

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: P195588

Luminaire Tested: **NAV-AF-06-D-UNV-SL2-7050-800-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195588
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-SL2-7050-800-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 5000K, 800mA 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: 23741 lumens
Efficiency: N/A
Efficacy: 95.3 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 - G4

Input Watts (W): 249
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

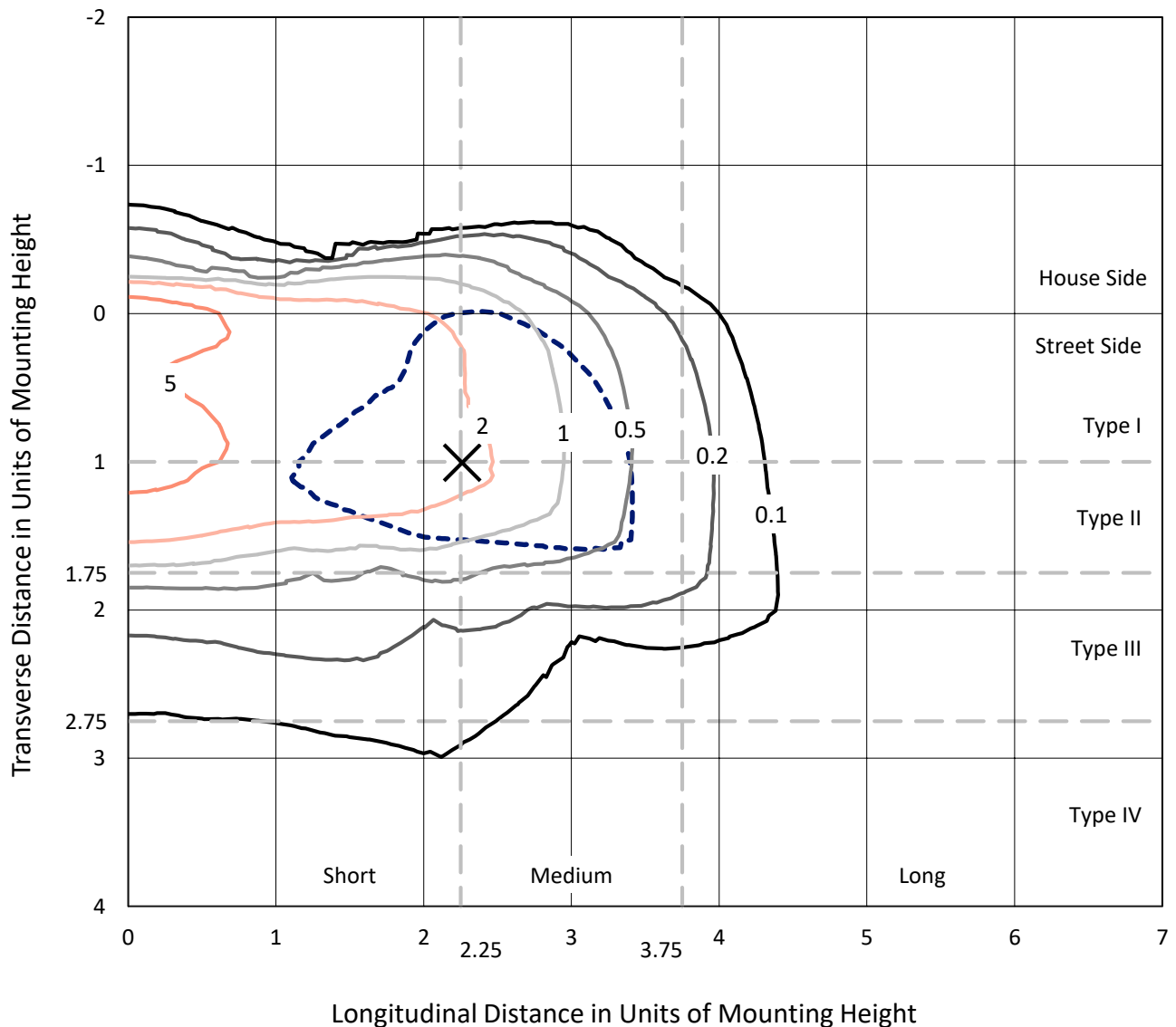


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

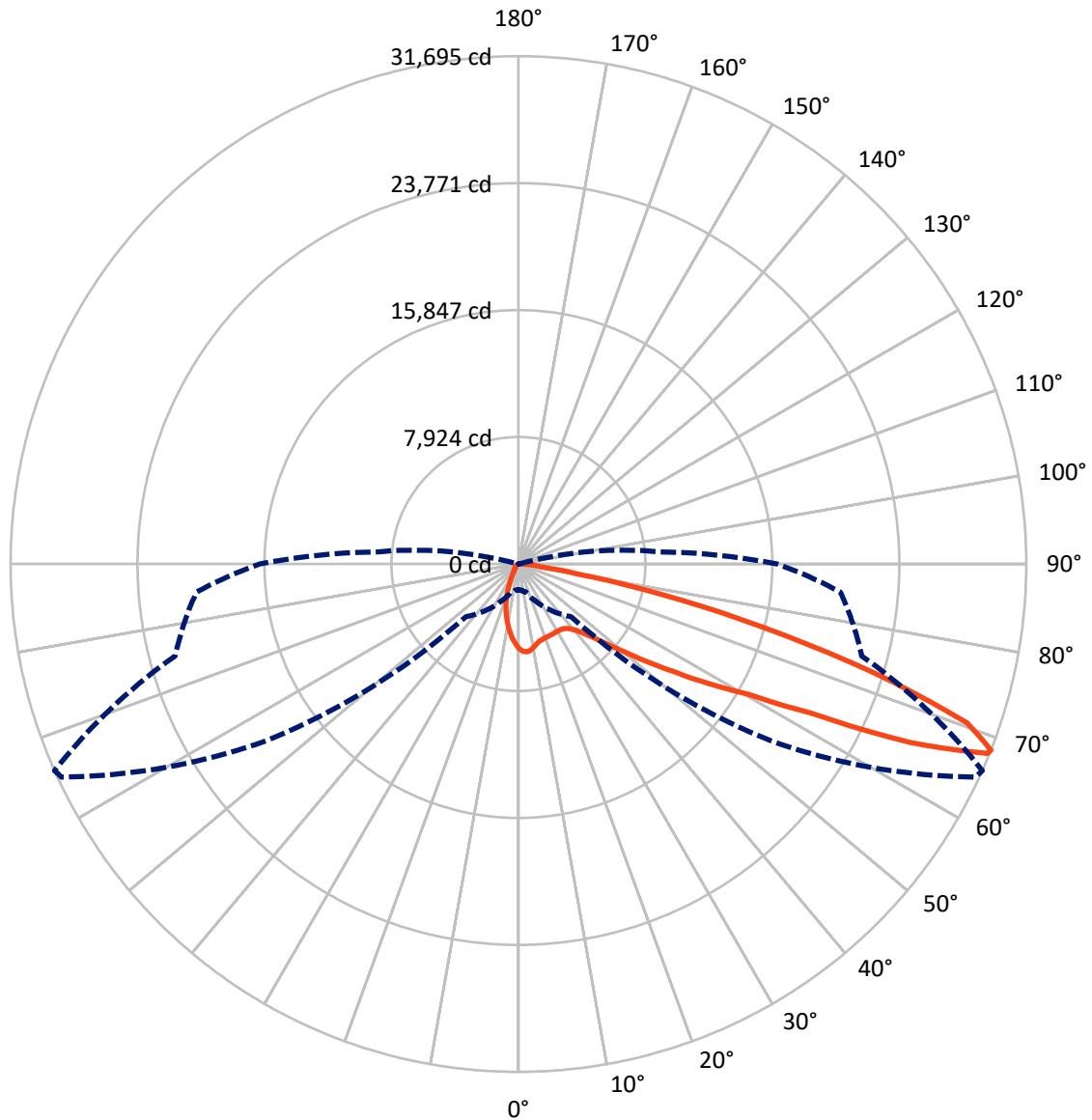


Based on 25 foot mounting height. Maximum calculated value = 8.5 fc
 Type II - Medium - Semi-Cutoff

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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	2404.7	0.0	2404.7
	% Fixture	10.1	0.0	10.1
Street Side	Lumens	21336.3	0.0	21336.3
	% Fixture	89.9	0.0	89.9
Total	Lumens	23741.0	0.0	23741.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	433.6	1.8
10°-20°	932.9	3.9
20°-30°	1352.0	5.7
30°-40°	2069.6	8.7
40°-50°	3539.8	14.9
50°-60°	5537.3	23.3
60°-70°	6376.0	26.9
70°-80°	3190.7	13.4
80°-90°	309.0	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°	23741.0	100.0
0°-180°	23741.0	100.0



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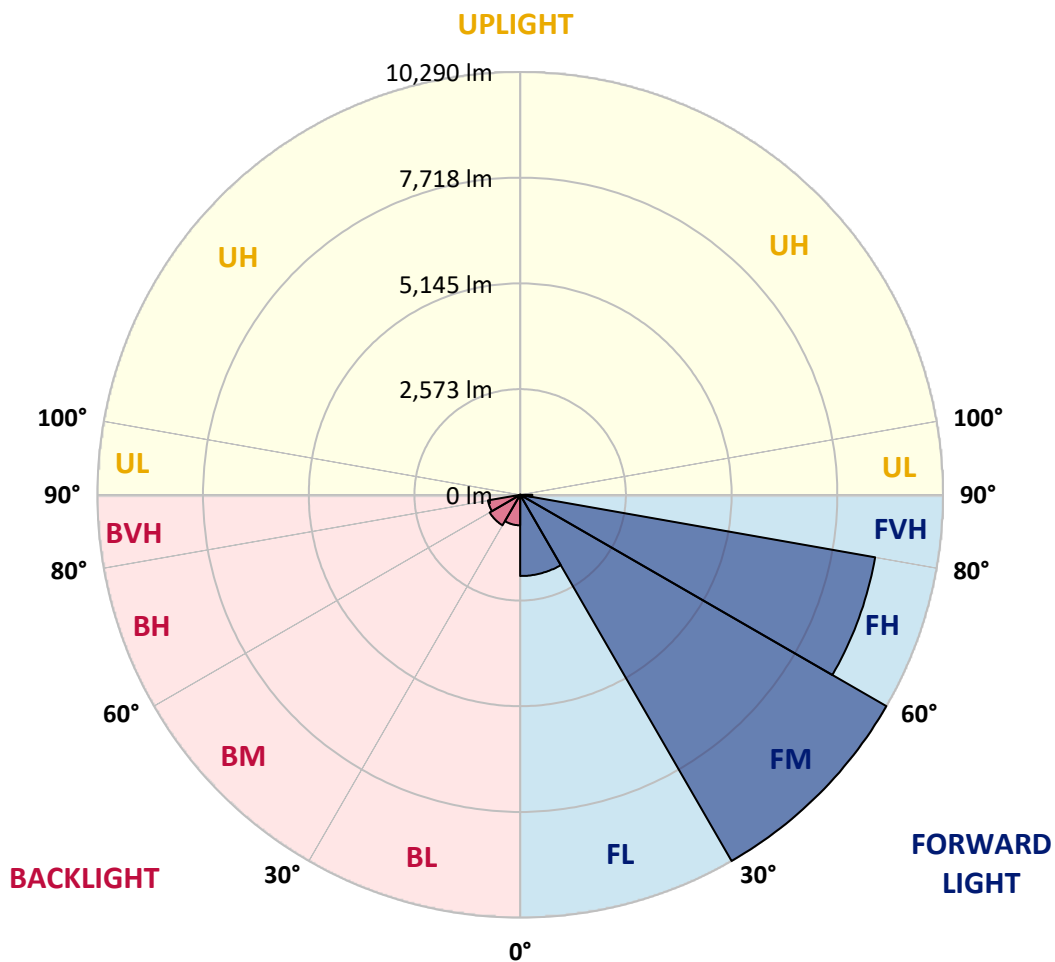
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1976.3	8.3			
FM (30°-60°)	10290.4	43.3			
FH (60°-80°)	8772.2	36.9			G4/12000
FVH (80°-90°)	297.3	1.3			G3/500
BL (0°-30°)	742.2	3.1	B2/1000		
BM (30°-60°)	856.3	3.6	B1/1000		
BH (60°-80°)	794.5	3.3	B2/1000		G2/1000
BVH (80°-90°)	11.7	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





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	66°	75°	85°
0°	5289.3	5289.3	5289.3	5289.3	5289.3	5289.3	5289.3	5289.3	5289.3	5289.3	5289.3
2.5°	5563.2	5567.0	5565.1	5570.7	5567.0	5539.0	5509.2	5445.8	5451.4	5369.4	5278.1
5°	5171.9	5203.5	5235.2	5266.9	5343.3	5410.4	5490.6	5509.2	5509.2	5438.4	5304.2
7.5°	4773.0	4774.9	4810.3	4853.2	4955.7	5078.7	5265.0	5432.8	5436.5	5455.1	5307.9
10°	4473.0	4482.3	4506.5	4553.1	4655.6	4776.7	4985.5	5248.3	5268.8	5406.7	5270.6
12.5°	4240.0	4251.2	4277.3	4331.3	4424.5	4549.4	4769.3	5069.4	5097.3	5360.1	5259.5
15°	4061.1	4076.0	4096.5	4150.5	4251.2	4383.5	4623.9	4950.1	4983.6	5341.5	5294.9
17.5°	3986.5	3986.5	3984.7	4021.9	4122.6	4256.8	4508.4	4886.7	4929.6	5356.4	5354.5
20°	4018.2	4012.6	3973.5	3964.2	4025.7	4159.8	4417.0	4845.7	4894.2	5384.3	5427.2
22.5°	4185.9	4174.8	4087.2	4014.5	3995.8	4085.3	4355.5	4817.7	4875.5	5442.1	5524.1
25°	4541.9	4508.4	4387.2	4223.2	4076.0	4066.7	4312.7	4802.8	4864.3	5509.2	5630.3
27.5°	5004.1	4994.8	4801.0	4581.1	4297.8	4128.2	4299.6	4791.7	4853.2	5557.6	5716.1
30°	5578.1	5581.9	5358.2	5071.2	4642.6	4301.5	4340.6	4786.1	4849.4	5561.4	5753.3
32.5°	6170.8	6174.5	5988.2	5680.7	5114.1	4599.7	4456.2	4812.2	4869.9	5546.5	5751.5
35°	6741.1	6746.7	6634.9	6387.0	5744.0	5013.4	4674.2	4901.6	4942.6	5555.8	5747.7
37.5°	7462.4	7484.7	7346.8	7115.7	6534.2	5621.0	5030.2	5082.4	5115.9	5632.2	5775.7
40°	8692.4	8662.6	8267.5	7876.1	7391.6	6360.9	5544.6	5393.6	5404.8	5829.8	5881.9
42.5°	10125.7	10088.4	9411.8	8737.2	8273.1	7253.6	6202.5	5870.8	5868.9	6161.5	6113.0
45°	11359.4	11337.1	10625.1	9725.0	9249.7	8239.6	7013.2	6558.5	6536.1	6735.5	6534.2
47.5°	12235.4	12216.8	11678.1	10776.1	10379.1	9324.2	8025.2	7495.9	7449.3	7486.6	7218.2
50°	12321.1	12300.6	12112.4	11532.8	11698.6	10915.9	9275.8	8724.1	8664.5	8606.7	8252.6
52.5°	11519.7	11517.9	11616.6	11579.4	12623.1	12964.1	10809.6	10243.1	10172.2	10025.0	9672.8
55°	9881.5	9872.2	10246.8	10791.0	12602.6	15077.6	13148.6	12050.9	11957.7	11663.2	11201.0
57.5°	7220.1	7171.6	7954.4	9108.1	11717.3	16002.0	16863.0	14296.7	14142.0	13208.3	12496.3
60°	3986.5	4005.2	5011.6	6377.7	9620.6	15819.4	20281.1	16915.2	16508.9	14540.8	13823.3
62.5°	2234.6	2281.2	3030.4	4144.9	6133.5	14337.7	22115.0	21421.7	20443.3	16095.2	15500.7
65°	1690.4	1718.4	2094.8	3198.2	3867.2	10019.4	22407.6	27723.0	26878.7	18450.9	18171.4
67.5°	1591.6	1614.0	1798.5	2652.1	3522.5	5196.1	20204.7	31450.5	31556.7	21664.0	20240.1
68°	1602.8	1630.8	1815.3	2551.4	3516.9	4648.1	19265.4	31469.1	31694.6	22182.1	20169.3
70°	1472.3	1479.8	1919.6	2503.0	3408.8	3662.2	13937.0	29312.8	29717.2	22799.0	18309.3
72.5°	562.8	564.7	861.0	2167.5	3570.9	3682.7	7020.7	23168.0	23188.5	19841.3	14274.3
75°	292.6	246.0	270.2	678.4	3410.6	3589.5	3522.5	15819.4	15720.6	13418.9	8746.5
77.5°	201.3	171.5	180.8	234.8	1418.3	3587.7	2544.0	9096.9	9076.4	5708.6	2495.5
80°	113.7	98.8	108.1	197.6	497.6	3367.8	2370.7	3910.1	3684.6	1002.7	404.4
82.5°	57.8	48.5	57.8	165.9	309.4	2119.1	2305.4	1533.9	1366.1	238.6	262.8
85°	14.9	14.9	28.0	115.6	192.0	695.2	2066.9	1107.1	995.2	104.4	186.4
87.5°	3.7	1.9	11.2	42.9	69.0	151.0	1146.2	616.9	531.2	54.0	108.1
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°	5289.3	5289.3	5289.3	5289.3	5289.3	5289.3	5289.3	5289.3	5289.3	5289.3	5289.3
2.5°	5240.8	5188.6	5086.1	4970.6	4888.6	4799.1	4746.9	4683.6	4635.1	4592.2	4623.9
5°	5222.2	5121.5	4894.2	4638.8	4424.5	4219.5	4066.7	3921.3	3811.3	3742.4	3770.3
7.5°	5173.7	5024.6	4655.6	4256.8	3906.4	3576.5	3308.1	3067.7	2881.3	2780.7	2812.4
10°	5091.7	4881.1	4385.4	3831.8	3341.7	2875.7	2476.9	2119.1	1848.8	1722.1	1751.9
12.5°	5032.1	4754.4	4105.8	3421.8	2777.0	2115.3	1586.0	1176.0	965.4	838.7	849.9
15°	5006.0	4655.6	3844.9	2989.4	2160.1	1358.7	857.3	620.6	547.9	521.8	523.7
17.5°	5009.7	4577.3	3597.0	2540.3	1537.6	780.9	525.6	473.4	462.2	456.6	456.6
20°	5019.0	4499.0	3339.8	2072.5	984.1	503.2	438.0	421.2	415.6	408.2	410.0
22.5°	5047.0	4439.4	3080.7	1602.8	605.7	410.0	387.7	372.7	363.4	352.2	354.1
25°	5089.9	4394.7	2825.4	1153.6	426.8	357.8	337.3	316.8	300.1	287.0	288.9
27.5°	5115.9	4331.3	2553.3	786.5	354.1	313.1	285.2	257.2	238.6	227.4	225.5
30°	5097.3	4228.8	2243.9	516.3	313.1	270.2	236.7	205.0	186.4	177.1	177.1
32.5°	5047.0	4096.5	1902.9	376.5	277.7	233.0	192.0	164.0	151.0	145.4	147.2
35°	4989.2	3958.6	1539.4	318.7	249.7	197.6	156.6	134.2	128.6	126.7	126.7
37.5°	4957.5	3839.3	1190.9	288.9	223.6	164.0	128.6	115.6	110.0	110.0	110.0
40°	4992.9	3748.0	881.5	266.5	197.6	136.1	108.1	98.8	96.9	96.9	96.9
42.5°	5143.9	3716.3	644.9	247.9	171.5	113.7	93.2	85.7	83.9	85.7	85.7
45°	5438.4	3785.2	488.3	229.2	147.2	93.2	80.1	74.5	74.5	76.4	76.4
47.5°	5937.8	3962.3	400.7	210.6	123.0	78.3	69.0	65.2	65.2	67.1	67.1
50°	6713.2	4290.3	359.7	190.1	102.5	67.1	57.8	55.9	55.9	57.8	59.6
52.5°	7891.0	4914.7	339.2	169.6	83.9	55.9	48.5	46.6	48.5	50.3	50.3
55°	9201.2	5714.2	315.0	149.1	70.8	46.6	39.1	39.1	41.0	44.7	44.7
57.5°	10422.0	6485.8	292.6	123.0	61.5	37.3	31.7	31.7	35.4	39.1	39.1
60°	11711.7	7242.5	262.8	98.8	52.2	29.8	26.1	26.1	31.7	35.4	37.3
62.5°	13305.2	8122.1	223.6	78.3	41.0	22.4	18.6	24.2	29.8	35.4	35.4
65°	15608.8	9216.2	175.2	61.5	31.7	16.8	14.9	22.4	28.0	33.5	35.4
67.5°	16445.6	9076.4	132.3	50.3	24.2	13.0	13.0	20.5	28.0	33.5	33.5
68°	16139.9	8770.7	126.7	48.5	22.4	13.0	13.0	20.5	28.0	33.5	33.5
70°	14063.7	7169.8	104.4	37.3	18.6	11.2	11.2	18.6	28.0	31.7	33.5
72.5°	10530.1	4763.7	89.5	24.2	16.8	11.2	9.3	18.6	26.1	31.7	31.7
75°	6040.4	1977.4	76.4	18.6	14.9	9.3	9.3	16.8	26.1	31.7	31.7
77.5°	1707.2	462.2	61.5	14.9	13.0	9.3	7.5	16.8	24.2	29.8	29.8
80°	313.1	137.9	48.5	13.0	11.2	9.3	7.5	16.8	24.2	29.8	29.8
82.5°	206.9	65.2	35.4	13.0	11.2	9.3	7.5	14.9	22.4	28.0	28.0
85°	154.7	46.6	22.4	13.0	11.2	9.3	7.5	14.9	22.4	28.0	28.0
87.5°	85.7	20.5	16.8	14.9	13.0	9.3	7.5	13.0	20.5	26.1	26.1
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)