

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: P197086

Luminaire Tested: **NAV-AF-04-D-UNV-SL3-8030-1200-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197086
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24263)
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-SL3-8030-1200-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(4) 80 CRI, 3000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III
SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 18539 lumens
Efficiency: N/A
Efficacy: 71.9 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Medium - Non-Cutoff
BUG Rating: B1 - U0 - G3

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

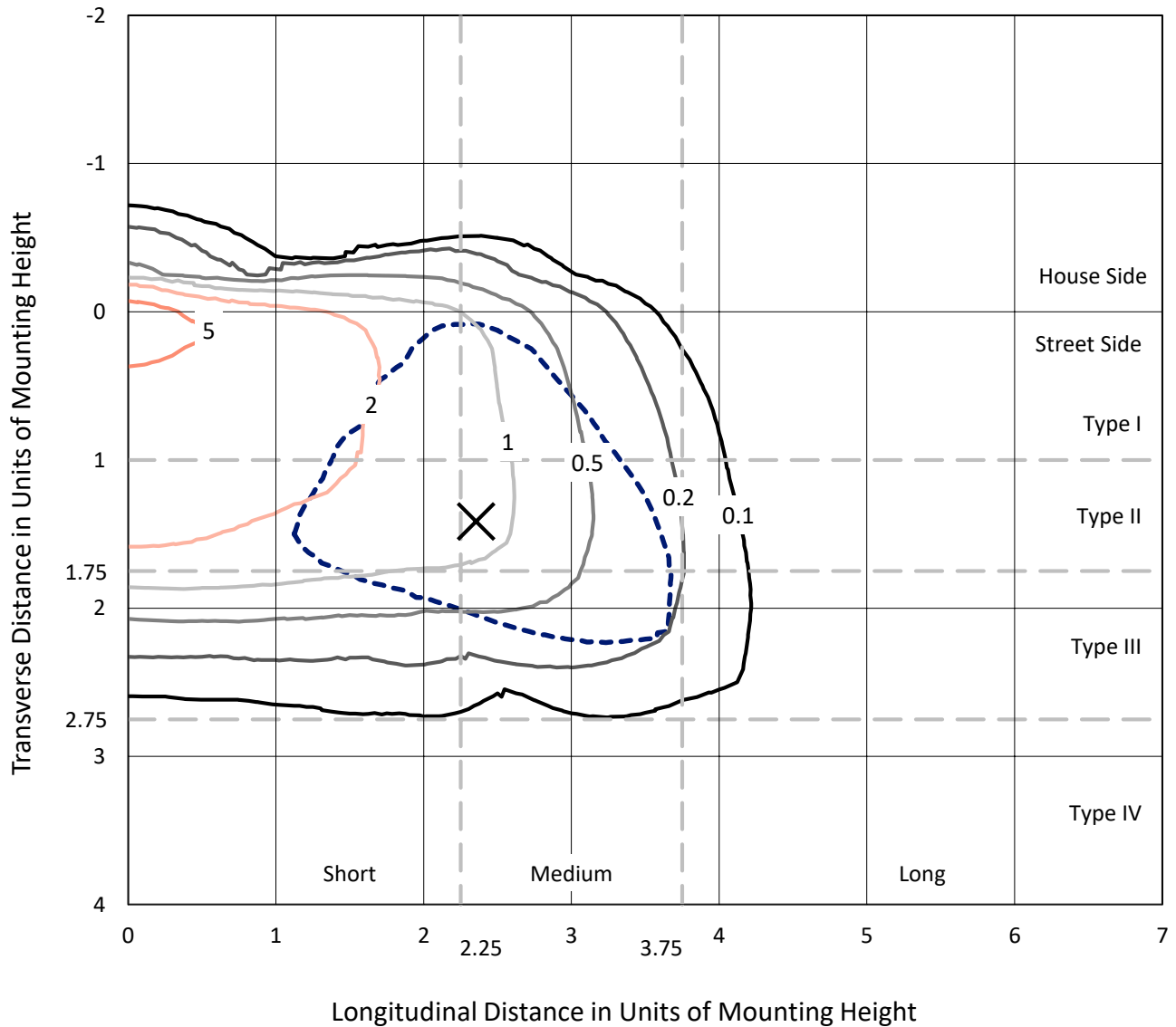


REPORT NUMBER: P197086

CATALOG NUMBER: NAV-AF-04-D-UNV-SL3-8030-1200-HSS

Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

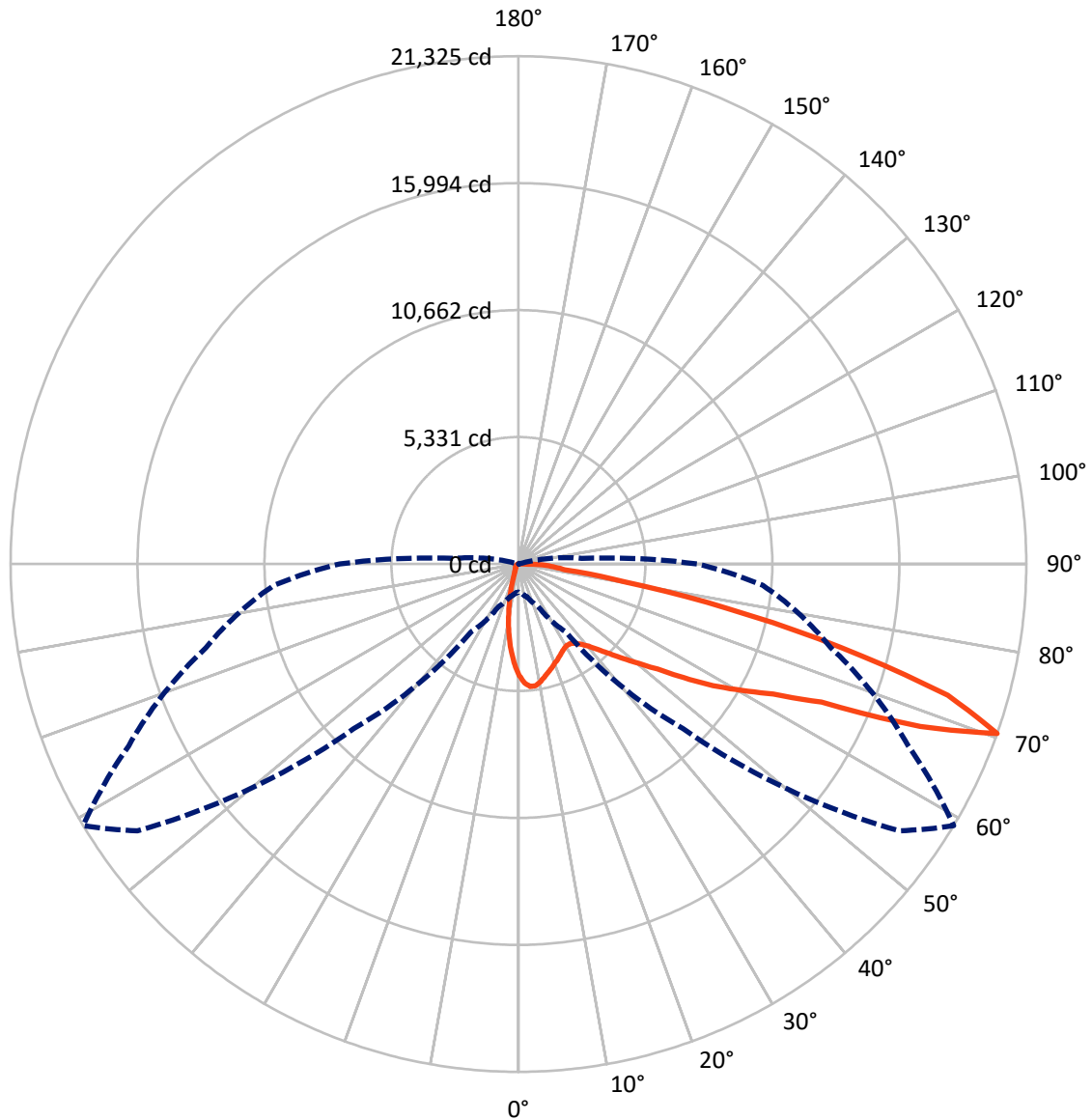


Based on 25 foot mounting height. Maximum calculated value = 8 fc
 Type III - Medium - Non-Cutoff

REPORT NUMBER: P197086

CATALOG NUMBER: NAV-AF-04-D-UNV-SL3-8030-1200-HSS

Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

REPORT NUMBER: P197086

CATALOG NUMBER: NAV-AF-04-D-UNV-SL3-8030-1200-HSS

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1425.2	0.0	1425.2
	% Fixture	7.7	0.0	7.7
Street Side	Lumens	17113.8	0.0	17113.8
	% Fixture	92.3	0.0	92.3
Total	Lumens	18539.0	0.0	18539.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	385.5	2.1
10°-20°	808.5	4.4
20°-30°	1094.5	5.9
30°-40°	1579.5	8.5
40°-50°	2623.2	14.1
50°-60°	4012.5	21.6
60°-70°	4990.6	26.9
70°-80°	2758.8	14.9
80°-90°	286.1	1.5
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°	18539.0	100.0
0°-180°	18539.0	100.0



REPORT NUMBER: P197086

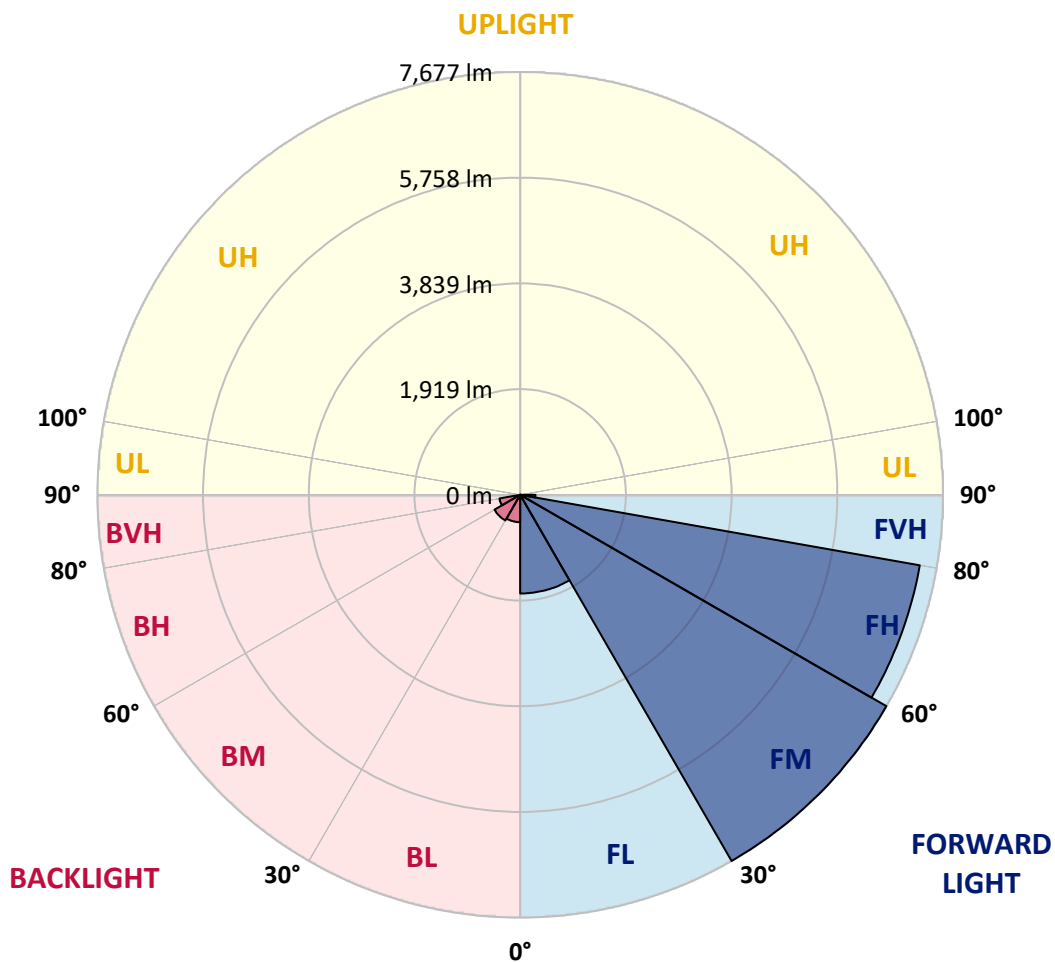
CATALOG NUMBER: NAV-AF-04-D-UNV-SL3-8030-1200-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1791.8	9.7			
FM	(30°-60°)	7677.2	41.4			
FH	(60°-80°)	7367.0	39.7			G3/7500
FVH	(80°-90°)	277.8	1.5			G3/500
BL	(0°-30°)	496.6	2.7	B1/500		
BM	(30°-60°)	537.9	2.9	B1/1000		
BH	(60°-80°)	382.3	2.1	B1/500		G1/500
BVH	(80°-90°)	8.3	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-G3

Type III Medium





REPORT NUMBER: P197086

CATALOG NUMBER: NAV-AF-04-D-UNV-SL3-8030-1200-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	4687.8	4687.8	4687.8	4687.8	4687.8	4687.8	4687.8	4687.8	4687.8	4687.8	4687.8
2.5°	5299.0	5290.6	5255.6	5248.7	5209.5	5131.2	5040.3	5003.9	4929.8	4812.3	4682.3
5°	5387.1	5391.3	5394.1	5378.7	5373.1	5308.8	5208.1	5164.7	5065.4	4872.5	4634.7
7.5°	5057.1	5068.2	5103.2	5118.6	5185.7	5210.9	5189.9	5161.9	5083.6	4855.7	4521.4
10°	4708.8	4729.8	4767.6	4792.7	4875.2	4942.4	5027.7	5034.7	5017.9	4799.7	4394.2
12.5°	4409.5	4429.1	4471.1	4521.4	4605.3	4692.0	4819.3	4864.1	4920.0	4763.4	4303.3
15°	4152.2	4157.8	4198.4	4261.3	4371.8	4490.7	4641.7	4707.4	4816.5	4749.4	4233.3
17.5°	3927.0	3928.4	3955.0	4012.4	4146.6	4303.3	4479.5	4566.2	4704.6	4729.8	4171.8
20°	3778.8	3777.4	3778.8	3809.6	3928.4	4114.5	4328.4	4419.3	4596.9	4706.0	4108.9
22.5°	3728.5	3721.5	3689.3	3678.1	3753.6	3917.3	4173.2	4292.1	4500.4	4699.0	4062.7
25°	3790.0	3785.8	3717.3	3652.9	3659.9	3762.0	4015.2	4160.6	4424.9	4724.2	4051.5
27.5°	3988.6	3980.2	3875.3	3749.4	3669.7	3687.9	3897.7	4050.1	4364.8	4785.7	4066.9
30°	4248.7	4250.1	4138.2	3985.8	3798.4	3694.9	3834.7	3978.8	4324.2	4878.0	4100.5
32.5°	4538.2	4536.8	4457.1	4280.9	4041.7	3823.6	3862.7	3984.4	4329.8	5013.7	4164.8
35°	4837.5	4822.1	4795.5	4640.3	4360.6	4048.7	3990.0	4079.5	4388.6	5192.7	4273.9
37.5°	5182.9	5177.3	5203.9	5040.3	4755.0	4380.2	4213.7	4273.9	4536.8	5457.0	4450.1
40°	5732.5	5701.8	5714.4	5492.0	5199.7	4826.3	4527.0	4542.4	4773.2	5806.7	4728.4
42.5°	6780.0	6655.6	6422.0	6005.3	5689.2	5321.4	4936.8	4910.2	5107.4	6230.4	5094.8
45°	8031.7	7889.1	7300.3	6571.7	6178.7	5852.8	5443.0	5371.7	5518.6	6735.3	5567.5
47.5°	9076.4	8922.6	8142.2	7163.2	6676.5	6401.0	6003.9	5919.9	6010.8	7321.3	6135.3
50°	9433.0	9347.7	8662.4	7655.5	7178.6	7016.4	6707.3	6567.5	6589.8	7953.4	6798.2
52.5°	9269.4	9240.0	8781.3	7992.6	7642.9	7696.1	7477.9	7331.1	7305.9	8644.3	7531.0
55°	8924.0	8910.0	8686.2	8180.0	8052.7	8318.4	8559.0	8431.7	8193.9	9378.5	8136.6
57.5°	8430.3	8483.4	8644.3	8540.8	8556.2	8975.7	9563.1	9628.8	9273.6	9963.1	8585.5
60°	7111.5	7254.1	7991.2	8928.2	9645.6	10069.4	10638.6	10761.6	10188.2	10363.0	9104.4
62.5°	5257.0	5461.2	6511.5	8233.1	10245.6	12149.0	12069.2	12014.7	11060.9	10898.7	10048.4
65°	3087.9	3327.1	4215.1	6433.2	9340.7	13485.9	14740.4	13985.2	12390.9	12011.9	11551.8
67.5°	1538.4	1539.8	1941.1	3395.6	6903.1	12553.1	18639.5	18203.2	15218.7	13652.4	12144.8
70°	1183.1	1215.3	1436.3	1973.3	3490.7	9777.1	19533.2	21324.7	18060.5	13579.6	10304.3
72.5°	1002.7	1023.7	1278.2	1717.4	2609.6	5367.5	16909.5	18849.3	17234.0	11473.5	7595.4
75°	721.6	738.4	1131.4	1558.0	2402.7	2662.8	11599.3	13979.6	12930.7	8070.9	4180.2
77.5°	179.0	177.6	394.4	1264.3	2149.5	2218.1	6655.6	8964.5	7419.2	3304.7	1074.1
80°	79.7	76.9	89.5	265.7	1999.9	2093.6	2927.1	4527.0	2846.0	535.6	328.7
82.5°	55.9	53.1	55.9	97.9	668.5	1942.5	1769.1	1962.1	1041.9	183.2	139.9
85°	18.2	16.8	30.8	82.5	187.4	1120.2	1725.8	1465.7	774.8	78.3	93.7
87.5°	2.8	2.8	11.2	44.8	54.5	373.4	1012.5	1015.3	348.2	46.2	42.0
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: P197086

CATALOG NUMBER: NAV-AF-04-D-UNV-SL3-8030-1200-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	4687.8	4687.8	4687.8	4687.8	4687.8	4687.8	4687.8	4687.8	4687.8	4687.8	4687.8
2.5°	4616.5	4534.0	4417.9	4301.9	4197.0	4089.3	4002.6	3962.0	3943.8	3918.7	3864.1
5°	4510.2	4360.6	4106.1	3855.7	3622.2	3398.4	3206.8	3097.7	2980.3	2974.7	2917.3
7.5°	4339.6	4127.0	3725.7	3336.9	2980.3	2639.0	2345.3	2155.1	2025.1	1943.9	1888.0
10°	4149.4	3876.7	3345.3	2798.4	2313.2	1857.2	1479.6	1233.5	1083.9	1008.3	965.0
12.5°	3998.4	3655.7	2970.5	2282.4	1674.0	1151.0	800.0	620.9	541.2	510.5	496.5
15°	3868.3	3453.0	2619.4	1820.9	1117.4	661.5	462.9	404.2	391.6	391.6	390.2
17.5°	3736.9	3257.2	2278.2	1367.8	703.5	433.5	365.0	356.6	358.0	362.2	362.2
20°	3612.4	3071.2	1949.5	974.8	461.5	346.8	331.4	328.7	332.8	338.4	337.0
22.5°	3511.7	2907.5	1641.9	669.9	355.2	314.7	304.9	300.7	303.5	307.7	306.3
25°	3440.4	2767.7	1359.4	467.1	309.1	286.7	275.5	269.9	267.1	269.9	268.5
27.5°	3397.0	2650.2	1093.6	351.0	276.9	258.7	244.7	233.6	226.6	226.6	223.8
30°	3369.0	2539.7	857.3	290.9	250.3	230.8	211.2	195.8	184.6	181.8	180.4
32.5°	3367.6	2444.6	640.5	257.3	225.2	202.8	179.0	159.4	146.8	144.0	142.6
35°	3402.6	2367.7	471.3	232.2	202.8	176.2	149.6	128.7	117.5	117.5	116.1
37.5°	3493.5	2322.9	356.6	212.6	184.6	153.8	125.9	106.3	96.5	99.3	99.3
40°	3662.7	2314.6	290.9	197.2	169.2	134.3	102.1	86.7	82.5	86.7	86.7
42.5°	3921.5	2359.3	258.7	186.0	155.2	114.7	85.3	74.1	72.7	76.9	76.9
45°	4258.5	2447.4	240.5	176.2	139.9	95.1	71.3	64.3	62.9	68.5	68.5
47.5°	4666.9	2566.3	223.8	165.0	124.5	78.3	60.1	54.5	54.5	60.1	61.5
50°	5150.8	2727.1	207.0	153.8	111.9	65.7	50.3	46.2	47.5	53.1	54.5
52.5°	5707.4	2924.3	191.6	144.0	97.9	53.1	42.0	39.2	40.6	46.2	47.5
55°	6187.1	3096.3	173.4	134.3	79.7	43.4	35.0	33.6	35.0	42.0	42.0
57.5°	6605.2	3261.4	156.6	118.9	62.9	35.0	28.0	28.0	30.8	37.8	39.2
60°	7160.4	3521.5	142.6	100.7	47.5	26.6	22.4	23.8	28.0	33.6	35.0
62.5°	8143.6	3963.4	124.5	83.9	35.0	21.0	18.2	19.6	25.2	32.2	33.6
65°	9374.3	4381.6	103.5	69.9	26.6	15.4	14.0	18.2	25.2	32.2	33.6
67.5°	9248.4	3811.0	81.1	55.9	19.6	12.6	11.2	16.8	23.8	32.2	33.6
70°	7500.3	2671.2	60.1	37.8	15.4	11.2	11.2	16.8	23.8	30.8	32.2
72.5°	5202.5	1486.6	46.2	25.2	14.0	11.2	9.8	15.4	22.4	30.8	32.2
75°	2475.4	455.9	36.4	18.2	12.6	9.8	8.4	15.4	22.4	30.8	32.2
77.5°	475.5	116.1	29.4	15.4	11.2	9.8	8.4	14.0	22.4	29.4	30.8
80°	160.8	51.7	23.8	14.0	11.2	9.8	8.4	14.0	21.0	28.0	29.4
82.5°	88.1	29.4	21.0	12.6	11.2	8.4	7.0	12.6	19.6	28.0	29.4
85°	68.5	21.0	16.8	12.6	11.2	8.4	7.0	12.6	19.6	26.6	28.0
87.5°	35.0	15.4	14.0	12.6	11.2	8.4	7.0	11.2	18.2	25.2	28.0
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)