

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: P195033

Luminaire Tested: **NAV-AF-03-D-UNV-AFL-7060-800-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195033
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24283)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-03-D-UNV-AFL-7060-800-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 5700K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND AUTOMOTIVE FRONTLINE OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12284 lumens
Efficiency: N/A
Efficacy: 99.1 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type II - Short - Full Cutoff
BUG Rating: B1 - U0 - G2

Input Watts (W): 124
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

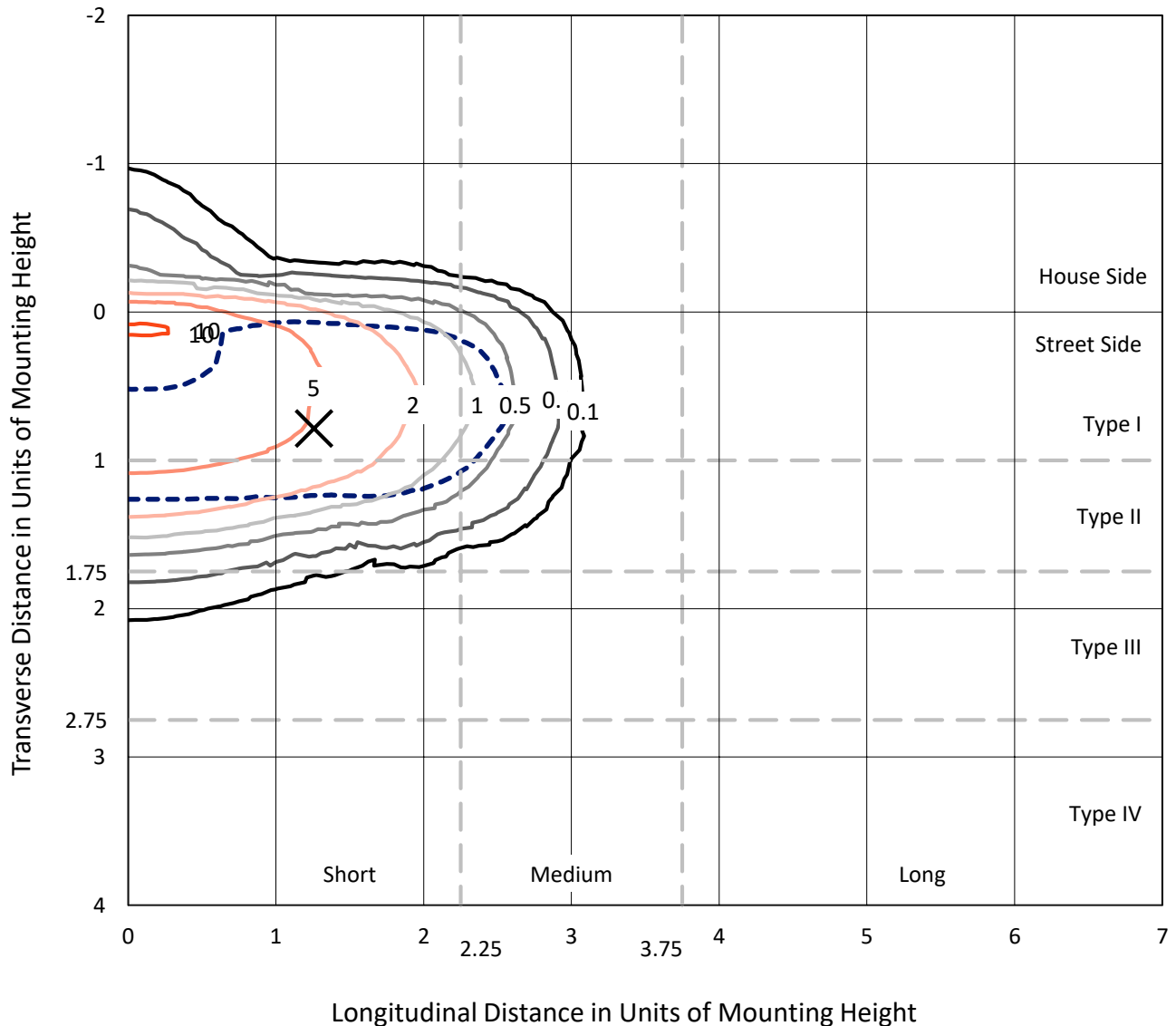


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

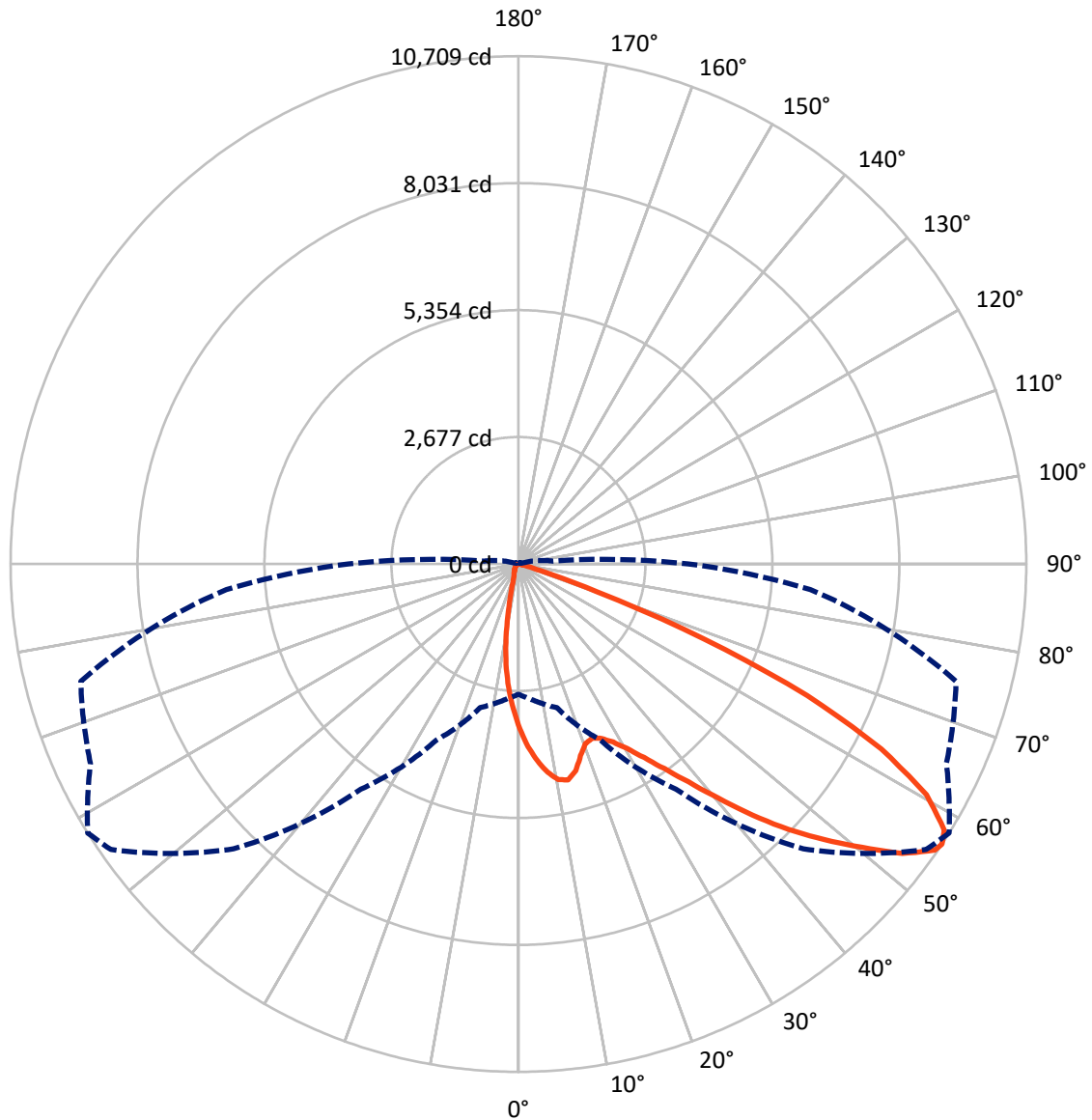


Based on 20 foot mounting height. Maximum calculated value = 10.8 fc
 Type II - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral - - - Horizontal Cone Through 56-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	766.8	0.0	766.8
	% Fixture	6.2	0.0	6.2
Street Side	Lumens	11517.2	0.0	11517.2
	% Fixture	93.8	0.0	93.8
Total	Lumens	12284.0	0.0	12284.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	296.7	2.4
10°-20°	690.4	5.6
20°-30°	1161.6	9.5
30°-40°	1989.2	16.2
40°-50°	3001.7	24.4
50°-60°	3120.2	25.4
60°-70°	1751.6	14.3
70°-80°	240.1	2.0
80°-90°	32.5	0.3
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°	12284.0	100.0
0°-180°	12284.0	100.0

Coefficient of Utilization



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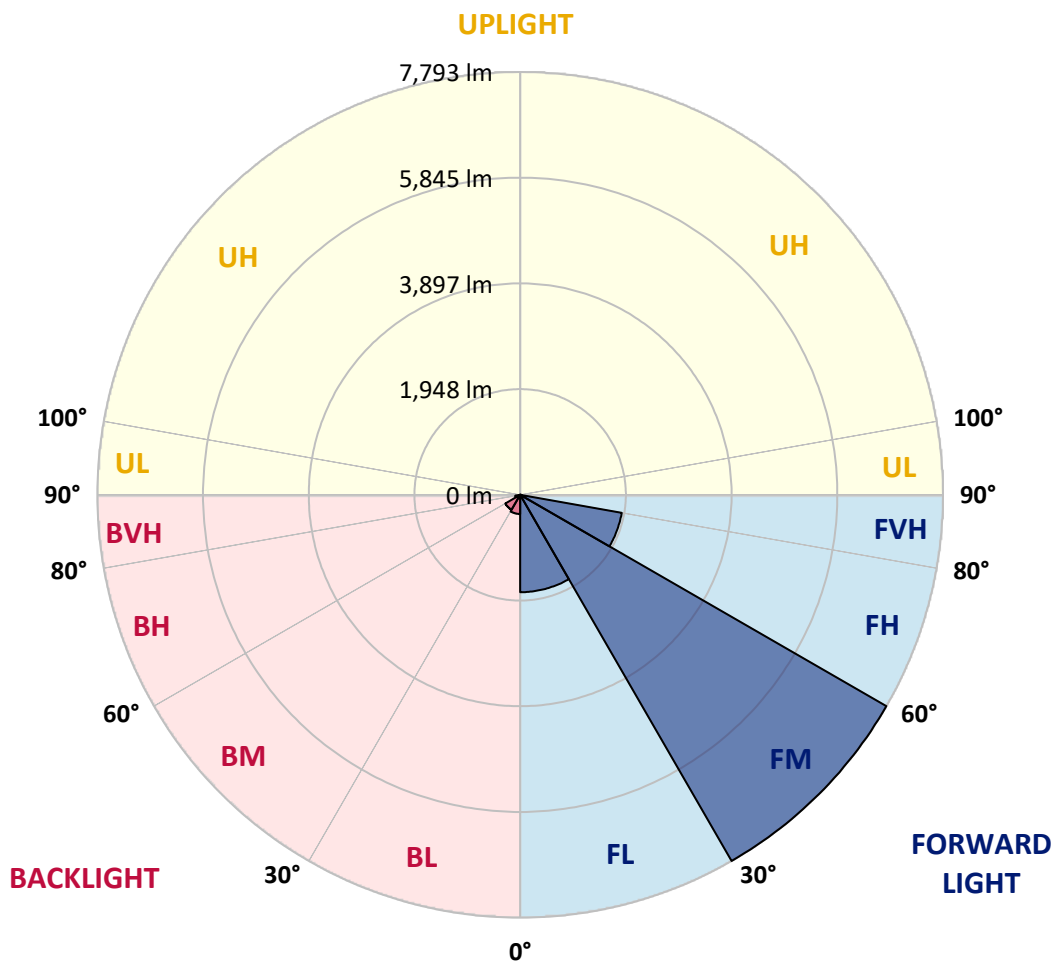
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1795.0	14.6			
FM (30°-60°)	7793.5	63.4			
FH (60°-80°)	1900.7	15.5			G2/5000
FVH (80°-90°)	28.0	0.2			G1/100
BL (0°-30°)	353.7	2.9	B1/500		
BM (30°-60°)	317.6	2.6	B1/1000		
BH (60°-80°)	91.0	0.7	B0/110		G0/110
BVH (80°-90°)	4.5	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G2

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	3478.0	3478.0	3478.0	3478.0	3478.0	3478.0	3478.0	3478.0	3478.0	3478.0	3478.0
2.5°	4184.6	4159.3	4133.1	4084.3	4039.4	3970.0	3874.4	3851.0	3776.0	3652.3	3537.0
5°	4545.4	4540.8	4523.0	4483.6	4434.9	4350.5	4242.7	4170.6	4054.4	3859.4	3637.3
7.5°	4331.8	4371.1	4435.8	4527.6	4589.5	4581.1	4498.6	4435.8	4320.5	4054.4	3735.7
10°	3651.4	3658.9	3747.9	3941.0	4246.5	4531.4	4639.2	4622.3	4516.4	4224.9	3821.9
12.5°	3411.4	3416.1	3436.7	3498.6	3697.3	4094.7	4582.9	4671.0	4662.6	4388.0	3913.8
15°	3430.2	3433.0	3438.6	3458.3	3514.5	3714.1	4298.0	4522.0	4756.3	4542.6	4003.7
17.5°	3578.3	3576.4	3558.6	3539.8	3557.6	3623.2	4007.5	4243.7	4736.6	4672.9	4077.8
20°	3866.9	3876.3	3816.3	3732.9	3689.8	3692.6	3864.1	4041.2	4626.0	4774.1	4133.1
22.5°	4272.7	4279.3	4180.9	4036.5	3910.0	3846.3	3894.1	3987.8	4498.6	4867.8	4178.1
25°	4757.3	4757.3	4619.5	4414.2	4218.4	4078.7	4037.5	4073.1	4449.9	4973.8	4223.1
27.5°	5280.2	5299.0	5119.0	4850.0	4591.4	4387.1	4257.7	4251.2	4487.3	5106.8	4273.7
30°	5849.1	5866.0	5652.3	5323.3	5016.9	4755.4	4556.7	4513.6	4630.7	5285.8	4347.7
32.5°	6415.2	6429.2	6193.1	5857.5	5500.5	5193.1	4931.6	4863.2	4888.5	5547.3	4456.4
35°	7135.0	7137.8	6838.8	6439.5	6058.1	5697.3	5366.4	5299.0	5270.8	5877.2	4612.9
37.5°	7707.6	7685.1	7495.8	7118.1	6680.4	6303.6	5914.7	5826.6	5759.1	6341.1	4855.7
40°	7842.5	7842.5	7814.4	7701.0	7353.3	6990.6	6613.9	6482.7	6333.6	6887.5	5181.8
42.5°	7491.1	7513.6	7699.1	7945.6	7948.4	7716.0	7347.7	7237.1	6974.7	7509.8	5538.0
45°	6704.8	6711.3	7156.5	7821.9	8273.7	8406.7	8134.9	7982.2	7618.5	8156.5	5864.1
47.5°	6421.7	6442.4	6631.7	7445.2	8298.0	8966.3	8890.3	8680.4	8214.6	8746.9	6168.7
50°	5986.9	6012.2	6243.7	6890.3	8078.7	9325.2	9612.9	9388.0	8757.3	9239.0	6319.6
52.5°	4946.6	4985.9	5313.0	6156.5	7530.5	9340.2	10274.6	10139.6	9313.0	9502.3	6301.8
55°	3403.9	3433.0	3814.4	4806.0	6424.5	8881.9	10559.5	10652.3	9808.8	9561.4	6215.6
56°	2746.0	2854.7	3134.0	4094.7	5794.7	8492.0	10493.9	10708.5	9955.9	9552.0	6178.1
57.5°	1815.4	1836.0	2140.6	2967.2	4653.2	7645.7	10197.7	10588.6	10145.3	9504.2	6150.9
60°	853.8	863.2	972.8	1369.3	2518.3	5571.7	9235.2	9883.8	10214.6	9403.9	6149.9
62.5°	556.7	558.6	571.7	653.2	1030.0	3034.7	7656.0	8589.5	9640.1	9392.7	6132.1
65°	458.3	463.0	447.0	457.4	538.9	1144.3	5400.2	6696.3	8291.5	9128.4	5931.6
67.5°	403.9	404.9	383.3	371.1	394.6	502.3	2720.7	4224.0	6201.5	7756.3	4885.7
70°	368.3	367.4	343.0	314.9	315.8	333.6	886.6	1754.4	3431.1	4605.4	2805.1
72.5°	327.1	329.0	314.9	275.5	262.4	236.2	333.6	473.3	1167.8	1478.9	739.5
75°	286.8	283.0	269.0	243.7	219.3	158.4	167.8	201.5	304.6	301.8	159.3
77.5°	217.4	213.7	220.2	208.1	171.5	110.6	91.8	105.0	137.8	128.4	64.7
80°	165.9	164.0	150.0	178.1	156.5	83.4	62.8	64.7	75.0	68.4	31.9
82.5°	120.0	119.0	113.4	109.7	99.3	60.9	47.8	50.6	56.2	47.8	23.4
85°	45.9	45.9	89.0	75.0	68.4	41.2	33.7	36.6	43.1	34.7	15.9
87.5°	7.5	7.5	60.0	49.7	30.9	20.6	21.6	23.4	25.3	20.6	12.2
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°	3478.0	3478.0	3478.0	3478.0	3478.0	3478.0	3478.0	3478.0	3478.0	3478.0	3478.0
2.5°	3468.6	3405.8	3268.0	3135.0	3018.7	2891.3	2826.6	2751.6	2723.5	2667.3	2672.9
5°	3504.2	3373.0	3096.5	2805.1	2538.0	2266.2	2073.1	1891.3	1790.1	1689.8	1689.8
7.5°	3540.8	3340.2	2912.8	2447.0	1997.2	1531.4	1201.5	937.2	790.1	691.7	688.8
10°	3566.1	3298.0	2703.8	2031.9	1368.3	789.1	476.1	374.9	338.3	322.4	321.5
12.5°	3598.9	3255.9	2465.8	1542.6	760.1	374.9	297.1	281.2	274.6	270.9	270.9
15°	3627.0	3195.9	2177.1	1037.5	399.2	281.2	255.9	250.2	249.3	248.4	249.3
17.5°	3633.5	3110.6	1831.3	607.3	289.6	245.5	234.3	229.6	229.6	228.7	228.7
20°	3618.6	2998.1	1448.9	374.9	250.2	225.9	213.7	208.1	207.1	207.1	207.1
22.5°	3587.6	2854.7	1071.2	284.0	227.7	208.1	192.1	186.5	186.5	187.4	188.4
25°	3549.2	2685.1	735.7	244.6	210.9	189.3	173.4	167.8	169.6	171.5	172.4
27.5°	3500.5	2482.7	481.7	211.8	188.4	170.6	156.5	152.8	156.5	160.3	162.1
30°	3451.7	2260.5	326.1	183.7	163.1	150.0	141.5	140.6	146.2	154.6	155.6
32.5°	3419.9	2032.8	246.5	164.9	143.4	132.1	128.4	130.3	138.7	148.1	150.0
35°	3417.1	1810.7	209.9	150.0	130.3	120.0	118.1	123.7	133.1	140.6	142.5
37.5°	3461.1	1602.6	190.3	138.7	120.0	109.7	106.8	117.2	125.6	133.1	135.0
40°	3550.1	1416.1	177.1	128.4	111.5	99.3	97.5	105.9	114.3	122.8	125.6
42.5°	3661.7	1241.8	162.1	118.1	102.2	88.1	86.2	92.8	101.2	113.4	115.3
45°	3758.2	1079.7	146.2	106.8	91.8	75.9	75.0	82.5	89.0	100.3	102.2
47.5°	3839.7	944.7	131.2	94.7	78.7	67.5	66.5	70.3	74.0	84.3	86.2
50°	3796.6	830.4	116.2	77.8	63.7	58.1	57.2	57.2	61.9	72.2	74.0
52.5°	3690.7	759.1	102.2	64.7	52.5	49.7	46.9	47.8	52.5	57.2	58.1
55°	3605.4	725.4	90.0	57.2	44.0	41.2	38.4	37.5	38.4	36.6	34.7
56°	3584.8	721.6	87.2	55.3	42.2	38.4	34.7	32.8	31.9	28.1	27.2
57.5°	3575.4	721.6	82.5	51.5	39.4	34.7	30.0	26.2	22.5	19.7	19.7
60°	3567.9	726.3	76.9	45.0	33.7	28.1	21.6	15.9	13.1	13.1	13.1
62.5°	3552.0	724.5	70.3	37.5	29.1	21.6	13.1	10.3	9.4	10.3	11.2
65°	3373.0	672.9	61.9	30.0	22.5	15.0	7.5	7.5	8.4	10.3	11.2
67.5°	2717.9	509.8	50.6	23.4	15.9	11.2	6.6	6.6	8.4	10.3	11.2
70°	1493.0	269.0	43.1	16.9	12.2	9.4	6.6	5.6	8.4	10.3	11.2
72.5°	364.6	112.5	39.4	13.1	11.2	8.4	5.6	5.6	8.4	10.3	11.2
75°	90.0	84.3	31.9	10.3	9.4	7.5	5.6	5.6	8.4	10.3	11.2
77.5°	42.2	111.5	21.6	9.4	8.4	6.6	5.6	5.6	8.4	10.3	10.3
80°	25.3	84.3	13.1	8.4	7.5	6.6	5.6	5.6	8.4	10.3	11.2
82.5°	15.0	24.4	9.4	8.4	7.5	5.6	5.6	5.6	8.4	10.3	11.2
85°	13.1	12.2	9.4	8.4	7.5	6.6	5.6	5.6	9.4	11.2	11.2
87.5°	10.3	9.4	8.4	7.5	7.5	6.6	5.6	5.6	8.4	10.3	11.2
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)