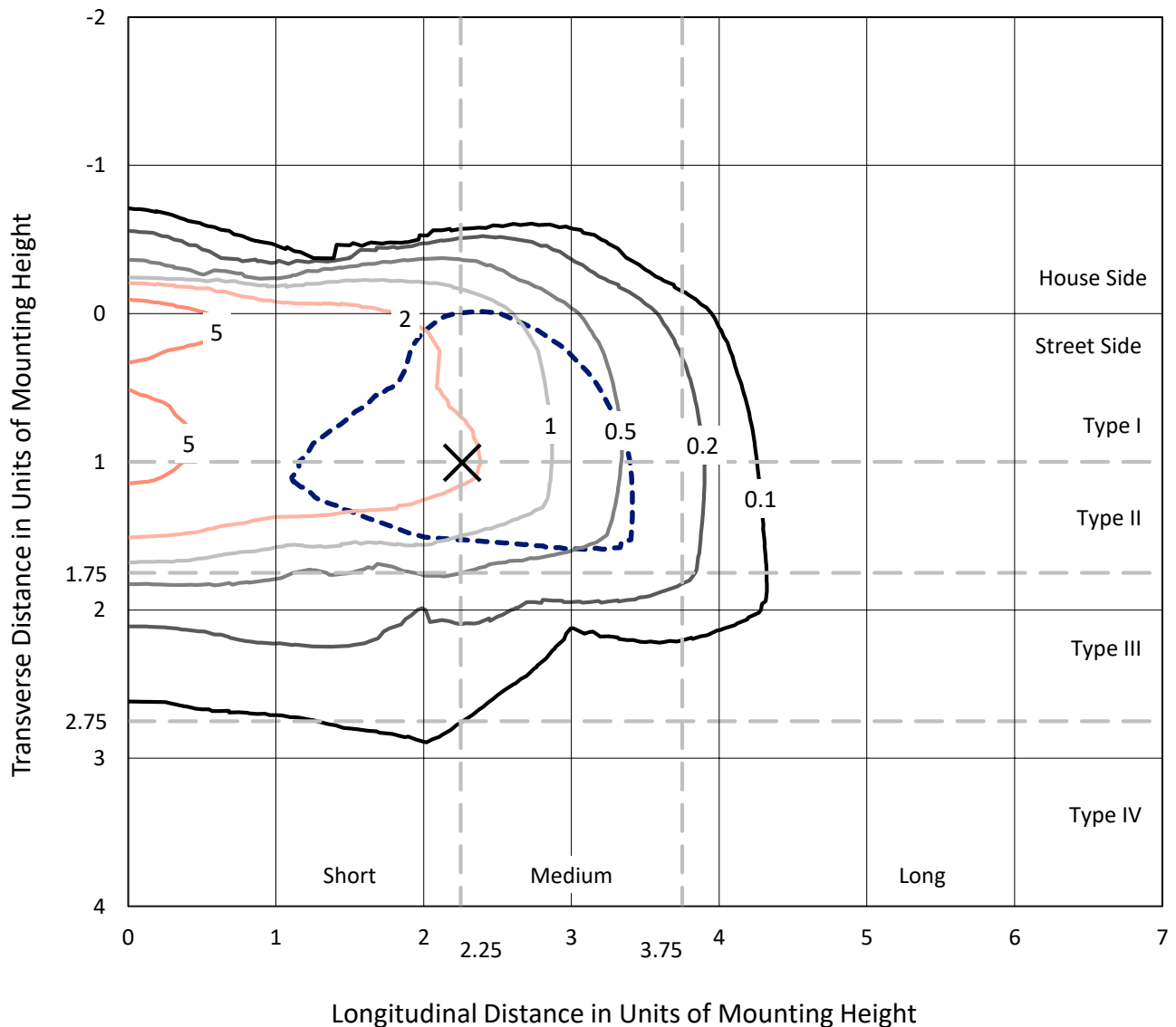


REPORT NUMBER: P270592

CATALOG NUMBER: NAV-AF-05-D-UNV-SL2-7027-HSS

Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

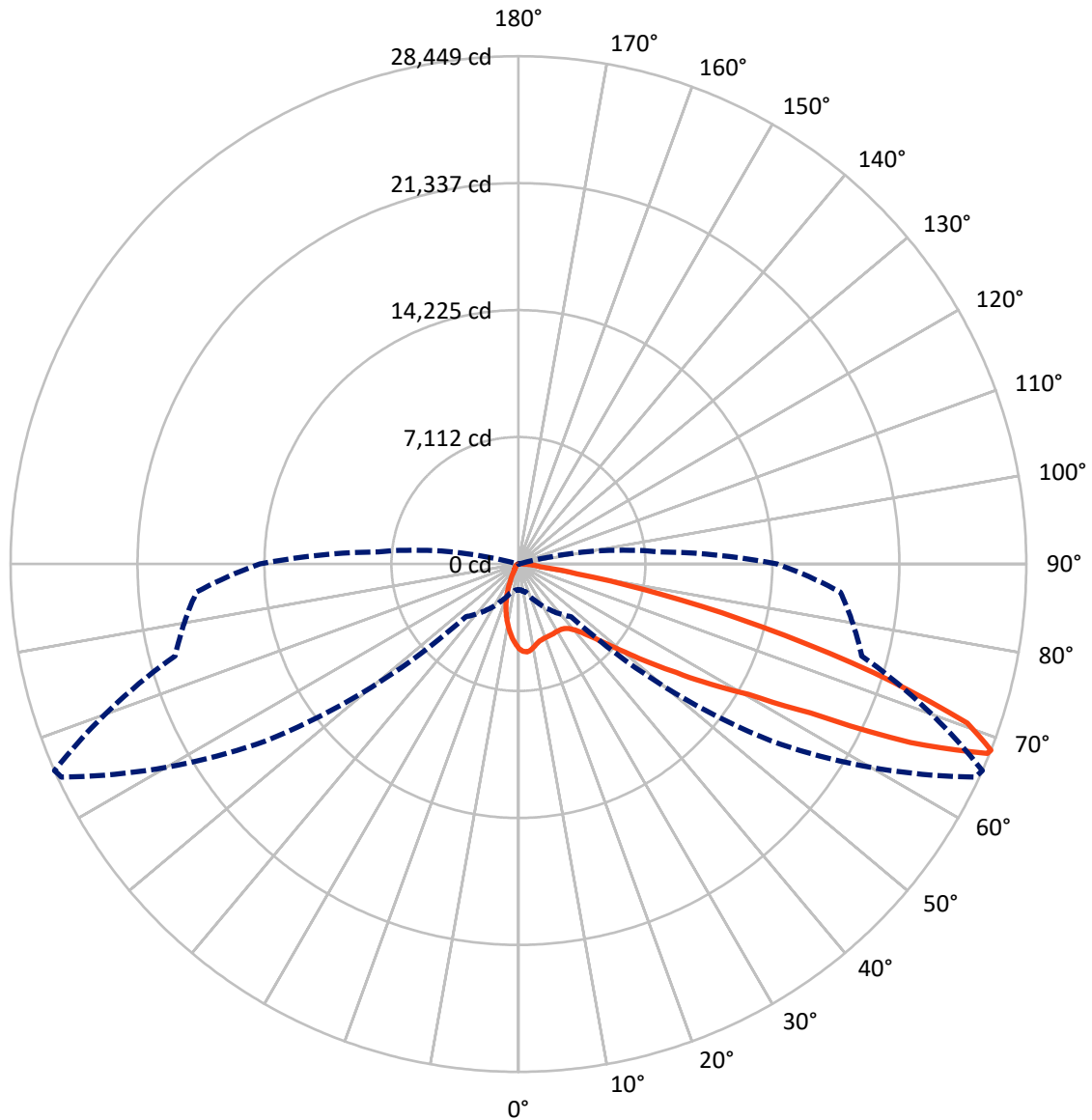


Based on 25 foot mounting height. Maximum calculated value = 7.6 fc
 Type II - Medium - Semi-Cutoff

REPORT NUMBER: P270592

CATALOG NUMBER: NAV-AF-05-D-UNV-SL2-7027-HSS

Luminous Intensity Polar Plot



— Vertical Plane Through 66-Deg Lateral - - - Horizontal Cone Through 68-Deg Vertical

REPORT NUMBER: P270592

CATALOG NUMBER: NAV-AF-05-D-UNV-SL2-7027-HSS

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2158.5	0.0	2158.5
	% Fixture	10.1	0.0	10.1
Street Side	Lumens	19151.4	0.0	19151.4
	% Fixture	89.9	0.0	89.9
Total	Lumens	21309.9	0.0	21309.9
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	389.2	1.8
10°-20°	837.4	3.9
20°-30°	1213.5	5.7
30°-40°	1857.6	8.7
40°-50°	3177.4	14.9
50°-60°	4970.3	23.3
60°-70°	5723.1	26.9
70°-80°	2863.9	13.4
80°-90°	277.4	1.3
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°	21309.9	100.0
0°-180°	21309.9	100.0



REPORT NUMBER: P270592

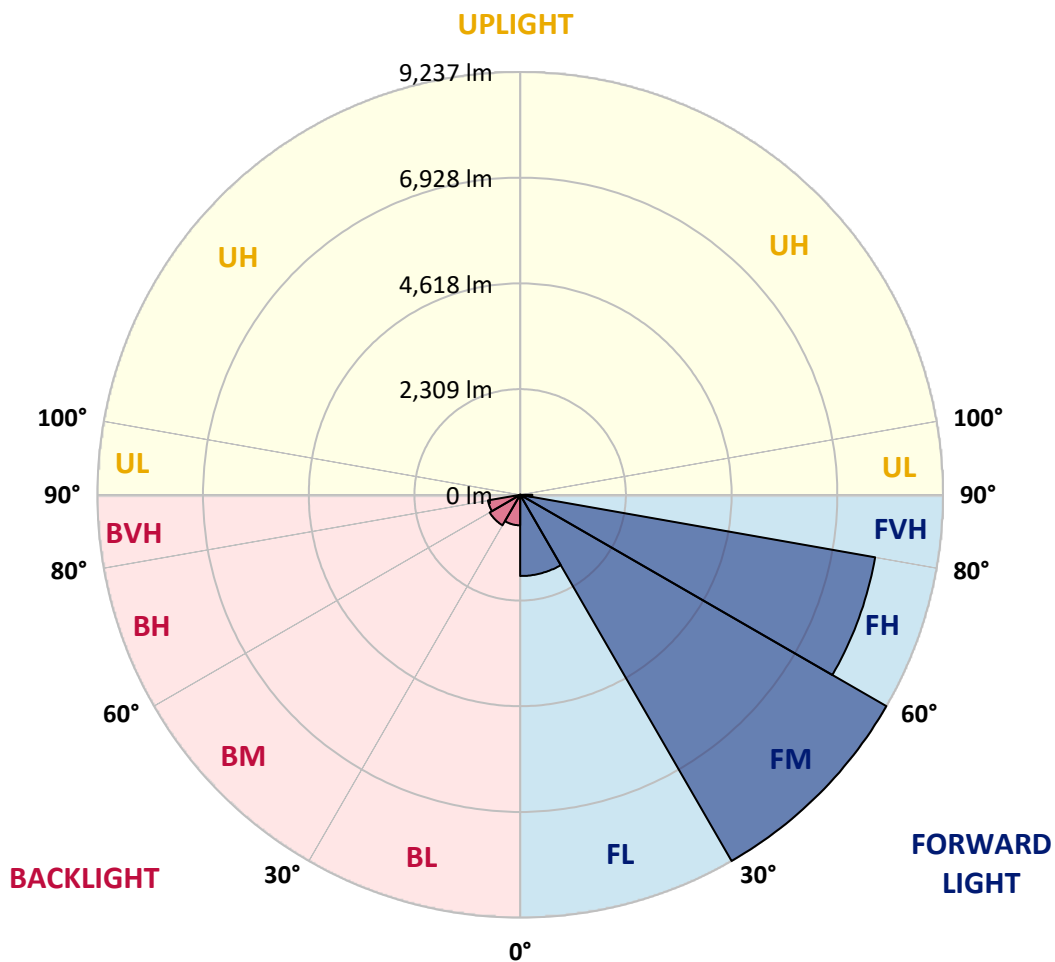
CATALOG NUMBER: NAV-AF-05-D-UNV-SL2-7027-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1773.9	8.3			
FM (30°-60°)	9236.7	43.3			
FH (60°-80°)	7873.9	36.9			G4/12000
FVH (80°-90°)	266.9	1.3			G3/500
BL (0°-30°)	666.2	3.1	B2/1000		
BM (30°-60°)	768.6	3.6	B1/1000		
BH (60°-80°)	713.1	3.3	B2/1000		G2/1000
BVH (80°-90°)	10.5	0.0			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G4

Type II Medium





REPORT NUMBER: P270592

CATALOG NUMBER: NAV-AF-05-D-UNV-SL2-7027-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	66°	75°	85°
0°	4747.6	4747.6	4747.6	4747.6	4747.6	4747.6	4747.6	4747.6	4747.6	4747.6	4747.6
2.5°	4993.6	4996.9	4995.3	5000.2	4996.9	4971.8	4945.1	4888.1	4893.2	4819.5	4737.7
5°	4642.3	4670.6	4699.2	4727.6	4796.2	4856.3	4928.3	4945.1	4945.1	4881.5	4761.0
7.5°	4284.2	4286.0	4317.8	4356.2	4448.1	4558.5	4726.0	4876.4	4879.9	4896.5	4764.4
10°	4015.0	4023.2	4045.1	4086.8	4178.8	4287.6	4474.9	4710.8	4729.2	4853.1	4731.0
12.5°	3805.8	3815.8	3839.3	3887.8	3971.4	4083.5	4281.0	4550.3	4575.3	4811.2	4721.0
15°	3645.2	3658.5	3677.0	3725.5	3815.8	3934.7	4150.3	4443.1	4473.3	4794.6	4752.7
17.5°	3578.3	3578.3	3576.6	3610.1	3700.4	3820.9	4046.8	4386.3	4424.8	4807.9	4806.2
20°	3606.8	3601.8	3566.6	3558.2	3613.4	3733.8	3964.7	4349.6	4393.0	4833.1	4871.5
22.5°	3757.3	3747.3	3668.7	3603.5	3586.7	3667.1	3909.6	4324.4	4376.3	4884.9	4958.5
25°	4076.8	4046.8	3938.0	3790.8	3658.5	3650.3	3871.1	4311.1	4366.2	4945.1	5053.8
27.5°	4491.6	4483.4	4309.3	4111.9	3857.7	3705.5	3859.4	4300.9	4356.2	4988.6	5130.7
30°	5007.0	5010.2	4809.5	4551.9	4167.1	3861.1	3896.2	4296.0	4352.8	4991.9	5164.1
32.5°	5538.9	5542.3	5375.0	5099.0	4590.3	4128.7	3999.9	4319.4	4371.2	4978.4	5162.5
35°	6050.9	6055.8	5955.5	5733.0	5155.8	4500.1	4195.7	4399.7	4436.5	4986.9	5159.1
37.5°	6698.2	6718.3	6594.5	6387.0	5865.2	5045.4	4515.2	4562.0	4592.0	5055.4	5184.3
40°	7802.4	7775.5	7420.9	7069.7	6634.6	5709.5	4976.8	4841.3	4851.3	5232.7	5279.6
42.5°	9088.8	9055.4	8448.1	7842.6	7426.0	6510.8	5567.3	5269.5	5267.9	5530.5	5487.0
45°	10196.2	10176.2	9537.1	8729.1	8302.6	7395.8	6295.1	5887.0	5866.8	6045.9	5865.2
47.5°	10982.5	10965.8	10482.3	9672.6	9316.3	8369.5	7203.5	6728.3	6686.5	6720.0	6479.0
50°	11059.5	11041.1	10872.0	10351.8	10500.6	9798.2	8325.9	7830.7	7777.3	7725.3	7407.6
52.5°	10340.1	10338.5	10427.0	10393.6	11330.4	11636.6	9702.8	9194.2	9130.6	8998.4	8682.3
55°	8869.7	8861.3	9197.6	9686.1	11312.0	13533.7	11802.2	10816.9	10733.2	10468.8	10054.0
57.5°	6480.7	6437.3	7139.9	8175.4	10517.4	14363.4	15136.4	12832.6	12693.9	11855.7	11216.6
60°	3578.3	3595.0	4498.4	5724.5	8635.4	14199.5	18204.3	15183.2	14818.4	13051.8	12407.7
62.5°	2005.7	2047.5	2720.1	3720.5	5505.4	12869.5	19850.4	19228.1	18349.9	14447.0	13913.4
65°	1517.2	1542.4	1880.3	2870.7	3471.2	8993.4	20113.1	24884.2	24126.4	16561.6	16310.6
67.5°	1428.7	1448.7	1614.3	2380.5	3161.8	4664.0	18135.7	28230.0	28325.3	19445.6	18167.5
68°	1438.6	1463.8	1629.3	2290.1	3156.7	4172.2	17292.6	28246.7	28449.1	19910.8	18104.0
70°	1321.5	1328.2	1723.0	2246.8	3059.6	3287.2	12509.8	26311.1	26674.2	20464.4	16434.4
72.5°	505.1	506.9	772.9	1945.5	3205.2	3305.7	6301.8	20795.7	20814.1	17809.5	12812.6
75°	262.7	220.9	242.5	609.0	3061.3	3222.0	3161.8	14199.5	14110.8	12044.7	7850.8
77.5°	180.6	153.9	162.2	210.8	1273.1	3220.3	2283.5	8165.4	8147.0	5124.0	2240.1
80°	102.0	88.7	97.0	177.3	446.6	3022.8	2127.9	3509.7	3307.3	900.0	363.1
82.5°	51.8	43.5	51.8	148.8	277.7	1902.2	2069.3	1376.8	1226.2	214.2	235.9
85°	13.4	13.4	25.2	103.8	172.4	624.1	1855.2	993.6	893.4	93.7	167.3
87.5°	3.4	1.6	10.1	38.4	62.0	135.6	1028.7	553.7	476.8	48.5	97.0
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: P270592

CATALOG NUMBER: NAV-AF-05-D-UNV-SL2-7027-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	4747.6	4747.6	4747.6	4747.6	4747.6	4747.6	4747.6	4747.6	4747.6	4747.6	4747.6
2.5°	4704.2	4657.4	4565.2	4461.6	4388.0	4307.7	4260.8	4204.0	4160.5	4122.1	4150.3
5°	4687.4	4597.0	4393.0	4163.9	3971.4	3787.4	3650.3	3519.7	3421.0	3359.1	3384.3
7.5°	4644.0	4510.1	4178.8	3820.9	3506.4	3210.3	2969.3	2753.6	2586.3	2495.9	2524.3
10°	4570.3	4381.4	3936.4	3439.4	2999.5	2581.3	2223.2	1902.2	1659.4	1545.8	1572.6
12.5°	4516.8	4267.6	3685.3	3071.5	2492.5	1898.7	1423.6	1055.6	866.5	752.8	762.8
15°	4493.4	4178.8	3451.2	2683.2	1938.9	1219.4	769.5	557.0	491.8	468.3	470.2
17.5°	4496.7	4108.6	3228.7	2280.2	1380.2	700.9	471.8	424.9	414.8	409.8	409.8
20°	4505.1	4038.3	2997.9	1860.2	883.3	451.7	393.1	378.0	373.1	366.4	368.0
22.5°	4530.2	3984.8	2765.3	1438.6	543.7	368.0	348.0	334.6	326.3	316.2	317.8
25°	4568.7	3944.6	2536.1	1035.6	383.0	321.2	302.8	284.5	269.3	257.6	259.3
27.5°	4592.0	3887.8	2291.8	706.0	317.8	281.0	255.9	230.9	214.2	204.1	202.4
30°	4575.3	3795.8	2014.2	463.3	281.0	242.5	212.4	184.1	167.3	158.9	158.9
32.5°	4530.2	3677.0	1707.9	337.9	249.3	209.1	172.4	147.2	135.6	130.4	132.2
35°	4478.3	3553.2	1381.9	286.1	224.1	177.3	140.6	120.5	115.4	113.7	113.7
37.5°	4449.8	3446.2	1069.0	259.3	200.7	147.2	115.4	103.8	98.8	98.8	98.8
40°	4481.6	3364.2	791.2	239.2	177.3	122.1	97.0	88.7	87.0	87.0	87.0
42.5°	4617.2	3335.8	578.8	222.5	153.9	102.0	83.6	77.0	75.3	77.0	77.0
45°	4881.5	3397.6	438.4	205.7	132.2	83.6	72.0	67.0	67.0	68.6	68.6
47.5°	5329.9	3556.6	359.7	189.1	110.4	70.2	62.0	58.6	58.6	60.2	60.2
50°	6025.7	3850.9	322.9	170.7	91.9	60.2	51.8	50.1	50.1	51.8	53.4
52.5°	7083.0	4411.3	304.4	152.3	75.3	50.1	43.5	41.9	43.5	45.2	45.2
55°	8259.0	5129.1	282.7	133.8	63.6	41.9	35.2	35.2	36.8	40.2	40.2
57.5°	9354.8	5821.6	262.7	110.4	55.2	33.4	28.4	28.4	31.8	35.2	35.2
60°	10512.4	6500.9	235.9	88.7	46.8	26.8	23.4	23.4	28.4	31.8	33.4
62.5°	11942.7	7290.5	200.7	70.2	36.8	20.1	16.7	21.7	26.8	31.8	31.8
65°	14010.4	8272.4	157.3	55.2	28.4	15.0	13.4	20.1	25.2	30.2	31.8
67.5°	14761.6	8147.0	118.8	45.2	21.7	11.7	11.7	18.3	25.2	30.2	30.2
68°	14487.1	7872.6	113.7	43.5	20.1	11.7	11.7	18.3	25.2	30.2	30.2
70°	12623.6	6435.5	93.7	33.4	16.7	10.1	10.1	16.7	25.2	28.4	30.2
72.5°	9451.7	4275.9	80.3	21.7	15.0	10.1	8.4	16.7	23.4	28.4	28.4
75°	5421.8	1775.0	68.6	16.7	13.4	8.4	8.4	15.0	23.4	28.4	28.4
77.5°	1532.4	414.8	55.2	13.4	11.7	8.4	6.6	15.0	21.7	26.8	26.8
80°	281.0	123.7	43.5	11.7	10.1	8.4	6.6	15.0	21.7	26.8	26.8
82.5°	185.7	58.6	31.8	11.7	10.1	8.4	6.6	13.4	20.1	25.2	25.2
85°	138.9	41.9	20.1	11.7	10.1	8.4	6.6	13.4	20.1	25.2	25.2
87.5°	77.0	18.3	15.0	13.4	11.7	8.4	6.6	11.7	18.3	23.4	23.4
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)