

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: P270514

Luminaire Tested: **NAV-AF-04-D-UNV-SL3-7027-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P270514  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24262)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-AF-04-D-UNV-SL3-7027-600  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(4) 70 CRI, 2700K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III  
SPILL LIGHT ELIMINATOR OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 13946.9 lumens  
Efficiency: N/A  
Efficacy: 108.1 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type III - Medium - Non-Cutoff  
BUG Rating: B2 - U0 - G3

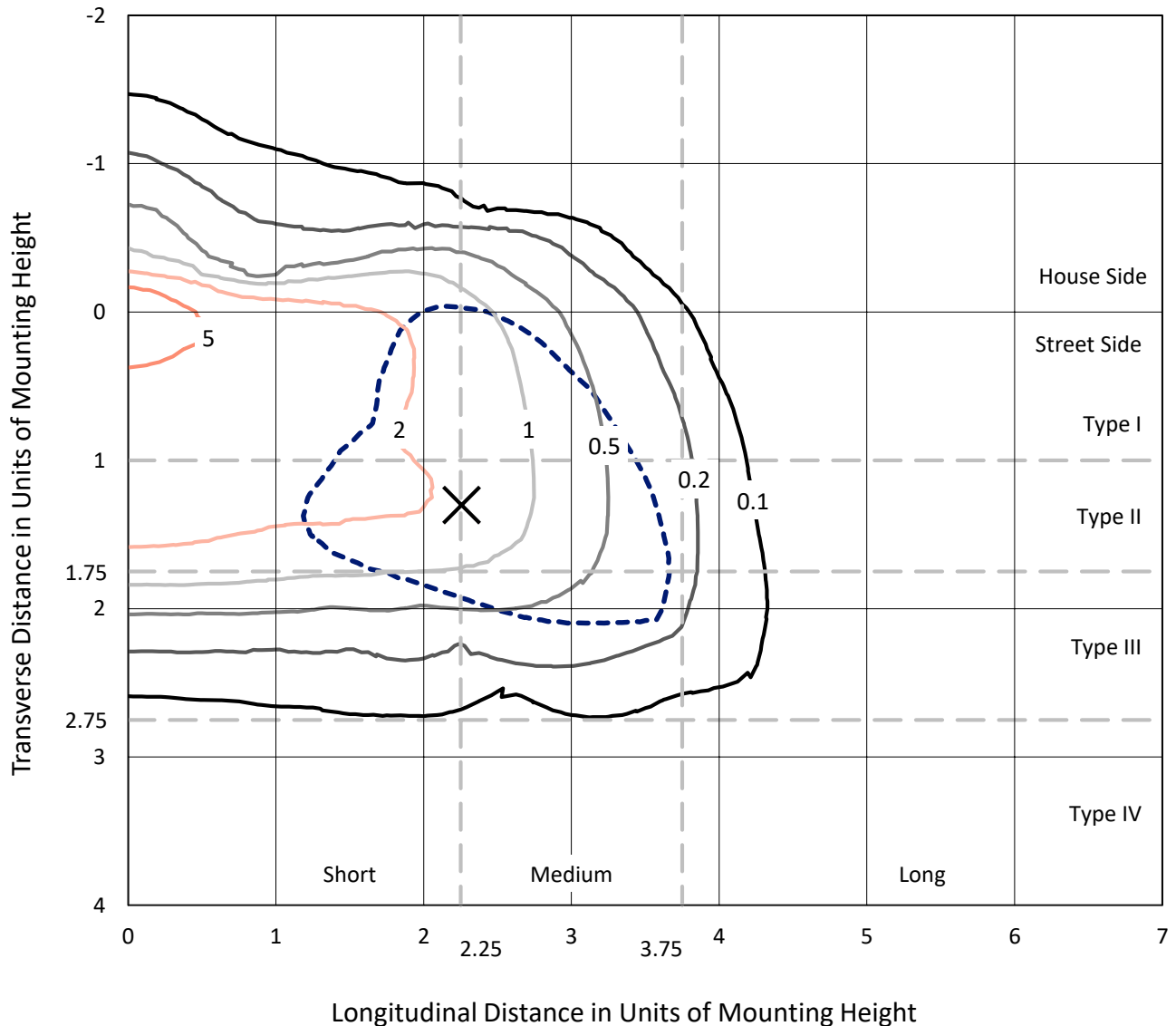
Input Watts (W): 129  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

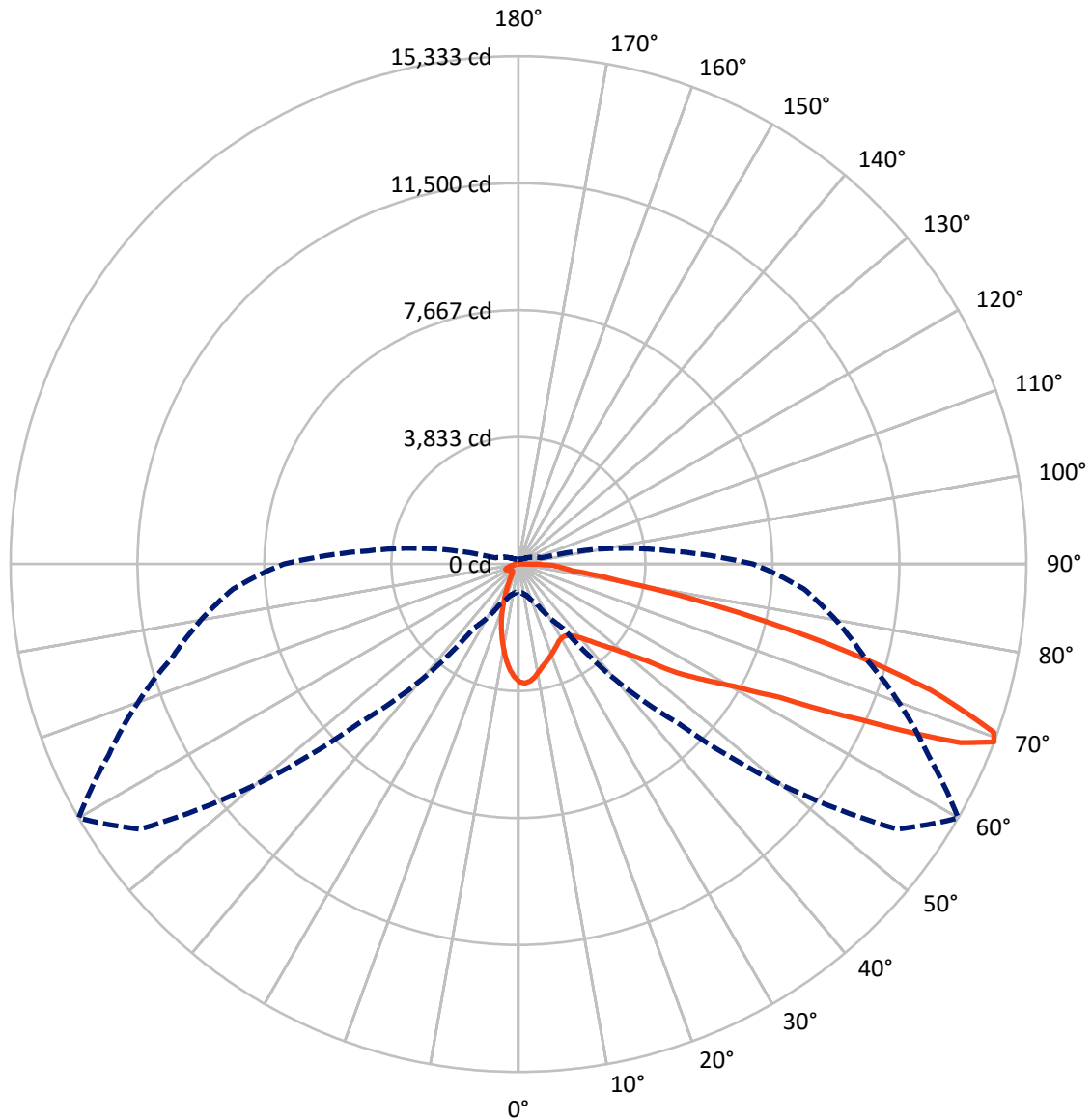
✕ Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 8.9 fc  
 Type III - Medium - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 60-Deg Lateral      - - - Horizontal Cone Through 69-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1989.3	0.0	1989.3
	% Fixture	14.3	0.0	14.3
<b>Street Side</b>	Lumens	11957.6	0.0	11957.6
	% Fixture	85.7	0.0	85.7
<b>Total</b>	Lumens	13946.9	0.0	13946.9
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	301.9	2.2
10°-20°	646.4	4.6
20°-30°	824.6	5.9
30°-40°	1134.7	8.1
40°-50°	1838.0	13.2
50°-60°	2884.7	20.7
60°-70°	3845.8	27.6
70°-80°	2139.1	15.3
80°-90°	331.8	2.4
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°	13946.9	100.0
0°-180°	13946.9	100.0

**Coefficient of Utilization**



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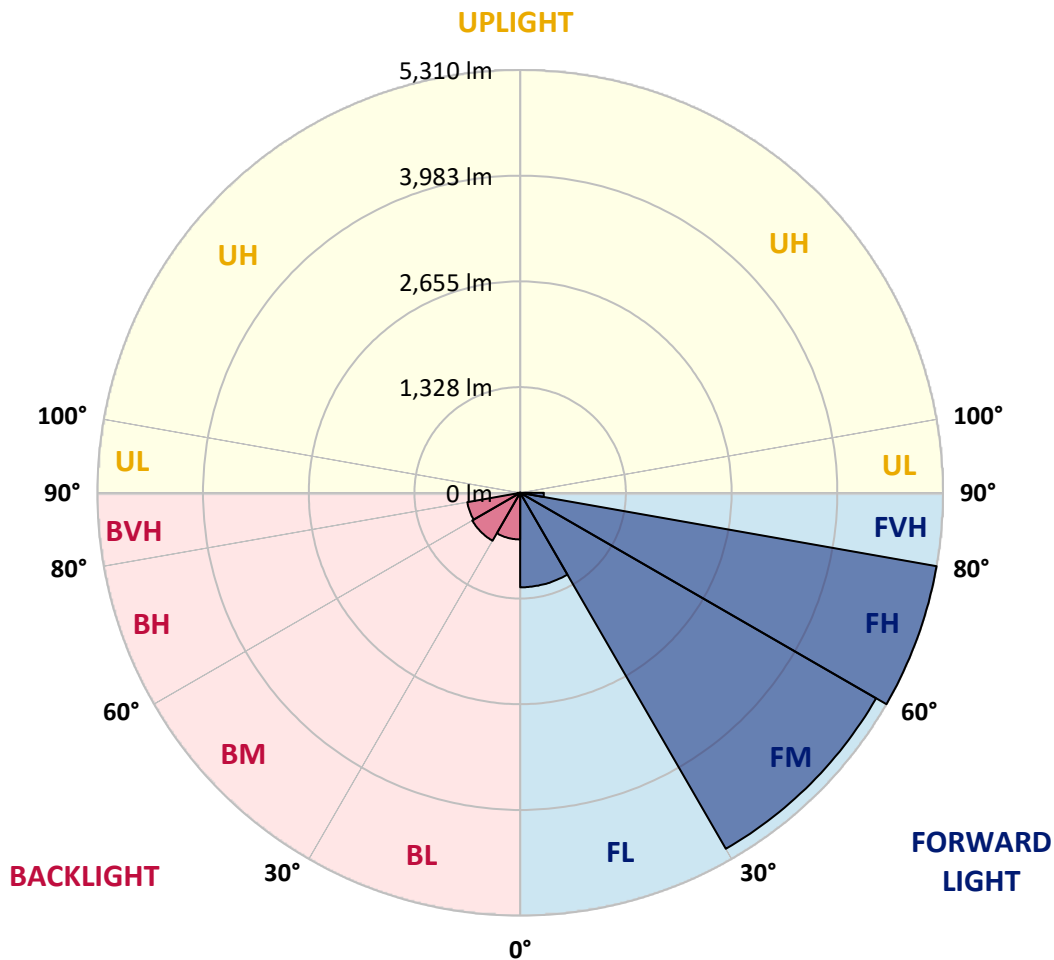
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1186.6	8.5			
FM	(30°-60°)	5162.4	37.0			
FH	(60°-80°)	5310.4	38.1			G3/7500
FVH	(80°-90°)	298.1	2.1			G3/500
BL	(0°-30°)	586.2	4.2	B2/1000		
BM	(30°-60°)	694.9	5.0	B1/1000		
BH	(60°-80°)	674.5	4.8	B2/1000		G2/1000
BVH	(80°-90°)	33.6	0.2			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G3**

Type III Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	60°	65°	75°	85°
0°	3558.5	3558.5	3558.5	3558.5	3558.5	3558.5	3558.5	3558.5	3558.5	3558.5	3558.5
2.5°	3653.3	3663.2	3663.2	3655.2	3650.7	3624.8	3609.6	3598.8	3580.0	3545.3	3513.9
5°	3522.9	3541.6	3549.7	3553.2	3576.5	3568.3	3569.3	3562.1	3546.1	3508.5	3457.5
7.5°	3283.1	3286.7	3301.0	3325.2	3381.5	3420.8	3453.1	3459.4	3455.7	3428.0	3356.4
10°	3047.1	3053.2	3070.2	3111.4	3165.1	3221.4	3291.2	3319.7	3341.2	3332.4	3242.1
12.5°	2851.2	2852.1	2870.9	2918.2	2978.2	3048.8	3143.6	3188.4	3239.3	3259.9	3158.8
15°	2662.4	2675.0	2692.8	2750.2	2824.4	2913.7	3022.8	3084.6	3151.7	3210.7	3094.4
17.5°	2519.3	2529.2	2540.0	2587.3	2673.1	2784.9	2920.0	2986.1	3074.8	3165.1	3028.2
20°	2440.7	2444.3	2436.3	2459.4	2532.0	2652.7	2809.1	2888.7	2994.2	3121.3	2960.3
22.5°	2424.5	2424.5	2395.1	2390.6	2422.8	2524.7	2694.6	2792.1	2920.8	3090.9	2899.5
25°	2499.7	2494.4	2438.9	2387.9	2376.2	2428.2	2585.5	2705.3	2858.2	3089.9	2853.8
27.5°	2641.8	2634.6	2565.9	2480.0	2405.8	2383.5	2501.5	2623.9	2809.1	3120.4	2830.6
30°	2819.1	2816.2	2746.5	2639.2	2516.7	2401.3	2468.5	2582.0	2776.0	3176.6	2829.8
32.5°	3013.1	3000.5	2957.6	2850.2	2691.1	2500.6	2488.0	2583.7	2767.0	3259.1	2850.2
35°	3219.6	3210.7	3199.9	3091.7	2912.8	2676.0	2574.8	2645.5	2810.9	3373.4	2908.4
37.5°	3482.5	3472.7	3490.6	3372.5	3176.6	2905.7	2721.4	2768.8	2900.4	3539.9	3016.6
40°	3950.2	3921.7	3871.6	3690.1	3484.3	3187.5	2933.4	2940.6	3053.2	3762.6	3190.2
42.5°	4718.5	4626.5	4378.7	4045.1	3809.1	3514.8	3209.9	3175.8	3264.4	4056.7	3442.3
45°	5488.6	5384.8	4966.3	4432.3	4145.3	3866.2	3551.4	3470.1	3527.3	4399.3	3767.0
47.5°	5985.9	5934.8	5462.7	4819.5	4497.6	4249.1	3942.2	3808.2	3849.2	4787.3	4167.6
50°	6131.7	6087.8	5716.6	5122.8	4830.4	4711.4	4426.0	4248.2	4255.4	5240.8	4647.9
52.5°	6022.4	6004.6	5758.7	5310.6	5136.1	5198.9	5095.9	4848.2	4789.3	5738.2	5168.4
55°	5876.7	5883.0	5788.1	5499.3	5447.4	5653.2	5972.4	5773.0	5522.6	6255.9	5710.3
57.5°	5417.9	5422.3	5671.0	5858.8	6041.3	6289.9	6654.9	6570.7	6279.2	6814.9	6317.6
60°	4362.6	4397.5	4951.1	5784.5	6720.1	7544.7	7634.1	7489.2	7084.0	7458.7	7107.3
62.5°	3116.8	3148.1	3789.3	5021.7	6640.5	8964.8	9442.4	8866.5	8176.1	8422.0	8218.1
65°	1637.5	1632.2	2128.5	3470.1	5593.1	9294.0	12291.8	11311.6	10015.7	9746.5	9291.3
67.5°	915.0	944.4	1136.7	1750.2	3645.3	8179.6	14111.8	14400.6	12573.5	10797.4	9244.7
69°	846.1	855.8	984.6	1353.1	2376.2	6748.6	13955.3	15333.4	13652.1	10801.8	8649.2
70°	821.9	832.5	949.8	1246.7	1996.2	5529.6	13385.6	15224.4	13914.1	10562.2	8107.3
72.5°	736.9	751.3	864.8	1120.6	1682.3	2850.2	10782.1	13030.5	12603.9	9231.4	6286.2
75°	628.8	652.9	824.6	1112.6	1593.8	1811.9	7190.6	9708.1	9380.7	6602.1	3566.6
77.5°	260.2	262.9	360.4	814.8	1672.5	1734.1	3864.5	6149.4	5443.9	2895.0	1074.2
80°	181.5	178.0	179.8	238.0	1349.6	1745.8	1982.7	3127.4	2430.9	763.7	502.6
82.5°	152.9	151.2	158.3	149.4	457.0	1980.9	1658.1	1630.3	1144.8	411.5	239.7
85°	101.1	98.4	129.6	136.0	217.3	1573.1	1783.3	1281.6	853.2	220.1	102.0
87.5°	49.1	50.0	74.2	92.2	115.3	498.1	1708.1	1013.3	659.1	95.7	41.1
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°	3558.5	3558.5	3558.5	3558.5	3558.5	3558.5	3558.5	3558.5	3558.5	3558.5	3558.5
2.5°	3501.4	3474.6	3450.4	3419.9	3396.8	3377.0	3350.1	3349.3	3344.7	3351.0	3352.8
5°	3423.5	3378.9	3310.9	3234.8	3181.2	3110.6	3041.7	3018.5	2992.4	2989.7	2997.9
7.5°	3306.4	3236.7	3120.4	3004.1	2887.8	2768.8	2656.2	2598.9	2543.6	2526.6	2534.6
10°	3175.8	3087.2	2909.3	2719.7	2556.0	2378.9	2207.2	2096.4	1995.2	1952.3	1963.1
12.5°	3073.8	2961.2	2710.7	2464.8	2219.7	1965.9	1739.5	1520.4	1355.0	1280.8	1285.1
15°	2986.1	2842.1	2524.7	2197.4	1890.7	1542.7	1228.8	974.8	829.9	776.2	774.5
17.5°	2891.5	2717.1	2330.7	1948.8	1550.7	1120.6	822.8	672.6	615.2	597.5	597.5
20°	2790.3	2588.2	2127.6	1677.8	1193.0	782.6	618.9	560.7	539.3	534.0	533.1
22.5°	2696.4	2462.2	1923.7	1388.9	863.0	593.8	526.8	504.4	500.9	505.2	505.2
25°	2622.2	2351.3	1717.1	1084.9	627.8	497.2	468.6	466.0	479.3	495.4	498.1
27.5°	2566.7	2252.0	1513.3	792.3	493.7	432.9	423.0	434.7	466.0	498.1	504.4
30°	2528.3	2167.0	1269.0	569.6	411.5	379.3	383.7	404.2	451.7	500.9	514.2
32.5°	2511.3	2098.1	1023.1	437.4	351.4	333.6	345.2	372.1	421.2	470.4	486.5
35°	2527.4	2048.0	796.0	363.2	307.7	294.3	307.7	335.3	367.5	391.8	401.5
37.5°	2585.5	2030.2	599.2	322.0	279.1	265.5	276.4	295.2	309.5	318.4	322.9
40°	2708.1	2048.9	469.5	300.6	262.9	247.8	250.4	259.4	269.2	276.4	277.2
42.5°	2903.1	2110.7	417.6	292.5	253.1	233.4	229.0	235.1	246.0	255.7	257.5
45°	3162.5	2213.6	412.3	295.2	248.7	221.8	212.9	219.0	233.4	249.5	252.2
47.5°	3497.8	2376.2	437.4	309.5	251.3	215.6	202.1	208.3	227.1	248.7	252.2
50°	3894.8	2601.6	483.8	330.8	263.8	215.6	197.6	202.9	222.7	246.9	250.4
52.5°	4362.6	2915.5	532.2	352.3	281.7	223.6	199.5	198.5	216.4	238.8	243.4
55°	4878.6	3305.6	578.7	371.2	291.6	234.3	203.9	193.1	207.5	225.4	229.0
57.5°	5485.9	3839.4	660.1	389.1	296.9	242.4	209.2	187.8	195.9	208.3	211.0
60°	6309.5	4623.8	818.4	419.5	306.7	246.0	210.2	182.4	181.5	190.5	191.3
62.5°	7383.7	5542.3	969.5	455.3	326.4	246.9	206.6	178.9	169.9	172.7	172.7
65°	8147.4	5880.2	925.7	485.7	344.3	246.0	202.9	176.2	160.9	156.6	156.6
67.5°	7712.8	5194.3	786.1	493.7	346.0	236.2	194.9	169.9	152.9	142.2	142.2
69°	7074.2	4553.1	721.8	479.3	331.8	224.4	185.9	163.8	147.6	135.0	135.0
70°	6553.8	4067.4	682.4	462.4	314.8	214.7	178.0	157.5	142.2	131.4	130.6
72.5°	4893.0	2714.3	583.1	398.8	258.4	181.5	155.6	140.4	127.9	120.7	120.7
75°	2582.0	1360.4	477.5	325.5	199.5	144.8	127.9	118.0	110.9	110.0	109.1
77.5°	846.1	615.2	343.4	245.1	146.7	112.6	102.0	95.7	94.9	98.4	98.4
80°	457.0	367.5	221.0	165.5	102.0	84.1	78.7	77.9	80.5	85.9	85.9
82.5°	221.8	181.5	131.4	102.0	69.8	61.8	61.8	62.6	66.1	72.5	72.5
85°	95.7	85.9	76.0	57.2	42.8	38.4	43.7	48.2	50.9	55.4	57.2
87.5°	45.6	40.2	34.9	22.4	18.8	19.7	23.3	28.7	34.0	37.5	38.4
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)