

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: P196558

Luminaire Tested: **NAV-AF-04-D-UNV-SL2-7030-1200-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196558
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-04-D-UNV-SL2-7030-1200-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(4) 70 CRI, 3000K, 1200mA 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: 21114.4 lumens
Efficiency: N/A
Efficacy: 81.8 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Medium - Semi-Cutoff
BUG Rating: B2 - U0 - G4

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

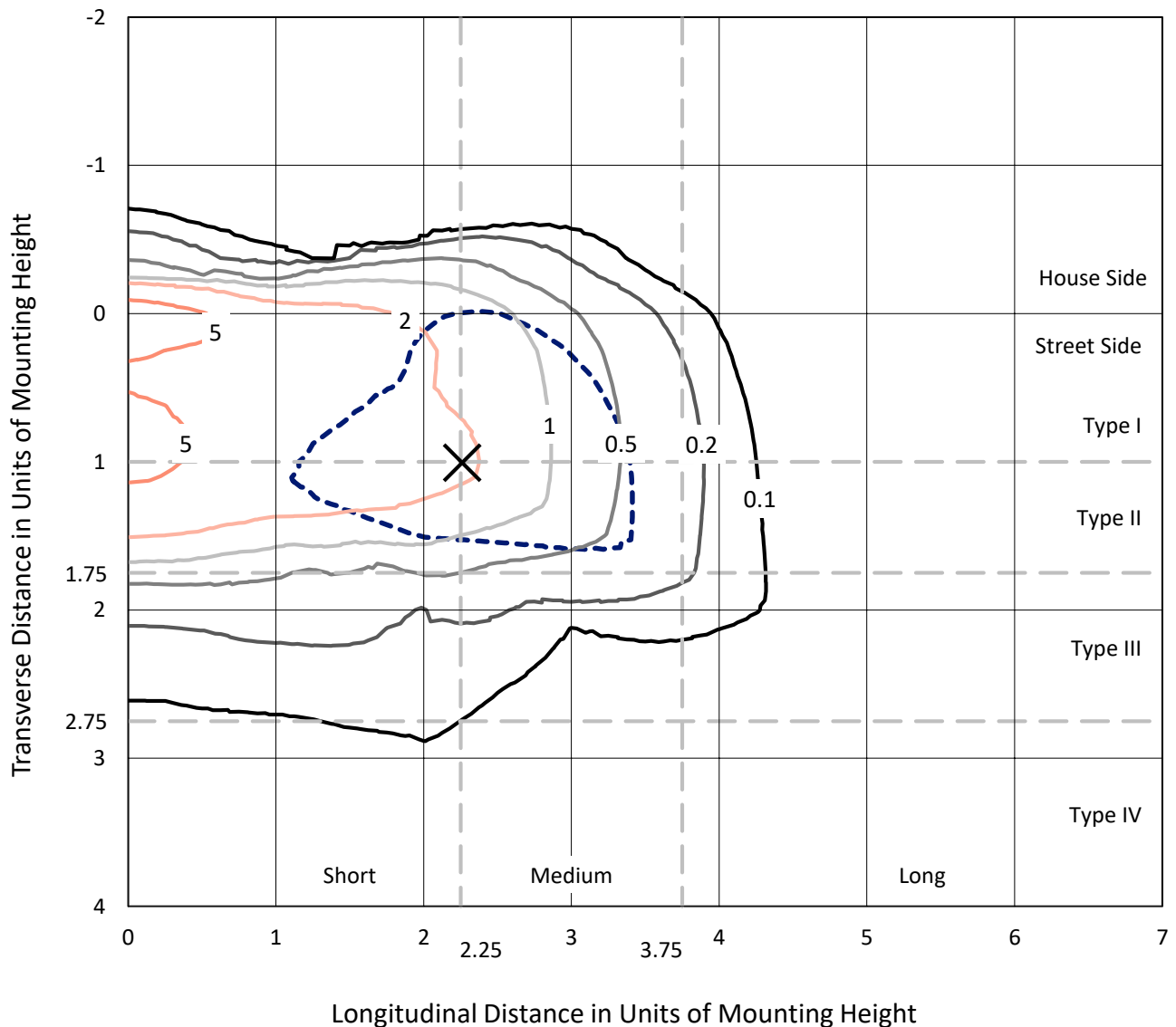


REPORT NUMBER: P196558

CATALOG NUMBER: NAV-AF-04-D-UNV-SL2-7030-1200-HSS

Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

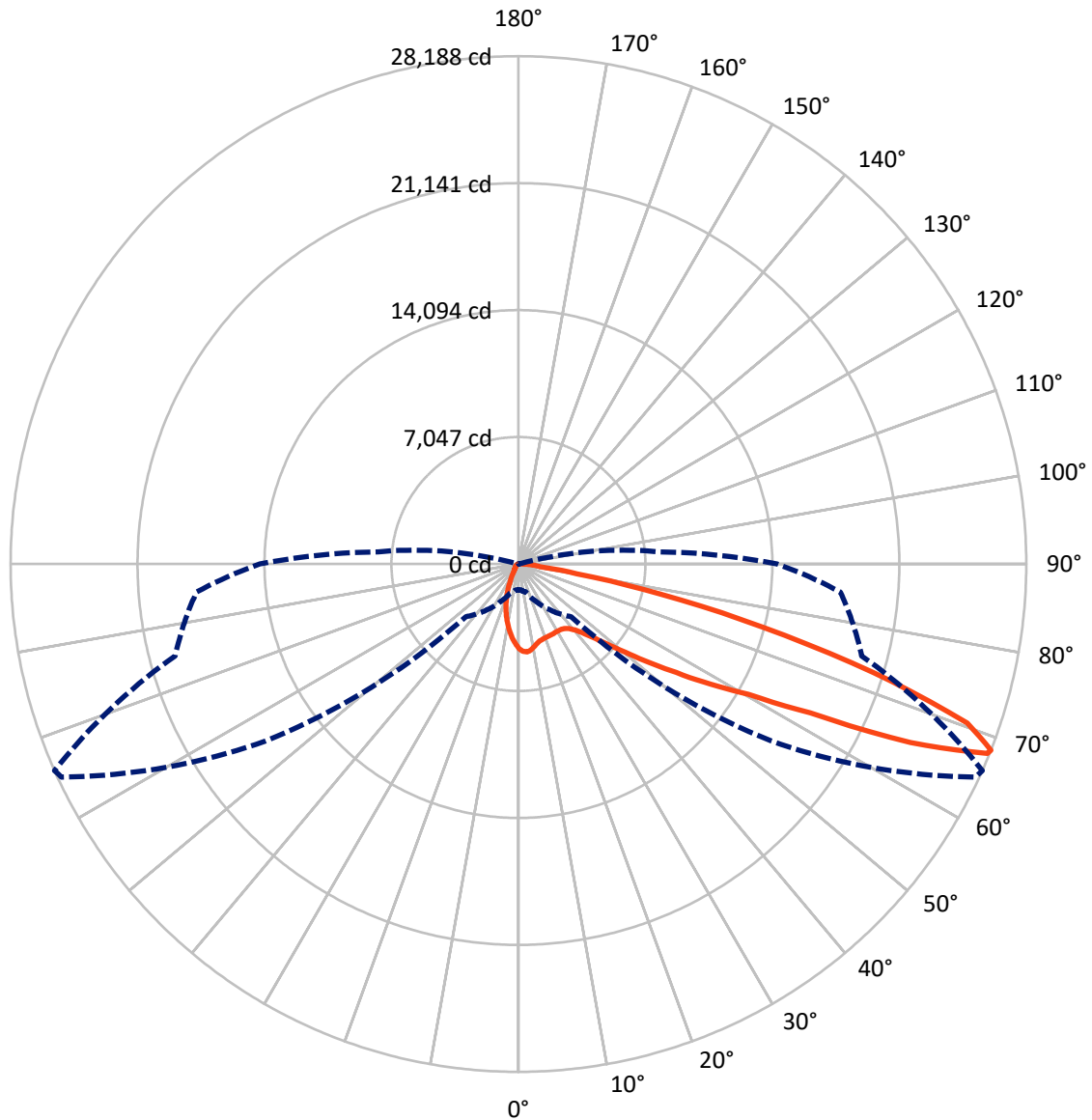


Based on 25 foot mounting height. Maximum calculated value = 7.5 fc
 Type II - Medium - Semi-Cutoff

REPORT NUMBER: P196558

CATALOG NUMBER: NAV-AF-04-D-UNV-SL2-7030-1200-HSS

Luminous Intensity Polar Plot



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

REPORT NUMBER: P196558

CATALOG NUMBER: NAV-AF-04-D-UNV-SL2-7030-1200-HSS

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2138.7	0.0	2138.7
	% Fixture	10.1	0.0	10.1
Street Side	Lumens	18975.7	0.0	18975.7
	% Fixture	89.9	0.0	89.9
Total	Lumens	21114.4	0.0	21114.4
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	385.6	1.8
10°-20°	829.7	3.9
20°-30°	1202.4	5.7
30°-40°	1840.6	8.7
40°-50°	3148.2	14.9
50°-60°	4924.7	23.3
60°-70°	5670.6	26.9
70°-80°	2837.7	13.4
80°-90°	274.8	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°	21114.4	100.0
0°-180°	21114.4	100.0



REPORT NUMBER: P196558

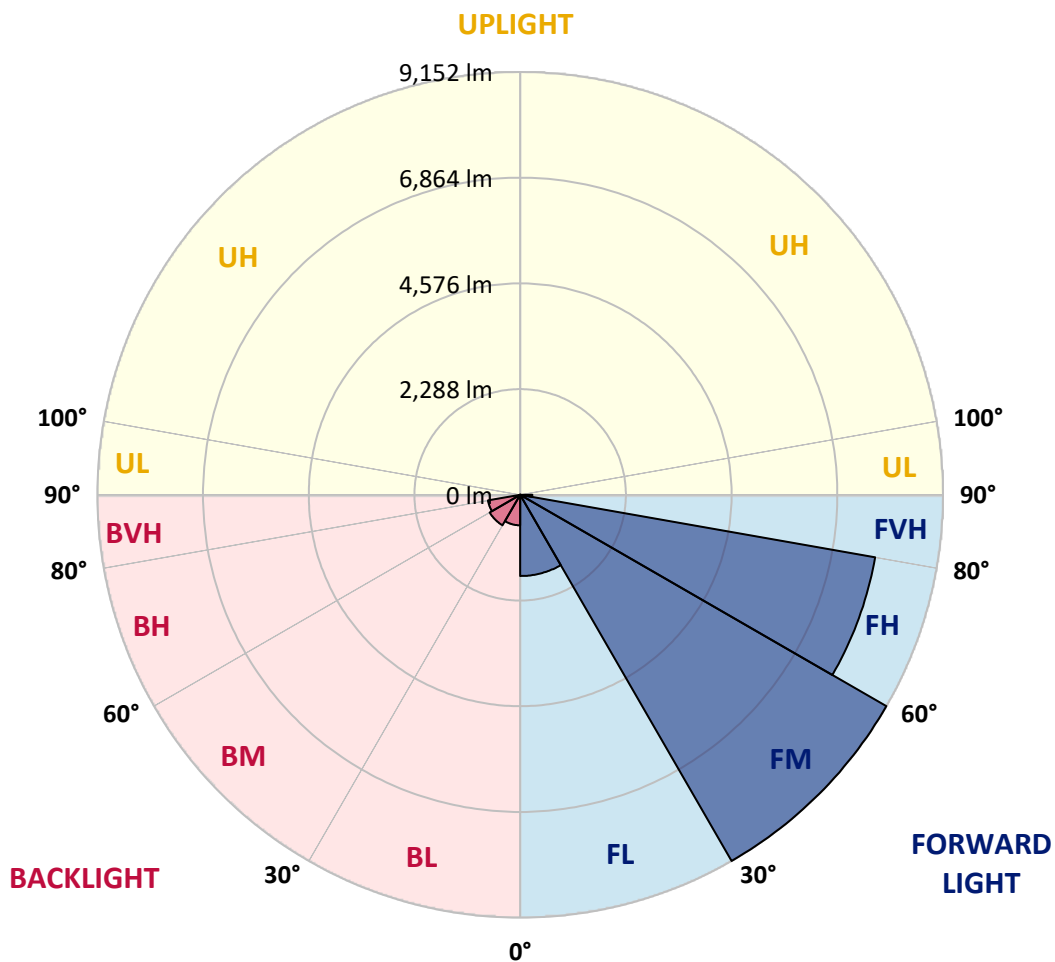
CATALOG NUMBER: NAV-AF-04-D-UNV-SL2-7030-1200-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1757.6	8.3			
FM	(30°-60°)	9151.9	43.3			
FH	(60°-80°)	7801.7	36.9			G4/12000
FVH	(80°-90°)	264.4	1.3			G3/500
BL	(0°-30°)	660.1	3.1	B2/1000		
BM	(30°-60°)	761.6	3.6	B1/1000		
BH	(60°-80°)	706.6	3.3	B2/1000		G2/1000
BVH	(80°-90°)	10.4	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: P196558

CATALOG NUMBER: NAV-AF-04-D-UNV-SL2-7030-1200-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	66°	75°	85°
0°	4704.0	4704.0	4704.0	4704.0	4704.0	4704.0	4704.0	4704.0	4704.0	4704.0	4704.0
2.5°	4947.7	4951.1	4949.5	4954.4	4951.1	4926.2	4899.6	4843.4	4848.3	4775.4	4694.1
5°	4599.7	4627.7	4656.0	4684.2	4752.1	4811.8	4883.2	4899.6	4899.6	4836.7	4717.4
7.5°	4244.9	4246.6	4278.0	4316.2	4407.4	4516.8	4682.6	4831.7	4835.0	4851.5	4720.6
10°	3978.1	3986.4	4007.9	4049.3	4140.5	4248.2	4433.8	4667.7	4685.8	4808.5	4687.6
12.5°	3770.9	3780.8	3804.1	3852.2	3935.0	4046.1	4241.7	4508.5	4533.3	4767.1	4677.6
15°	3611.8	3625.0	3643.2	3691.4	3780.8	3898.5	4112.3	4402.4	4432.2	4750.5	4709.1
17.5°	3545.5	3545.5	3543.9	3576.9	3666.4	3785.9	4009.6	4346.0	4384.1	4763.7	4762.1
20°	3573.7	3568.6	3533.9	3525.6	3580.3	3699.6	3928.3	4309.6	4352.7	4788.7	4826.7
22.5°	3722.8	3712.8	3634.9	3570.4	3553.7	3633.3	3873.7	4284.7	4336.1	4839.9	4913.0
25°	4039.5	4009.6	3901.8	3756.0	3625.0	3616.7	3835.5	4271.5	4326.1	4899.6	5007.5
27.5°	4450.4	4442.2	4269.9	4074.2	3822.2	3671.4	3824.0	4261.5	4316.2	4942.8	5083.7
30°	4961.0	4964.3	4765.5	4510.1	4128.9	3825.6	3860.3	4256.5	4312.9	4946.0	5116.8
32.5°	5488.1	5491.4	5325.7	5052.1	4548.3	4090.7	3963.2	4279.8	4331.1	4932.8	5115.2
35°	5995.3	6000.3	5900.8	5680.4	5108.5	4458.8	4157.1	4359.3	4395.8	4941.1	5111.8
37.5°	6636.7	6656.6	6534.0	6328.4	5811.3	4999.1	4473.7	4520.0	4549.9	5009.1	5136.8
40°	7730.7	7704.2	7352.8	7004.7	6573.8	5657.1	4931.2	4796.9	4806.9	5184.8	5231.3
42.5°	9005.3	8972.3	8370.6	7770.5	7357.7	6451.1	5516.3	5221.3	5219.6	5479.8	5436.7
45°	10102.6	10082.8	9449.7	8649.0	8226.3	7327.9	6237.3	5832.8	5812.9	5990.3	5811.3
47.5°	10881.6	10865.2	10386.0	9583.9	9230.8	8292.7	7137.4	6666.6	6625.2	6658.3	6419.6
50°	10957.9	10939.7	10772.3	10256.8	10404.3	9708.1	8249.5	7758.9	7705.8	7654.4	7339.6
52.5°	10245.2	10243.6	10331.4	10298.2	11226.5	11529.8	9613.7	9109.8	9046.7	8915.9	8602.6
55°	8788.3	8780.0	9113.1	9597.2	11208.3	13409.4	11693.9	10717.6	10634.8	10372.8	9961.8
57.5°	6421.2	6378.2	7074.3	8100.4	10420.9	14231.6	14997.4	12714.9	12577.4	11746.9	11113.8
60°	3545.5	3562.1	4457.1	5672.0	8556.2	14069.1	18037.3	15043.8	14682.5	12932.0	12294.0
62.5°	1987.4	2028.8	2695.1	3686.4	5455.0	12751.4	19668.3	19051.6	18181.5	14314.5	13785.7
65°	1503.4	1528.2	1863.1	2844.3	3439.4	8910.8	19928.6	24655.8	23905.0	16409.5	16161.0
67.5°	1415.6	1435.4	1599.5	2358.7	3132.8	4621.2	17969.4	27970.9	28065.3	19267.3	18000.8
68°	1425.5	1450.3	1614.5	2269.2	3127.8	4134.0	17133.9	27987.5	28188.1	19728.0	17937.8
70°	1309.5	1316.0	1707.2	2226.0	3031.6	3257.0	12395.0	26069.7	26429.4	20276.6	16283.6
72.5°	500.6	502.3	765.8	1927.7	3175.8	3275.3	6243.9	20604.7	20623.0	17646.1	12695.1
75°	260.2	218.8	240.4	603.3	3033.2	3192.4	3132.8	14069.1	13981.3	11934.3	7778.8
77.5°	178.9	152.5	160.8	208.9	1261.4	3190.7	2262.5	8090.4	8072.2	5077.1	2219.4
80°	101.1	87.9	96.1	175.7	442.6	2995.2	2108.3	3477.5	3276.9	891.8	359.7
82.5°	51.4	43.0	51.4	147.5	275.2	1884.6	2050.4	1364.1	1215.0	212.2	233.7
85°	13.2	13.2	24.9	102.8	170.8	618.3	1838.2	984.5	885.1	92.9	165.7
87.5°	3.3	1.6	10.0	38.1	61.3	134.3	1019.4	548.6	472.4	48.1	96.1
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: P196558

CATALOG NUMBER: NAV-AF-04-D-UNV-SL2-7030-1200-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	4704.0	4704.0	4704.0	4704.0	4704.0	4704.0	4704.0	4704.0	4704.0	4704.0	4704.0
2.5°	4661.0	4614.6	4523.5	4420.6	4347.8	4268.1	4221.8	4165.4	4122.3	4084.1	4112.3
5°	4644.4	4554.9	4352.7	4125.6	3935.0	3752.6	3616.7	3487.4	3389.7	3328.4	3353.1
7.5°	4601.4	4468.7	4140.5	3785.9	3474.2	3180.7	2942.2	2728.3	2562.5	2473.1	2501.2
10°	4528.4	4341.1	3900.2	3407.9	2972.0	2557.5	2202.8	1884.6	1644.3	1531.6	1558.0
12.5°	4475.4	4228.4	3651.6	3043.2	2469.7	1881.3	1410.5	1045.9	858.6	745.9	755.8
15°	4452.1	4140.5	3419.5	2658.8	1921.1	1208.3	762.4	552.0	487.3	464.2	465.8
17.5°	4455.5	4070.9	3199.0	2259.3	1367.5	694.5	467.4	420.9	411.1	406.1	406.1
20°	4463.8	4001.3	2970.3	1843.2	875.1	447.5	389.5	374.6	369.7	363.0	364.7
22.5°	4488.6	3948.2	2739.9	1425.5	538.6	364.7	344.7	331.5	323.2	313.2	314.8
25°	4526.7	3908.4	2512.9	1026.1	379.5	318.3	300.0	281.8	266.8	255.2	256.9
27.5°	4549.9	3852.2	2270.9	699.5	314.8	278.5	253.6	228.8	212.2	202.2	200.6
30°	4533.3	3760.9	1995.6	459.1	278.5	240.4	210.6	182.4	165.7	157.5	157.5
32.5°	4488.6	3643.2	1692.3	334.8	246.9	207.1	170.8	145.9	134.3	129.3	130.9
35°	4437.2	3520.6	1369.1	283.4	222.2	175.7	139.2	119.3	114.4	112.7	112.7
37.5°	4409.0	3414.6	1059.2	256.9	198.9	145.9	114.4	102.8	97.8	97.8	97.8
40°	4440.6	3333.3	784.1	237.0	175.7	121.0	96.1	87.9	86.2	86.2	86.2
42.5°	4574.8	3305.1	573.5	220.4	152.5	101.1	82.9	76.3	74.7	76.3	76.3
45°	4836.7	3366.5	434.3	203.9	130.9	82.9	71.2	66.3	66.3	68.0	68.0
47.5°	5280.9	3523.9	356.4	187.3	109.4	69.6	61.3	58.0	58.0	59.6	59.6
50°	5970.5	3815.7	319.9	169.1	91.1	59.6	51.4	49.7	49.7	51.4	53.0
52.5°	7017.9	4370.9	301.7	150.9	74.7	49.7	43.0	41.4	43.0	44.8	44.8
55°	8183.2	5081.9	280.1	132.6	63.0	41.4	34.9	34.9	36.5	39.8	39.8
57.5°	9268.9	5768.3	260.2	109.4	54.7	33.1	28.2	28.2	31.4	34.9	34.9
60°	10415.9	6441.2	233.7	87.9	46.4	26.6	23.2	23.2	28.2	31.4	33.1
62.5°	11833.1	7223.5	198.9	69.6	36.5	19.8	16.6	21.6	26.6	31.4	31.4
65°	13881.8	8196.5	155.8	54.7	28.2	15.0	13.2	19.8	24.9	29.8	31.4
67.5°	14626.1	8072.2	117.7	44.8	21.6	11.6	11.6	18.2	24.9	29.8	29.8
68°	14354.3	7800.3	112.7	43.0	19.8	11.6	11.6	18.2	24.9	29.8	29.8
70°	12507.8	6376.5	92.9	33.1	16.6	10.0	10.0	16.6	24.9	28.2	29.8
72.5°	9365.0	4236.6	79.5	21.6	15.0	10.0	8.3	16.6	23.2	28.2	28.2
75°	5372.1	1758.6	68.0	16.6	13.2	8.3	8.3	15.0	23.2	28.2	28.2
77.5°	1518.2	411.1	54.7	13.2	11.6	8.3	6.7	15.0	21.6	26.6	26.6
80°	278.5	122.7	43.0	11.6	10.0	8.3	6.7	15.0	21.6	26.6	26.6
82.5°	184.0	58.0	31.4	11.6	10.0	8.3	6.7	13.2	19.8	24.9	24.9
85°	137.5	41.4	19.8	11.6	10.0	8.3	6.7	13.2	19.8	24.9	24.9
87.5°	76.3	18.2	15.0	13.2	11.6	8.3	6.7	11.6	18.2	23.2	23.2
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)