

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: P195582

Luminaire Tested: **NAV-AF-06-D-UNV-SL2-7050-600-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195582
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-06-D-UNV-SL2-7050-600-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 5000K, 615mA 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: 19360 lumens
Efficiency: N/A
Efficacy: 100.3 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 - G3

Input Watts (W): 193
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

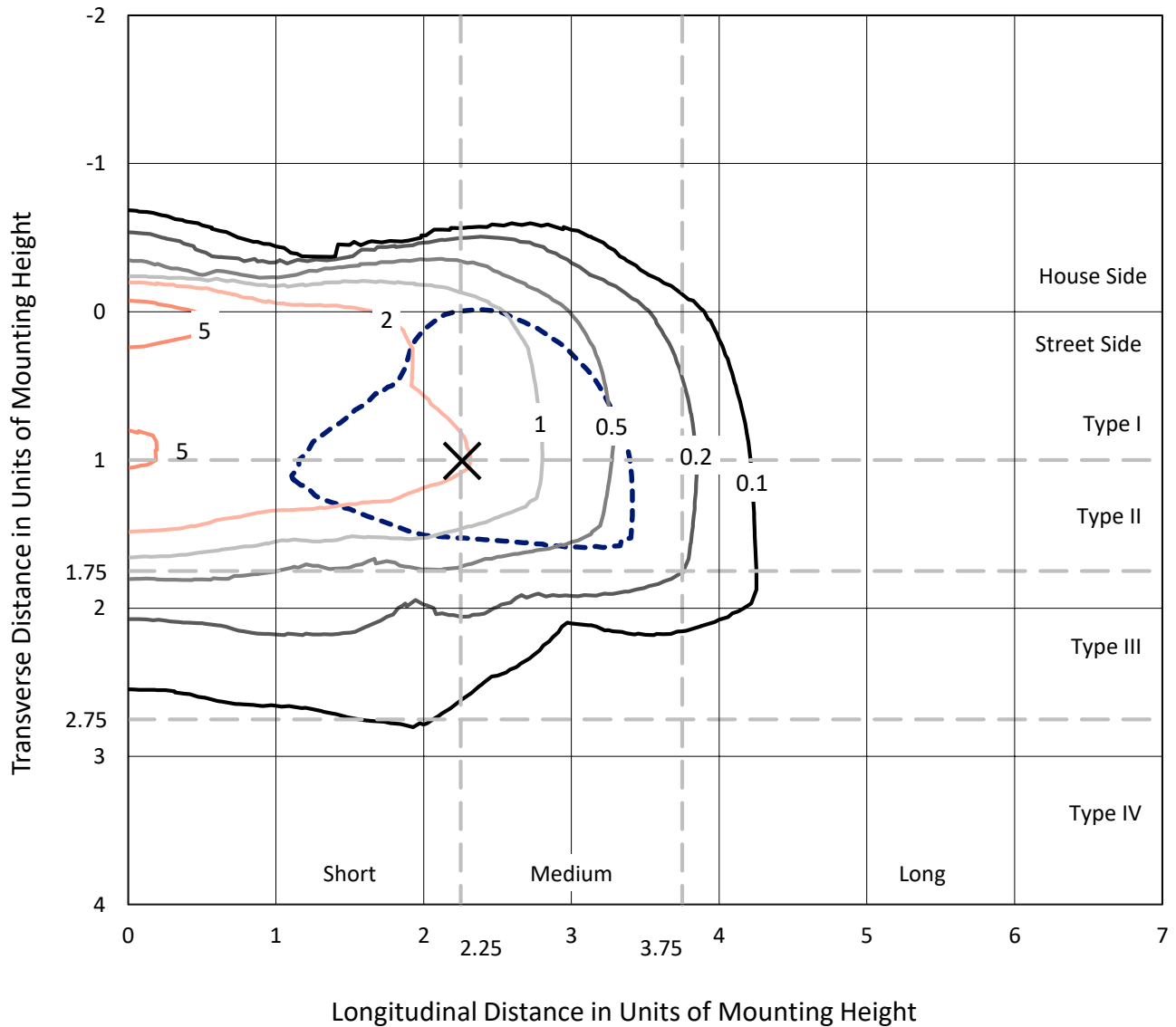


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

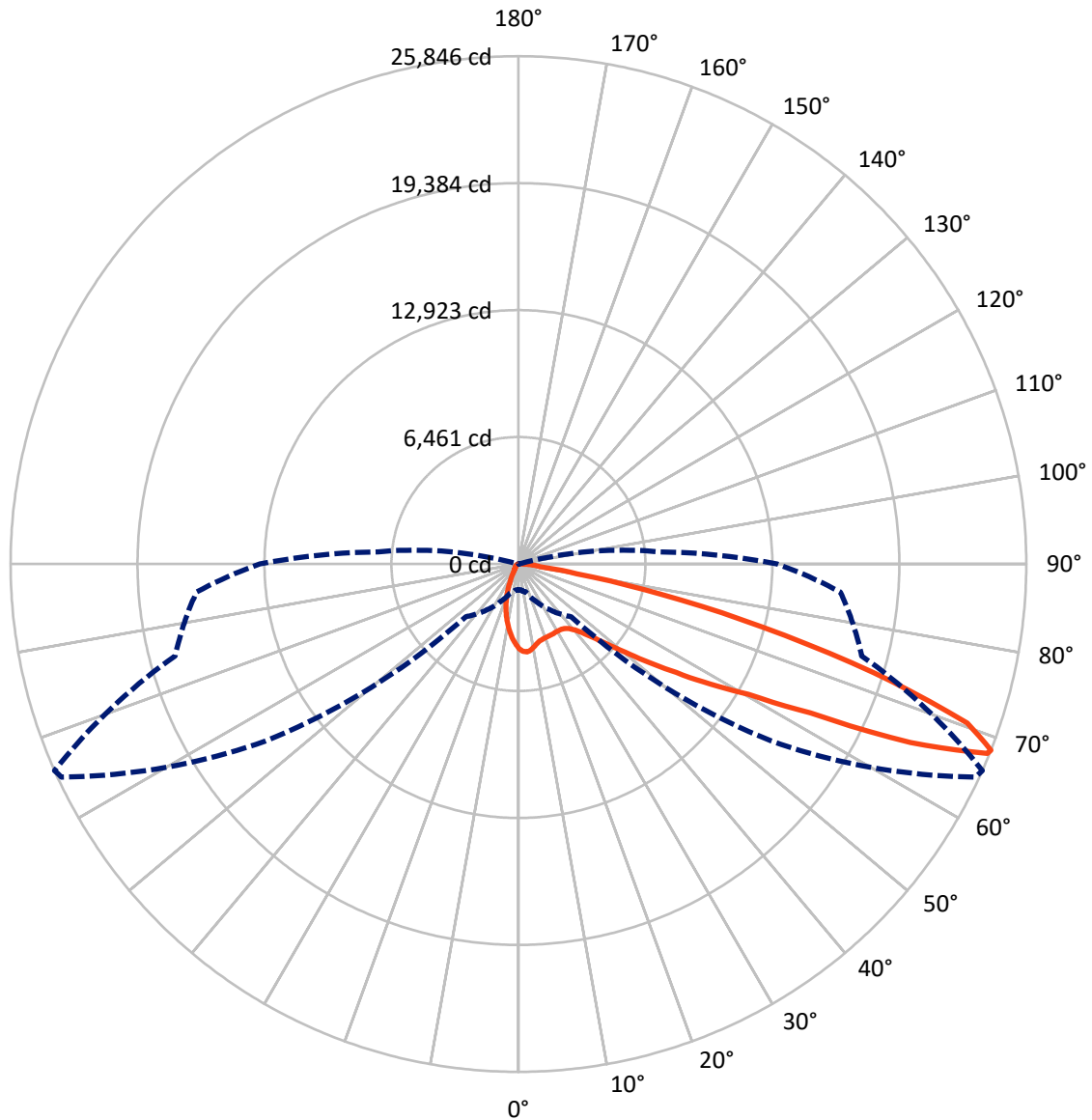


Based on 25 foot mounting height. Maximum calculated value = 6.9 fc
 Type II - Medium - Semi-Cutoff

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Luminous Intensity Polar Plot



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

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1961.0	0.0	1961.0
	% Fixture	10.1	0.0	10.1
Street Side	Lumens	17399.0	0.0	17399.0
	% Fixture	89.9	0.0	89.9
Total	Lumens	19360.0	0.0	19360.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	353.6	1.8
10°-20°	760.8	3.9
20°-30°	1102.5	5.7
30°-40°	1687.7	8.7
40°-50°	2886.6	14.9
50°-60°	4515.5	23.3
60°-70°	5199.5	26.9
70°-80°	2601.9	13.4
80°-90°	252.0	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°	19360.0	100.0
0°-180°	19360.0	100.0

Coefficient of Utilization



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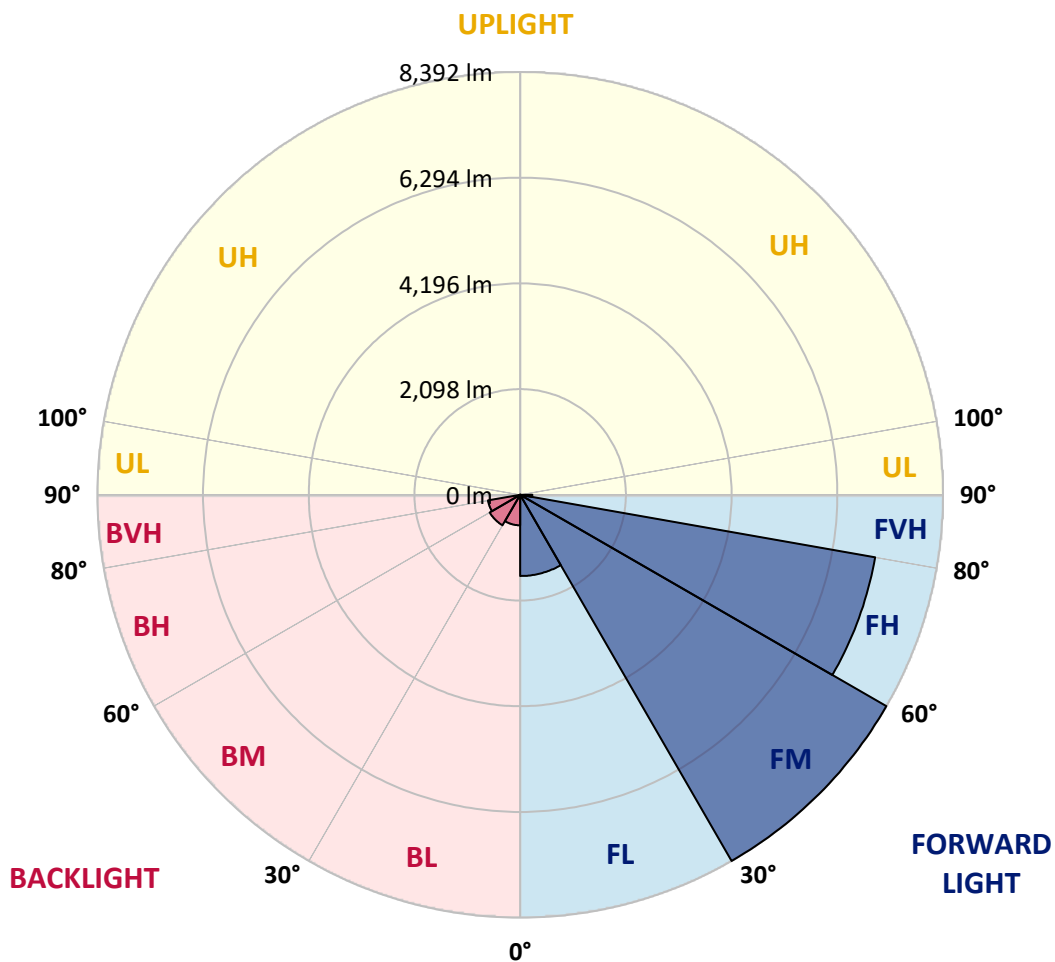
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1611.6	8.3			
FM (30°-60°)	8391.5	43.3			
FH (60°-80°)	7153.5	36.9			G3/7500
FVH (80°-90°)	242.4	1.3			G3/500
BL (0°-30°)	605.2	3.1	B2/1000		
BM (30°-60°)	698.3	3.6	B1/1000		
BH (60°-80°)	647.9	3.3	B2/1000		G2/1000
BVH (80°-90°)	9.5	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G3

Type II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	66°	75°	85°
0°	4313.2	4313.2	4313.2	4313.2	4313.2	4313.2	4313.2	4313.2	4313.2	4313.2	4313.2
2.5°	4536.6	4539.7	4538.2	4542.7	4539.7	4516.9	4492.6	4440.9	4445.4	4378.6	4304.1
5°	4217.5	4243.3	4269.2	4295.0	4357.3	4412.0	4477.4	4492.6	4492.6	4434.8	4325.4
7.5°	3892.2	3893.8	3922.6	3957.6	4041.2	4141.5	4293.5	4430.3	4433.3	4448.5	4328.4
10°	3647.5	3655.1	3674.9	3712.9	3796.5	3895.3	4065.5	4279.8	4296.5	4409.0	4298.0
12.5°	3457.6	3466.7	3488.0	3532.0	3608.0	3709.9	3889.2	4133.9	4156.7	4371.0	4288.9
15°	3311.7	3323.8	3340.5	3384.6	3466.7	3574.6	3770.7	4036.6	4064.0	4355.8	4317.8
17.5°	3250.9	3250.9	3249.4	3279.8	3361.8	3471.2	3676.4	3984.9	4019.9	4367.9	4366.4
20°	3276.7	3272.2	3240.2	3232.6	3282.8	3392.2	3602.0	3951.5	3991.0	4390.7	4425.7
22.5°	3413.5	3404.4	3332.9	3273.7	3258.5	3331.4	3551.8	3928.7	3975.8	4437.8	4504.7
25°	3703.8	3676.4	3577.6	3443.9	3323.8	3316.2	3516.8	3916.6	3966.7	4492.6	4591.4
27.5°	4080.7	4073.1	3915.0	3735.7	3504.7	3366.4	3506.2	3907.4	3957.6	4532.1	4661.3
30°	4548.8	4551.8	4369.5	4135.4	3785.9	3507.7	3539.6	3902.9	3954.5	4535.1	4691.7
32.5°	5032.1	5035.1	4883.2	4632.4	4170.4	3750.9	3633.9	3924.2	3971.3	4523.0	4690.1
35°	5497.2	5501.7	5410.5	5208.4	4684.1	4088.3	3811.7	3997.1	4030.5	4530.6	4687.1
37.5°	6085.3	6103.6	5991.1	5802.6	5328.5	4583.8	4102.0	4144.5	4171.9	4592.9	4709.9
40°	7088.4	7064.1	6741.9	6422.7	6027.6	5187.1	4521.4	4398.3	4407.5	4754.0	4796.5
42.5°	8257.1	8226.7	7675.0	7124.9	6746.4	5915.1	5057.9	4787.4	4785.9	5024.5	4985.0
45°	9263.3	9245.0	8664.4	7930.4	7542.8	6719.1	5719.1	5348.2	5330.0	5492.6	5328.5
47.5°	9977.6	9962.4	9523.1	8787.6	8463.8	7603.6	6544.3	6112.7	6074.7	6105.1	5886.2
50°	10047.5	10030.8	9877.3	9404.6	9539.9	8901.5	7564.1	7114.2	7065.6	7018.5	6729.7
52.5°	9394.0	9392.4	9473.0	9442.6	10293.7	10571.8	8814.9	8352.9	8295.1	8175.1	7887.8
55°	8058.0	8050.4	8355.9	8799.7	10277.0	12295.3	10722.3	9827.1	9751.1	9511.0	9134.1
57.5°	5887.7	5848.2	6486.6	7427.3	9555.1	13049.1	13751.3	11658.5	11532.3	10770.9	10190.3
60°	3250.9	3266.1	4086.8	5200.8	7845.3	12900.2	16538.6	13793.8	13462.5	11857.6	11272.4
62.5°	1822.3	1860.2	2471.2	3380.1	5001.7	11691.9	18034.1	17468.7	16670.8	13125.1	12640.3
65°	1378.5	1401.3	1708.3	2608.0	3153.6	8170.5	18272.7	22607.2	21918.7	15046.1	14818.2
67.5°	1297.9	1316.2	1466.6	2162.7	2872.4	4237.2	16476.3	25646.8	25733.4	17666.3	16505.2
68°	1307.0	1329.8	1480.3	2080.6	2867.9	3790.4	15710.3	25662.0	25845.9	18088.8	16447.4
70°	1200.7	1206.7	1565.4	2041.1	2779.7	2986.4	11365.2	23903.6	24233.4	18591.9	14930.6
72.5°	459.0	460.5	702.2	1767.5	2912.0	3003.1	5725.1	18892.8	18909.5	16179.9	11640.2
75°	238.6	200.6	220.4	553.2	2781.3	2927.2	2872.4	12900.2	12819.6	10942.6	7132.5
77.5°	164.1	139.8	147.4	191.5	1156.6	2925.6	2074.5	7418.2	7401.5	4655.2	2035.0
80°	92.7	80.6	88.1	161.1	405.8	2746.3	1933.2	3188.6	3004.7	817.7	329.8
82.5°	47.1	39.5	47.1	135.3	252.3	1728.0	1880.0	1250.8	1114.0	194.5	214.3
85°	12.2	12.2	22.8	94.2	156.5	566.9	1685.5	902.8	811.6	85.1	152.0
87.5°	3.0	1.5	9.1	35.0	56.2	123.1	934.7	503.1	433.1	44.1	88.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	4313.2	4313.2	4313.2	4313.2	4313.2	4313.2	4313.2	4313.2	4313.2	4313.2	4313.2
2.5°	4273.7	4231.2	4147.6	4053.3	3986.5	3913.5	3871.0	3819.3	3779.8	3744.8	3770.7
5°	4258.5	4176.4	3991.0	3782.8	3608.0	3440.9	3316.2	3197.7	3108.0	3051.8	3074.6
7.5°	4219.0	4097.4	3796.5	3471.2	3185.5	2916.5	2697.7	2501.6	2349.6	2267.6	2293.4
10°	4152.1	3980.4	3576.1	3124.7	2725.0	2345.1	2019.8	1728.0	1507.7	1404.3	1428.6
12.5°	4103.5	3877.0	3348.1	2790.4	2264.5	1725.0	1293.4	959.0	787.3	683.9	693.0
15°	4082.2	3796.5	3135.4	2437.8	1761.5	1107.9	699.1	506.1	446.8	425.5	427.1
17.5°	4085.3	3732.7	2933.2	2071.5	1253.8	636.8	428.6	386.0	376.9	372.4	372.4
20°	4092.9	3668.8	2723.5	1690.0	802.5	410.3	357.2	343.5	338.9	332.8	334.4
22.5°	4115.6	3620.2	2512.2	1307.0	493.9	334.4	316.1	304.0	296.4	287.2	288.8
25°	4150.6	3583.7	2304.0	940.8	348.0	291.8	275.1	258.4	244.7	234.1	235.6
27.5°	4171.9	3532.0	2082.1	641.4	288.8	255.3	232.5	209.7	194.5	185.4	183.9
30°	4156.7	3448.5	1829.9	421.0	255.3	220.4	193.0	167.2	152.0	144.4	144.4
32.5°	4115.6	3340.5	1551.7	307.0	226.5	190.0	156.5	133.7	123.1	118.5	120.1
35°	4068.5	3228.1	1255.4	259.9	203.7	161.1	127.7	109.4	104.9	103.3	103.3
37.5°	4042.7	3130.8	971.2	235.6	182.4	133.7	104.9	94.2	89.7	89.7	89.7
40°	4071.6	3056.3	718.9	217.3	161.1	110.9	88.1	80.6	79.0	79.0	79.0
42.5°	4194.7	3030.5	525.9	202.1	139.8	92.7	76.0	69.9	68.4	69.9	69.9
45°	4434.8	3086.7	398.2	186.9	120.1	76.0	65.4	60.8	60.8	62.3	62.3
47.5°	4842.1	3231.1	326.8	171.7	100.3	63.8	56.2	53.2	53.2	54.7	54.7
50°	5474.4	3498.6	293.3	155.0	83.6	54.7	47.1	45.6	45.6	47.1	48.6
52.5°	6434.9	4007.7	276.6	138.3	68.4	45.6	39.5	38.0	39.5	41.0	41.0
55°	7503.3	4659.7	256.8	121.6	57.8	38.0	31.9	31.9	33.4	36.5	36.5
57.5°	8498.8	5288.9	238.6	100.3	50.2	30.4	25.8	25.8	28.9	31.9	31.9
60°	9550.5	5906.0	214.3	80.6	42.6	24.3	21.3	21.3	25.8	28.9	30.4
62.5°	10849.9	6623.3	182.4	63.8	33.4	18.2	15.2	19.8	24.3	28.9	28.9
65°	12728.4	7515.5	142.9	50.2	25.8	13.7	12.2	18.2	22.8	27.4	28.9
67.5°	13410.8	7401.5	107.9	41.0	19.8	10.6	10.6	16.7	22.8	27.4	27.4
68°	13161.6	7152.2	103.3	39.5	18.2	10.6	10.6	16.7	22.8	27.4	27.4
70°	11468.5	5846.7	85.1	30.4	15.2	9.1	9.1	15.2	22.8	25.8	27.4
72.5°	8586.9	3884.6	73.0	19.8	13.7	9.1	7.6	15.2	21.3	25.8	25.8
75°	4925.7	1612.5	62.3	15.2	12.2	7.6	7.6	13.7	21.3	25.8	25.8
77.5°	1392.1	376.9	50.2	12.2	10.6	7.6	6.1	13.7	19.8	24.3	24.3
80°	255.3	112.5	39.5	10.6	9.1	7.6	6.1	13.7	19.8	24.3	24.3
82.5°	168.7	53.2	28.9	10.6	9.1	7.6	6.1	12.2	18.2	22.8	22.8
85°	126.1	38.0	18.2	10.6	9.1	7.6	6.1	12.2	18.2	22.8	22.8
87.5°	69.9	16.7	13.7	12.2	10.6	7.6	6.1	10.6	16.7	21.3	21.3
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)