

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: P270417

Luminaire Tested: **NAV-AF-03-D-UNV-AFL-7027-800-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270417
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-7027-800-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 2700K, 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: 10672.6 lumens
Efficiency: N/A
Efficacy: 86.1 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 - G1

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

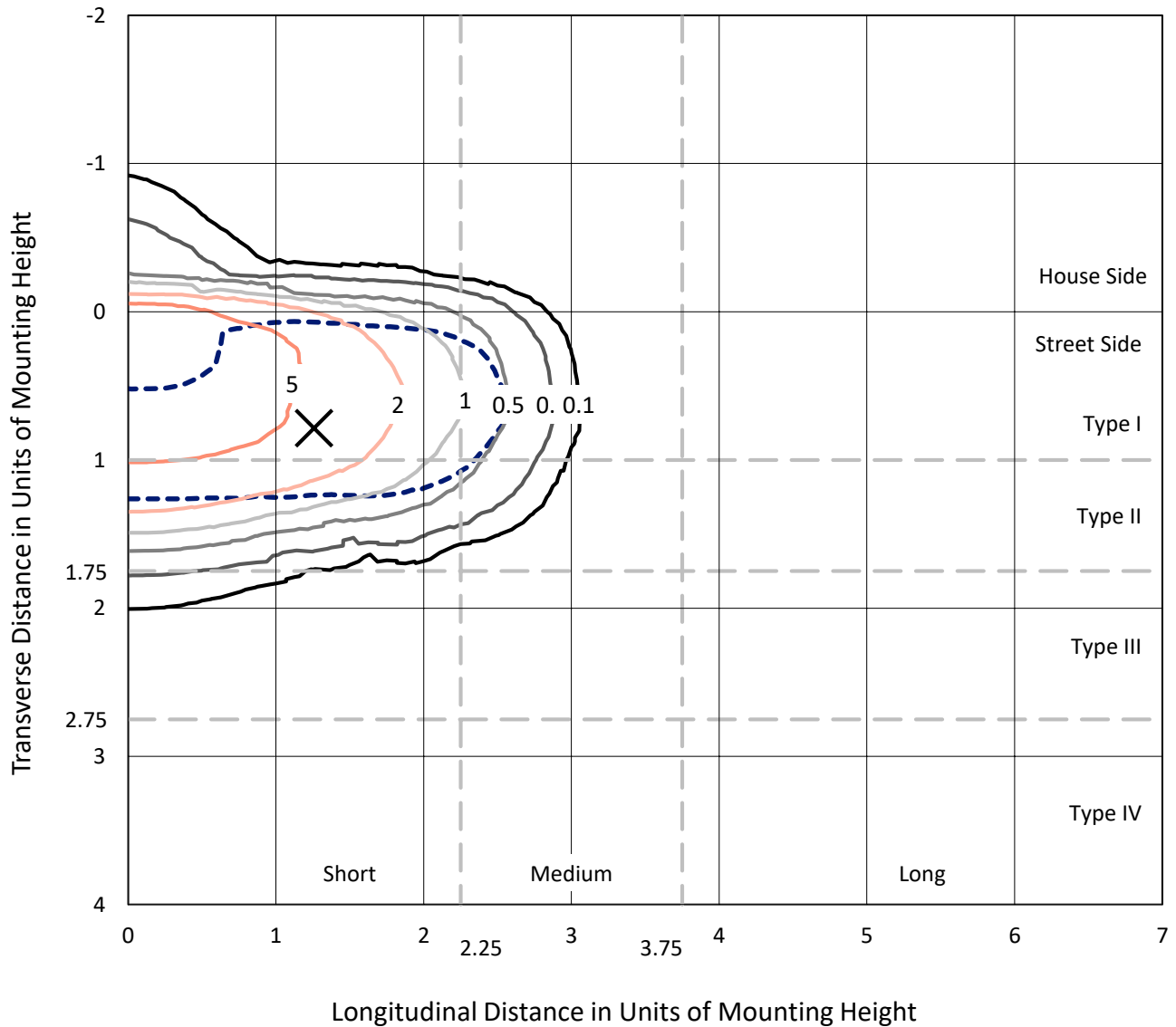


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

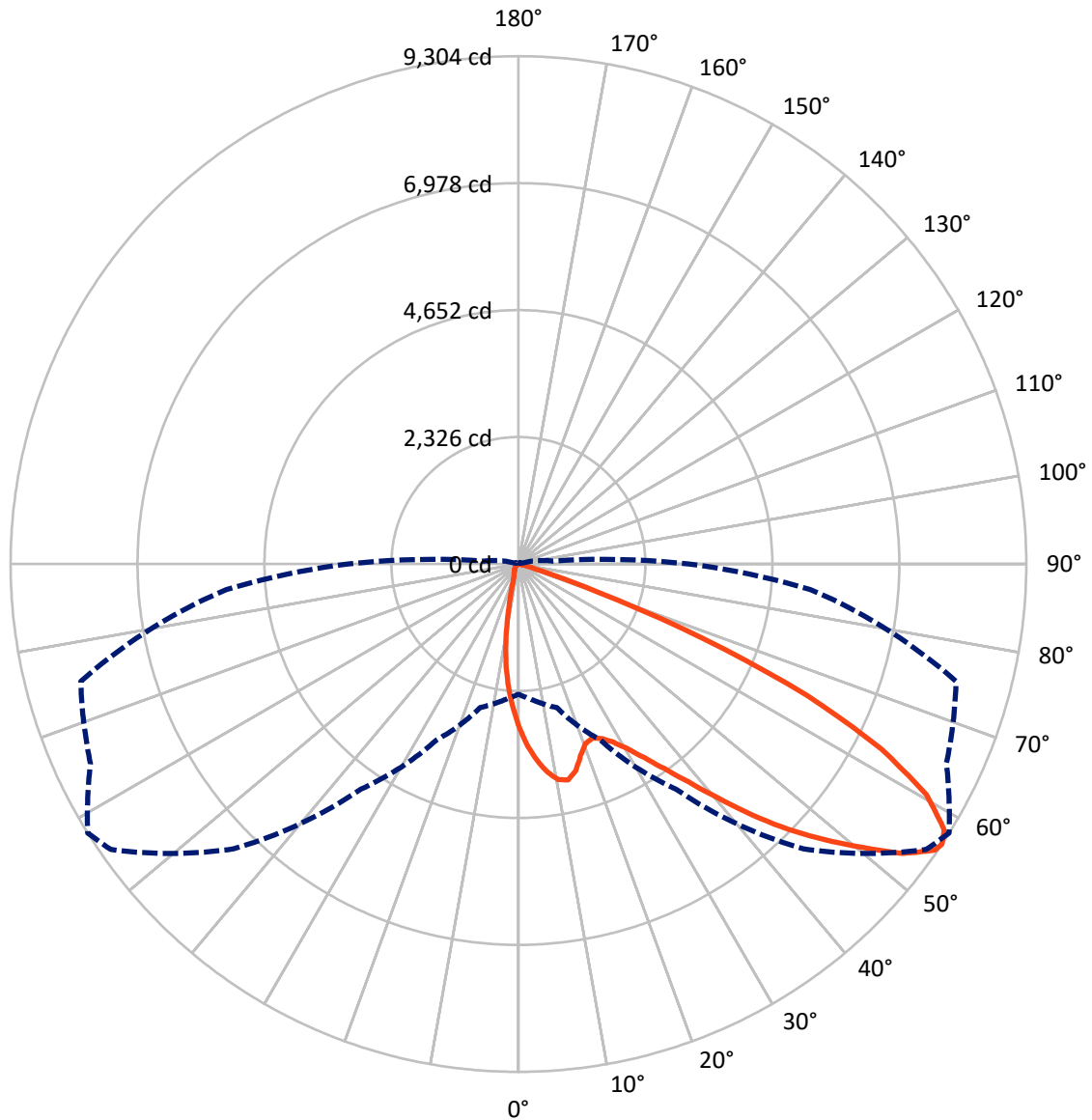


Based on 20 foot mounting height. Maximum calculated value = 9.4 fc
 Type II - Short - Full Cutoff

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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	666.2	0.0	666.2
	% Fixture	6.2	0.0	6.2
Street Side	Lumens	10006.4	0.0	10006.4
	% Fixture	93.8	0.0	93.8
Total	Lumens	10672.6	0.0	10672.6
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	257.8	2.4
10°-20°	599.8	5.6
20°-30°	1009.3	9.5
30°-40°	1728.2	16.2
40°-50°	2608.0	24.4
50°-60°	2710.9	25.4
60°-70°	1521.9	14.3
70°-80°	208.6	2.0
80°-90°	28.3	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°	10672.6	100.0
0°-180°	10672.6	100.0

Coefficient of Utilization



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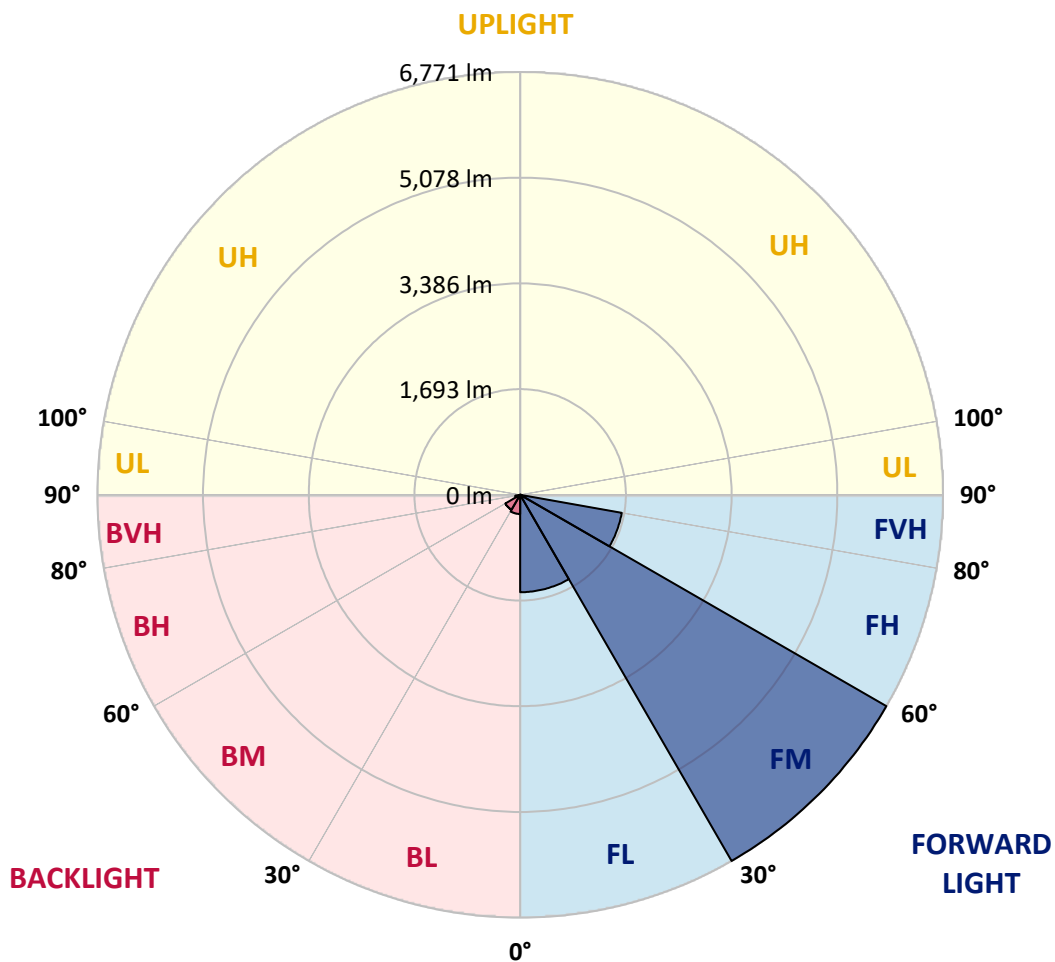
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1559.5	14.6			
FM	(30°-60°)	6771.1	63.4			
FH	(60°-80°)	1651.4	15.5			G1/1800
FVH	(80°-90°)	24.4	0.2			G1/100
BL	(0°-30°)	307.3	2.9	B1/500		
BM	(30°-60°)	275.9	2.6	B1/1000		
BH	(60°-80°)	79.0	0.7	B0/110		G0/110
BVH	(80°-90°)	3.9	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-G1

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	3021.8	3021.8	3021.8	3021.8	3021.8	3021.8	3021.8	3021.8	3021.8	3021.8	3021.8
2.5°	3635.7	3613.7	3591.0	3548.6	3509.5	3449.2	3366.2	3345.8	3280.7	3173.3	3073.0
5°	3949.2	3945.1	3929.6	3895.5	3853.1	3779.8	3686.1	3623.6	3522.6	3353.2	3160.1
7.5°	3763.5	3797.8	3853.9	3933.7	3987.4	3980.1	3908.4	3853.9	3753.7	3522.6	3245.7
10°	3172.4	3178.9	3256.3	3424.0	3689.5	3937.0	4030.6	4016.0	3923.9	3670.7	3320.6
12.5°	2964.0	2968.0	2986.0	3039.7	3212.2	3557.6	3981.7	4058.4	4050.9	3812.3	3400.4
15°	2980.1	2982.6	2987.6	3004.7	3053.5	3226.9	3734.3	3928.8	4132.5	3946.8	3478.5
17.5°	3108.9	3107.2	3091.7	3075.4	3091.0	3148.0	3481.8	3687.1	4115.3	4059.9	3542.8
20°	3359.8	3367.8	3315.7	3243.2	3205.8	3208.1	3357.2	3511.1	4019.2	4147.8	3591.0
22.5°	3712.2	3717.9	3632.4	3507.1	3397.1	3341.8	3383.2	3464.8	3908.4	4229.3	3630.1
25°	4133.2	4133.2	4013.4	3835.3	3665.1	3543.8	3507.8	3538.9	3866.1	4321.2	3669.0
27.5°	4587.6	4603.9	4447.5	4213.8	3989.2	3811.6	3699.2	3693.6	3898.7	4437.0	3713.1
30°	5081.8	5096.5	4910.9	4625.1	4358.8	4131.6	3959.0	3921.6	4023.2	4592.4	3777.5
32.5°	5573.7	5585.9	5380.7	5089.2	4779.0	4511.8	4284.6	4225.3	4247.2	4819.6	3871.9
35°	6199.1	6201.4	5941.7	5594.9	5263.3	4949.9	4662.6	4603.9	4579.4	5106.2	4007.8
37.5°	6696.5	6677.0	6512.5	6184.3	5804.0	5476.7	5138.8	5062.3	5003.6	5509.3	4218.7
40°	6813.7	6813.7	6789.4	6690.8	6388.7	6073.6	5746.3	5632.4	5502.7	5984.1	4502.0
42.5°	6508.4	6528.0	6689.1	6903.4	6905.8	6703.8	6383.9	6287.7	6059.7	6524.7	4811.5
45°	5825.2	5831.0	6217.8	6795.9	7188.3	7303.9	7067.9	6935.2	6619.3	7086.5	5094.8
47.5°	5579.4	5597.2	5761.8	6468.5	7209.4	7790.1	7724.2	7541.7	7137.0	7599.5	5359.5
50°	5201.5	5223.6	5424.7	5986.5	7018.9	8102.0	8351.9	8156.5	7608.6	8027.1	5490.6
52.5°	4297.8	4331.8	4616.1	5348.9	6542.6	8115.0	8926.7	8809.6	8091.4	8255.9	5475.1
55°	2957.4	2982.6	3314.0	4175.5	5581.8	7716.8	9174.3	9255.0	8522.1	8307.2	5400.3
56°	2385.8	2480.3	2722.9	3557.6	5034.6	7378.0	9117.3	9303.8	8650.0	8299.0	5367.6
57.5°	1577.2	1595.1	1859.9	2578.0	4042.8	6642.7	8860.1	9199.6	8814.3	8257.5	5344.0
60°	741.8	749.9	845.2	1189.6	2187.9	4840.8	8023.8	8587.3	8874.6	8170.4	5343.2
62.5°	483.6	485.4	496.8	567.5	894.9	2636.5	6651.8	7462.8	8375.5	8160.7	5327.8
65°	398.2	402.3	388.3	397.4	468.1	994.2	4691.8	5818.0	7203.8	7931.0	5153.4
67.5°	351.0	351.7	333.0	322.4	342.9	436.4	2363.8	3669.8	5388.0	6738.8	4244.9
70°	319.9	319.2	298.0	273.7	274.4	289.9	770.2	1524.3	2981.0	4001.3	2437.1
72.5°	284.1	285.8	273.7	239.4	228.0	205.3	289.9	411.2	1014.5	1284.9	642.5
75°	249.2	245.9	233.6	211.7	190.5	137.6	145.7	175.1	264.6	262.1	138.3
77.5°	189.0	185.7	191.3	180.7	148.9	96.1	79.8	91.2	119.7	111.6	56.1
80°	144.1	142.6	130.3	154.7	136.0	72.5	54.5	56.1	65.1	59.5	27.7
82.5°	104.3	103.5	98.5	95.3	86.2	52.9	41.5	43.9	48.9	41.5	20.3
85°	40.0	40.0	77.3	65.1	59.5	35.8	29.4	31.8	37.5	30.2	13.8
87.5°	6.5	6.5	52.1	43.2	26.9	18.0	18.8	20.3	22.0	18.0	10.6
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°	3021.8	3021.8	3021.8	3021.8	3021.8	3021.8	3021.8	3021.8	3021.8	3021.8	3021.8
2.5°	3013.6	2959.0	2839.4	2723.8	2622.7	2512.0	2455.8	2390.7	2366.2	2317.4	2322.3
5°	3044.5	2930.5	2690.3	2437.1	2205.0	1968.8	1801.1	1643.2	1555.2	1468.1	1468.1
7.5°	3076.2	2902.1	2530.7	2126.1	1735.2	1330.5	1043.9	814.3	686.5	601.0	598.5
10°	3098.3	2865.5	2349.2	1765.3	1188.8	685.5	413.7	325.7	293.9	280.1	279.4
12.5°	3126.8	2828.8	2142.4	1340.4	660.3	325.7	258.2	244.2	238.6	235.4	235.4
15°	3151.3	2776.7	1891.6	901.4	346.8	244.2	222.3	217.4	216.6	215.9	216.6
17.5°	3157.0	2702.6	1591.1	527.7	251.6	213.3	203.6	199.6	199.6	198.6	198.6
20°	3143.9	2604.8	1258.9	325.7	217.4	196.2	185.7	180.7	179.9	179.9	179.9
22.5°	3116.9	2480.3	930.7	246.8	197.8	180.7	166.9	162.1	162.1	162.9	163.8
25°	3083.6	2332.9	639.2	212.4	183.3	164.5	150.6	145.7	147.4	148.9	149.8
27.5°	3041.3	2157.0	418.5	184.1	163.8	148.2	136.0	132.7	136.0	139.2	140.9
30°	2998.9	1964.1	283.3	159.5	141.8	130.3	123.0	122.1	127.0	134.3	135.1
32.5°	2971.2	1766.2	214.2	143.3	124.5	114.9	111.6	113.1	120.6	128.6	130.3
35°	2968.8	1573.1	182.4	130.3	113.1	104.3	102.5	107.4	115.6	122.1	123.7
37.5°	3007.0	1392.5	165.3	120.6	104.3	95.3	92.9	101.8	109.1	115.6	117.3
40°	3084.4	1230.4	153.9	111.6	96.8	86.2	84.7	91.9	99.4	106.7	109.1
42.5°	3181.3	1079.0	140.9	102.5	88.8	76.5	74.9	80.6	87.9	98.5	100.2
45°	3265.2	938.0	127.0	92.9	79.8	65.9	65.1	71.7	77.3	87.1	88.8
47.5°	3336.0	820.8	113.9	82.3	68.5	58.6	57.9	61.1	64.3	73.3	74.9
50°	3298.5	721.5	101.0	67.6	55.3	50.5	49.6	49.6	53.8	62.7	64.3
52.5°	3206.6	659.5	88.8	56.1	45.6	43.2	40.8	41.5	45.6	49.6	50.5
55°	3132.5	630.3	78.2	49.6	38.3	35.8	33.3	32.6	33.3	31.8	30.2
56°	3114.6	626.9	75.7	48.0	36.7	33.3	30.2	28.4	27.7	24.4	23.6
57.5°	3106.3	626.9	71.7	44.7	34.1	30.2	26.1	22.7	19.6	17.1	17.1
60°	3100.0	631.1	66.7	39.0	29.4	24.4	18.8	13.8	11.4	11.4	11.4
62.5°	3086.0	629.4	61.1	32.6	25.2	18.8	11.4	9.0	8.2	9.0	9.8
65°	2930.5	584.6	53.8	26.1	19.6	13.0	6.5	6.5	7.4	9.0	9.8
67.5°	2361.4	443.0	43.9	20.3	13.8	9.8	5.7	5.7	7.4	9.0	9.8
70°	1297.2	233.6	37.5	14.6	10.6	8.2	5.7	4.9	7.4	9.0	9.8
72.5°	316.7	97.7	34.1	11.4	9.8	7.4	4.9	4.9	7.4	9.0	9.8
75°	78.2	73.3	27.7	9.0	8.2	6.5	4.9	4.9	7.4	9.0	9.8
77.5°	36.7	96.8	18.8	8.2	7.4	5.7	4.9	4.9	7.4	9.0	9.0
80°	22.0	73.3	11.4	7.4	6.5	5.7	4.9	4.9	7.4	9.0	9.8
82.5°	13.0	21.2	8.2	7.4	6.5	4.9	4.9	4.9	7.4	9.0	9.8
85°	11.4	10.6	8.2	7.4	6.5	5.7	4.9	4.9	8.2	9.8	9.8
87.5°	9.0	8.2	7.4	6.5	6.5	5.7	4.9	4.9	7.4	9.0	9.8
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)