

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: P196557

Luminaire Tested: **NAV-AF-03-D-UNV-SL2-7030-1200-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196557  
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-03-D-UNV-SL2-7030-1200-HSS  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(3) 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: 15676.5 lumens  
Efficiency: N/A  
Efficacy: 82.1 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')  
IES Classification: Type II - Medium - Semi-Cutoff  
BUG Rating: B2 - U0 - G3

Input Watts (W): 191  
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

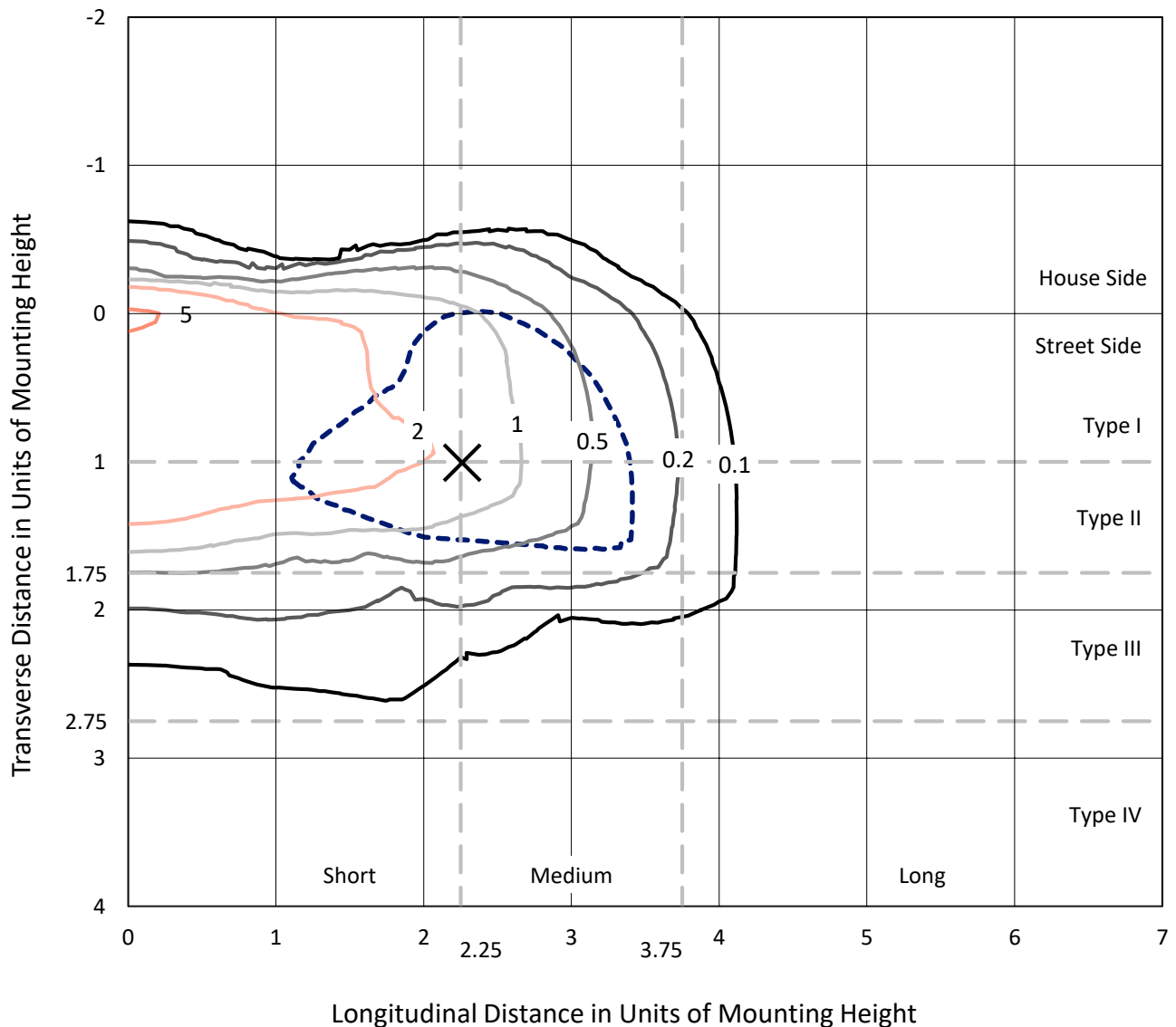


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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

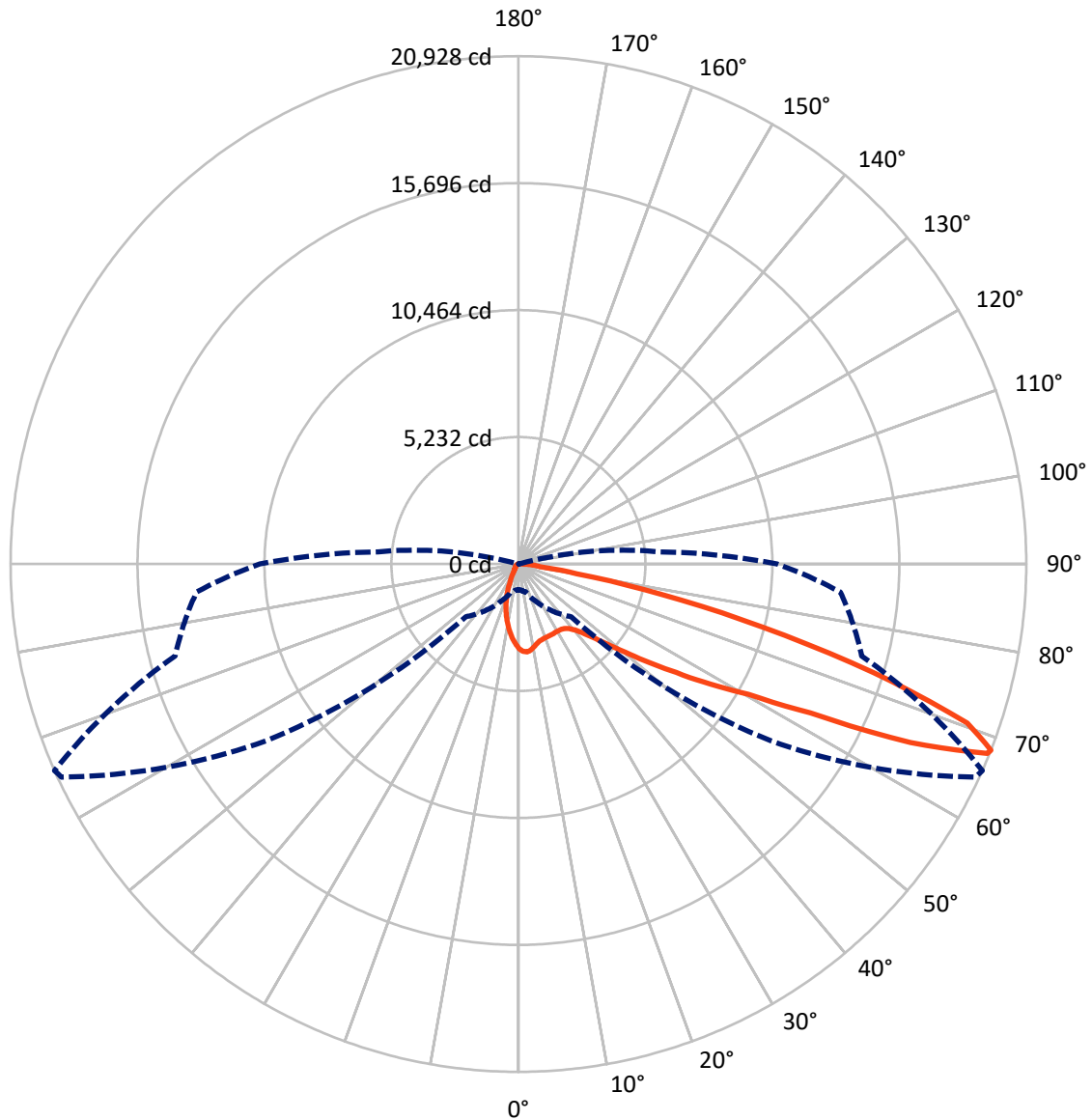


Based on 25 foot mounting height. Maximum calculated value = 5.6 fc  
 Type II - Medium - Semi-Cutoff

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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
<b>House Side</b>	Lumens	1587.8	0.0	1587.8
	% Fixture	10.1	0.0	10.1
<b>Street Side</b>	Lumens	14088.7	0.0	14088.7
	% Fixture	89.9	0.0	89.9
<b>Total</b>	Lumens	15676.5	0.0	15676.5
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	286.3	1.8
10°-20°	616.0	3.9
20°-30°	892.7	5.7
30°-40°	1366.6	8.7
40°-50°	2337.4	14.9
50°-60°	3656.4	23.3
60°-70°	4210.2	26.9
70°-80°	2106.8	13.4
80°-90°	204.0	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°	15676.5	100.0
0°-180°	15676.5	100.0



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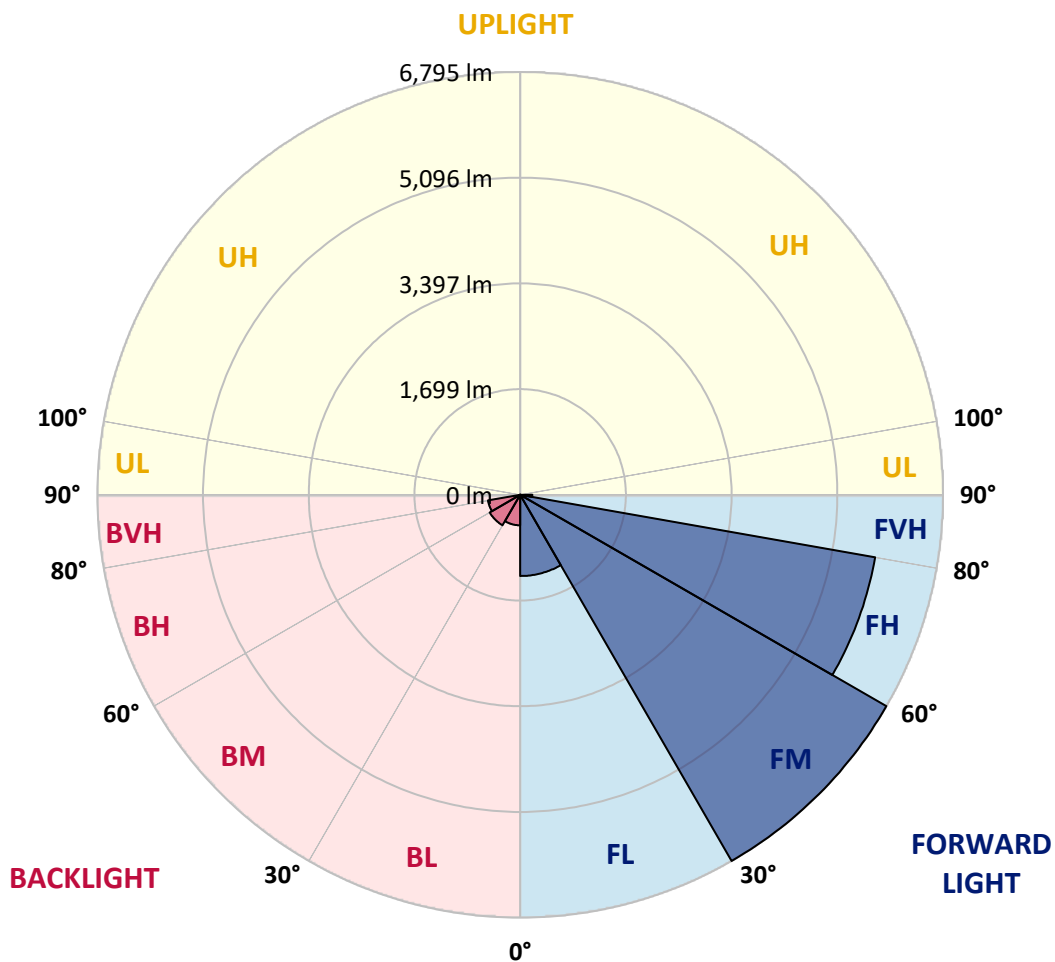
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1305.0	8.3			
FM	(30°-60°)	6794.9	43.3			
FH	(60°-80°)	5792.4	36.9			G3/7500
FVH	(80°-90°)	196.3	1.3			G2/225
BL	(0°-30°)	490.1	3.1	B1/500		
BM	(30°-60°)	565.4	3.6	B1/1000		
BH	(60°-80°)	524.6	3.3	B2/1000		G2/1000
BVH	(80°-90°)	7.7	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°	3492.6	3492.6	3492.6	3492.6	3492.6	3492.6	3492.6	3492.6	3492.6	3492.6	3492.6
2.5°	3673.6	3675.9	3674.7	3678.4	3675.9	3657.5	3637.8	3595.9	3599.6	3545.5	3485.2
5°	3415.0	3435.9	3456.9	3477.8	3528.3	3572.6	3625.4	3637.8	3637.8	3591.1	3502.5
7.5°	3151.7	3152.9	3176.2	3204.6	3272.4	3353.5	3476.6	3587.3	3589.8	3602.1	3504.9
10°	2953.6	2959.8	2975.6	3006.5	3074.1	3154.2	3292.0	3465.4	3479.1	3570.1	3480.2
12.5°	2799.8	2807.1	2824.4	2860.1	2921.6	3004.0	3149.2	3347.3	3365.8	3539.4	3473.0
15°	2681.5	2691.4	2704.9	2740.7	2807.1	2894.5	3053.2	3268.6	3290.8	3527.0	3496.3
17.5°	2632.4	2632.4	2631.1	2655.8	2722.2	2810.8	2977.0	3226.8	3255.1	3536.8	3535.6
20°	2653.3	2649.5	2623.8	2617.7	2658.2	2746.8	2916.6	3199.6	3231.7	3555.3	3583.6
22.5°	2764.0	2756.6	2698.8	2650.8	2638.5	2697.6	2876.0	3181.2	3219.4	3593.5	3647.6
25°	2999.0	2977.0	2896.9	2788.7	2691.4	2685.3	2847.8	3171.4	3212.0	3637.8	3717.8
27.5°	3304.3	3298.1	3170.1	3025.0	2837.9	2725.9	2839.1	3164.0	3204.6	3669.8	3774.4
30°	3683.3	3685.8	3538.2	3348.6	3065.6	2840.3	2866.2	3160.4	3202.2	3672.2	3799.1
32.5°	4074.8	4077.1	3954.1	3751.0	3376.8	3037.2	2942.5	3177.6	3215.7	3662.4	3797.8
35°	4451.2	4454.9	4381.1	4217.4	3792.8	3310.4	3086.5	3236.6	3263.7	3668.6	3795.3
37.5°	4927.5	4942.3	4851.2	4698.5	4314.6	3711.6	3321.5	3356.0	3378.1	3718.9	3813.8
40°	5739.7	5720.0	5459.1	5200.7	4880.7	4200.3	3661.2	3561.6	3568.9	3849.4	3883.9
42.5°	6686.1	6661.5	6214.7	5769.3	5462.9	4789.7	4095.6	3876.5	3875.3	4068.5	4036.5
45°	7500.7	7486.0	7016.0	6421.5	6107.7	5440.7	4631.0	4330.6	4315.8	4447.6	4314.6
47.5°	8079.1	8066.9	7711.2	7115.6	6853.5	6157.0	5299.2	4949.7	4918.9	4943.6	4766.3
50°	8135.8	8122.4	7998.0	7615.3	7724.7	7208.0	6125.0	5760.7	5721.3	5683.1	5449.3
52.5°	7606.6	7605.4	7670.6	7646.1	8335.2	8560.4	7137.8	6763.7	6716.9	6619.7	6387.1
55°	6524.9	6518.7	6766.1	7125.5	8321.6	9955.9	8682.2	7957.4	7895.8	7701.3	7396.2
57.5°	4767.5	4735.6	5252.4	6014.1	7737.0	10566.4	11134.9	9440.3	9338.2	8721.6	8251.5
60°	2632.4	2644.6	3309.3	4211.3	6352.7	10445.7	13391.9	11169.3	10901.2	9601.4	9127.7
62.5°	1475.5	1506.3	2001.1	2737.0	4050.0	9467.5	14602.8	14145.0	13499.0	10627.8	10235.3
65°	1116.2	1134.6	1383.2	2111.8	2553.6	6615.9	14796.1	18305.9	17748.4	12183.4	11998.9
67.5°	1051.0	1065.8	1187.5	1751.2	2325.9	3431.1	13341.4	20767.2	20837.4	14305.1	13364.8
68°	1058.4	1076.9	1198.7	1684.8	2322.2	3069.2	12721.2	20779.5	20928.4	14647.2	13318.0
70°	972.2	977.1	1267.5	1652.8	2250.8	2418.2	9202.8	19355.6	19622.6	15054.5	12089.9
72.5°	371.7	372.9	568.5	1431.3	2358.0	2431.8	4635.9	15298.2	15311.7	13101.5	9425.6
75°	193.2	162.5	178.4	448.0	2252.1	2370.3	2325.9	10445.7	10380.5	8860.7	5775.5
77.5°	132.9	113.2	119.4	155.0	936.6	2369.0	1679.9	6006.7	5993.3	3769.5	1647.8
80°	75.1	65.2	71.3	130.4	328.6	2223.8	1565.3	2581.9	2432.9	662.1	267.0
82.5°	38.1	32.0	38.1	109.5	204.4	1399.3	1522.3	1012.9	902.1	157.6	173.5
85°	9.9	9.9	18.5	76.3	126.7	459.0	1364.7	731.1	657.2	69.0	123.0
87.5°	2.5	1.2	7.4	28.3	45.6	99.7	756.8	407.3	350.7	35.7	71.3
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°	3492.6	3492.6	3492.6	3492.6	3492.6	3492.6	3492.6	3492.6	3492.6	3492.6	3492.6
2.5°	3460.6	3426.2	3358.4	3282.1	3227.9	3168.9	3134.4	3092.6	3060.6	3032.3	3053.2
5°	3448.2	3381.8	3231.7	3063.1	2921.6	2786.2	2685.3	2589.3	2516.7	2471.1	2489.6
7.5°	3416.3	3317.8	3074.1	2810.8	2579.4	2361.6	2184.4	2025.6	1902.5	1836.1	1857.1
10°	3362.1	3223.0	2895.7	2530.2	2206.6	1898.9	1635.5	1399.3	1220.8	1137.2	1156.8
12.5°	3322.8	3139.3	2711.2	2259.5	1833.7	1396.8	1047.2	776.5	637.5	553.8	561.1
15°	3305.5	3074.1	2538.8	1974.0	1426.3	897.1	566.1	409.8	361.7	344.6	345.8
17.5°	3308.0	3022.4	2375.2	1677.3	1015.2	515.6	347.0	312.6	305.2	301.5	301.5
20°	3314.2	2970.8	2205.3	1368.5	649.8	332.2	289.2	278.2	274.5	269.6	270.8
22.5°	3332.6	2931.4	2034.3	1058.4	400.0	270.8	256.0	246.2	240.0	232.6	233.9
25°	3361.0	2901.8	1865.7	761.7	281.8	236.3	222.8	209.2	198.1	189.6	190.7
27.5°	3378.1	2860.1	1686.0	519.3	233.9	206.7	188.3	169.8	157.6	150.1	148.9
30°	3365.8	2792.3	1481.7	340.9	206.7	178.4	156.2	135.4	123.0	116.9	116.9
32.5°	3332.6	2704.9	1256.5	248.6	183.3	153.8	126.7	108.2	99.7	96.0	97.2
35°	3294.5	2613.9	1016.5	210.5	164.9	130.4	103.4	88.6	84.9	83.7	83.7
37.5°	3273.5	2535.2	786.3	190.7	147.7	108.2	84.9	76.3	72.6	72.6	72.6
40°	3296.9	2474.8	582.2	176.0	130.4	89.8	71.3	65.2	64.0	64.0	64.0
42.5°	3396.6	2454.0	425.8	163.7	113.2	75.1	61.5	56.6	55.4	56.6	56.6
45°	3591.1	2499.5	322.5	151.4	97.2	61.5	52.9	49.2	49.2	50.5	50.5
47.5°	3920.9	2616.3	264.6	139.1	81.2	51.7	45.6	43.0	43.0	44.2	44.2
50°	4432.7	2833.0	237.5	125.5	67.6	44.2	38.1	36.9	36.9	38.1	39.4
52.5°	5210.6	3245.2	224.0	112.0	55.4	36.9	32.0	30.8	32.0	33.3	33.3
55°	6075.7	3773.2	208.0	98.5	46.8	30.8	25.9	25.9	27.1	29.5	29.5
57.5°	6881.8	4282.6	193.2	81.2	40.7	24.6	20.9	20.9	23.4	25.9	25.9
60°	7733.4	4782.3	173.5	65.2	34.4	19.6	17.3	17.3	20.9	23.4	24.6
62.5°	8785.6	5363.2	147.7	51.7	27.1	14.7	12.3	16.0	19.6	23.4	23.4
65°	10306.7	6085.5	115.7	40.7	20.9	11.0	9.9	14.7	18.5	22.2	23.4
67.5°	10859.3	5993.3	87.4	33.3	16.0	8.6	8.6	13.5	18.5	22.2	22.2
68°	10657.3	5791.4	83.7	32.0	14.7	8.6	8.6	13.5	18.5	22.2	22.2
70°	9286.5	4734.3	69.0	24.6	12.3	7.4	7.4	12.3	18.5	20.9	22.2
72.5°	6953.2	3145.6	59.1	16.0	11.0	7.4	6.1	12.3	17.3	20.9	20.9
75°	3988.5	1305.7	50.5	12.3	9.9	6.1	6.1	11.0	17.3	20.9	20.9
77.5°	1127.2	305.2	40.7	9.9	8.6	6.1	4.9	11.0	16.0	19.6	19.6
80°	206.7	91.1	32.0	8.6	7.4	6.1	4.9	11.0	16.0	19.6	19.6
82.5°	136.6	43.0	23.4	8.6	7.4	6.1	4.9	9.9	14.7	18.5	18.5
85°	102.1	30.8	14.7	8.6	7.4	6.1	4.9	9.9	14.7	18.5	18.5
87.5°	56.6	13.5	11.0	9.9	8.6	6.1	4.9	8.6	13.5	17.3	17.3
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)