

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: P197045

Luminaire Tested: **NAV-AF-05-D-UNV-SL2-8030-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P197045  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24257)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-AF-05-D-UNV-SL2-8030-600  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(5) 80 CRI, 3000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II SPILL  
LIGHT ELIMINATOR OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 15849 lumens  
Efficiency: N/A  
Efficacy: 97.8 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 - G3

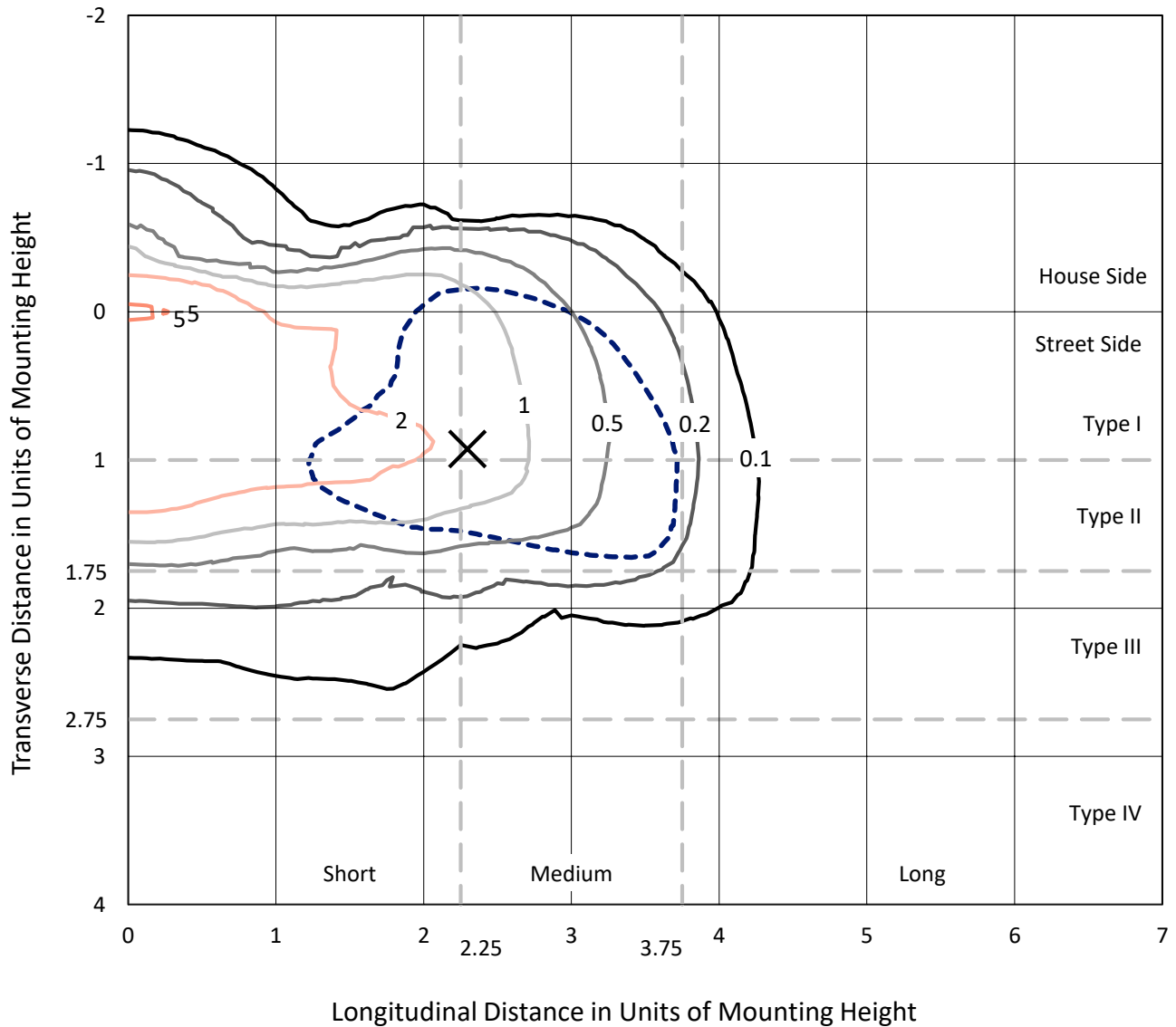
Input Watts (W): 162  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

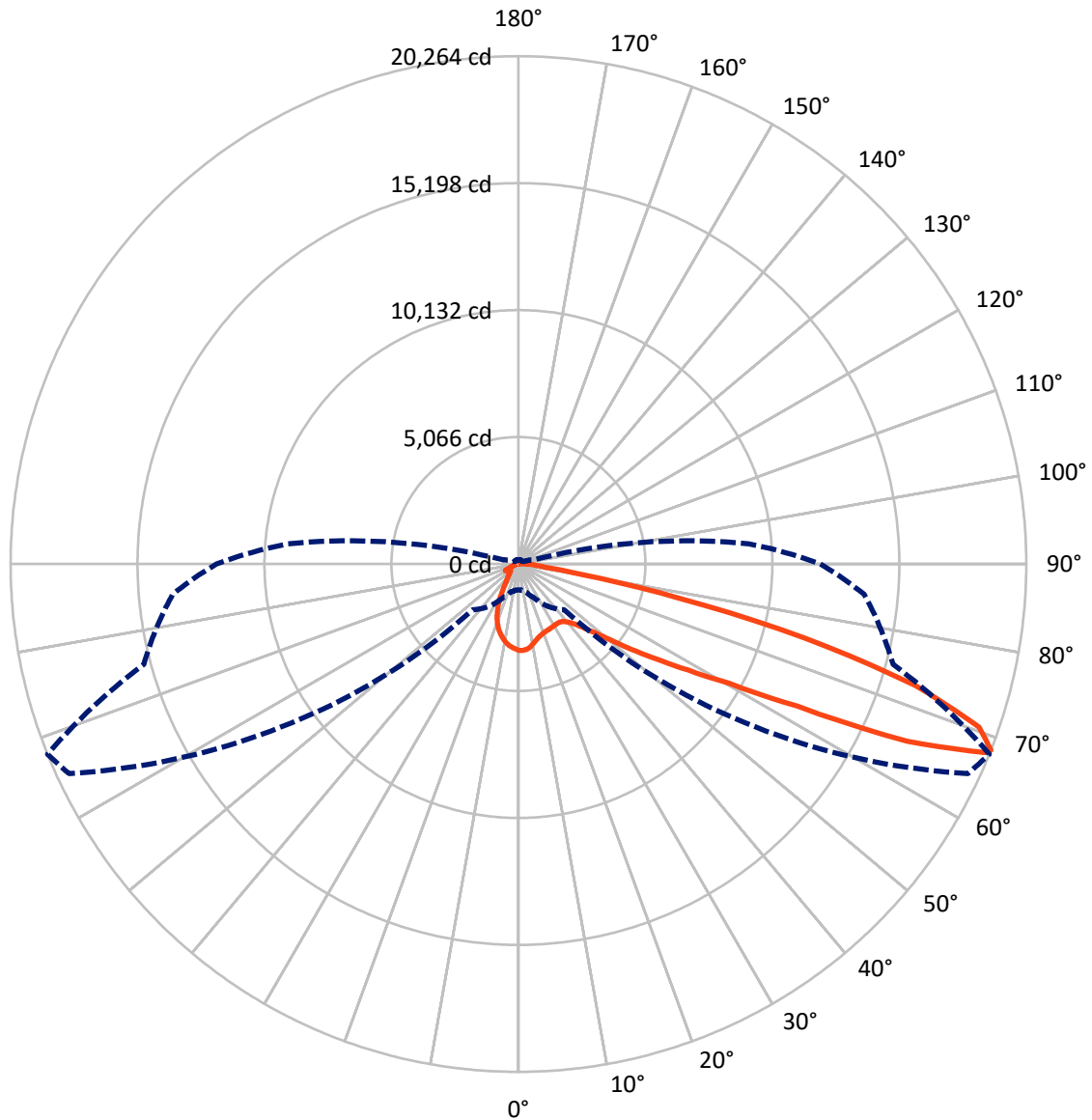
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.5 fc  
 Type II - Medium - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 68-Deg Lateral    - - - Horizontal Cone Through 68-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2592.9	0.0	2592.9
	% Fixture	16.4	0.0	16.4
<b>Street Side</b>	Lumens	13256.1	0.0	13256.1
	% Fixture	83.6	0.0	83.6
<b>Total</b>	Lumens	15849.0	0.0	15849.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	295.5	1.9
10°-20°	685.3	4.3
20°-30°	926.9	5.8
30°-40°	1306.9	8.2
40°-50°	2149.0	13.6
50°-60°	3331.2	21.0
60°-70°	4319.1	27.3
70°-80°	2478.5	15.6
80°-90°	356.6	2.3
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°	15849.0	100.0
0°-180°	15849.0	100.0

**Coefficient of Utilization**



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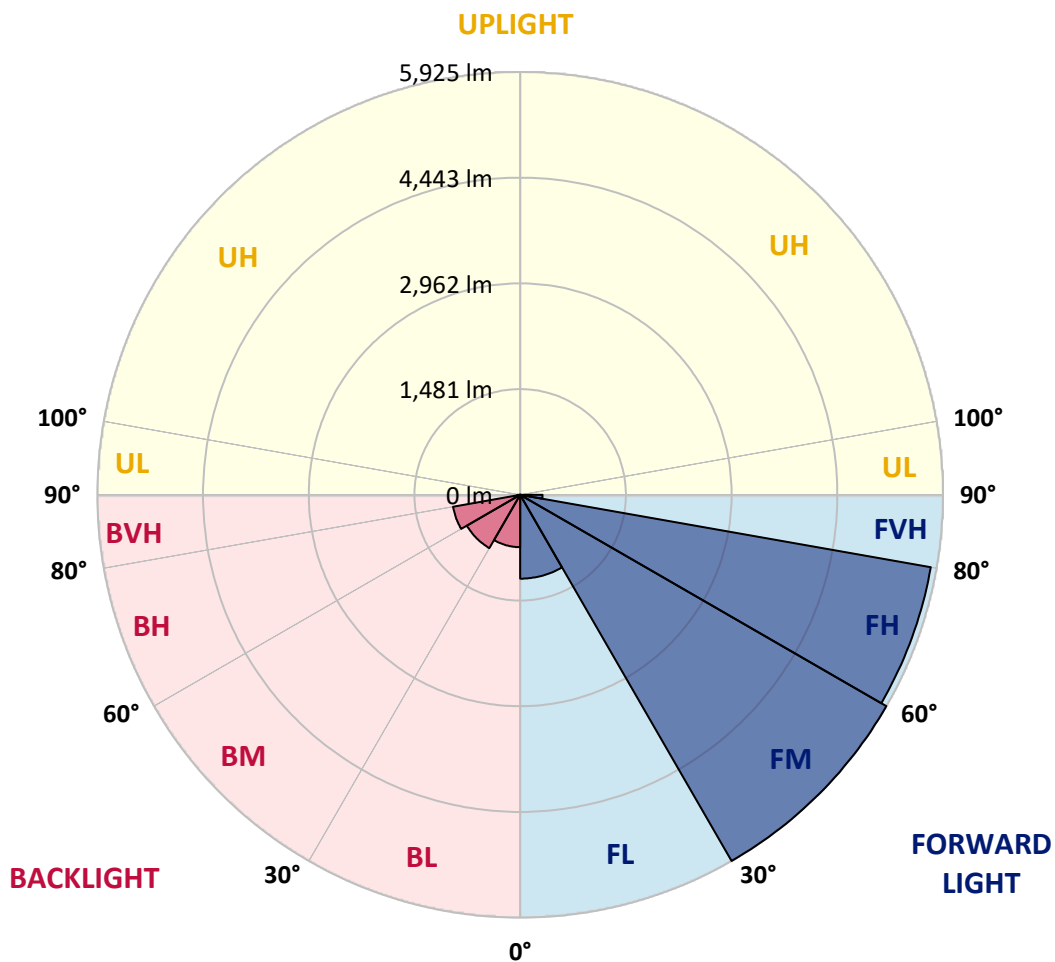
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1174.7	7.4			
FM (30°-60°)	5924.6	37.4			
FH (60°-80°)	5842.7	36.9			G3/7500
FVH (80°-90°)	314.1	2.0			G3/500
BL (0°-30°)	733.0	4.6	B2/1000		
BM (30°-60°)	862.4	5.4	B1/1000		
BH (60°-80°)	954.9	6.0	B2/1000		G2/1000
BVH (80°-90°)	42.5	0.3			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 II Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	3448.6	3448.6	3448.6	3448.6	3448.6	3448.6	3448.6	3448.6	3448.6	3448.6	3448.6
2.5°	3356.5	3383.4	3383.4	3403.0	3420.6	3435.1	3447.6	3447.6	3447.6	3439.3	3432.0
5°	3003.4	3039.7	3044.8	3094.5	3159.8	3239.5	3328.5	3407.2	3422.7	3451.7	3463.1
7.5°	2758.1	2769.4	2789.1	2823.3	2889.5	2987.9	3127.7	3303.7	3346.1	3437.2	3484.8
10°	2584.1	2593.4	2610.0	2644.2	2704.2	2793.3	2930.9	3159.8	3230.2	3391.7	3485.9
12.5°	2456.8	2464.0	2479.6	2510.6	2571.7	2651.4	2792.2	3030.3	3117.3	3346.1	3500.4
15°	2357.4	2369.8	2382.2	2412.3	2474.4	2551.0	2693.9	2936.1	3030.3	3309.9	3527.3
17.5°	2318.0	2324.3	2326.3	2341.9	2397.8	2475.4	2618.3	2869.9	2967.2	3280.9	3548.0
20°	2342.9	2343.9	2323.2	2312.9	2345.0	2416.4	2555.1	2820.2	2919.6	3255.0	3556.3
22.5°	2451.6	2451.6	2397.8	2352.2	2330.5	2375.0	2512.7	2786.0	2893.7	3235.3	3556.3
25°	2658.7	2649.3	2565.5	2475.4	2379.1	2360.5	2485.8	2764.3	2874.0	3225.0	3542.8
27.5°	2930.9	2922.7	2816.0	2682.5	2508.5	2391.6	2476.4	2746.7	2854.3	3209.4	3513.8
30°	3262.2	3255.0	3133.9	2958.9	2702.1	2489.9	2498.2	2734.2	2838.8	3183.6	3465.2
32.5°	3592.5	3588.4	3492.1	3313.0	2969.3	2656.6	2555.1	2732.2	2830.5	3152.5	3406.2
35°	3924.8	3924.8	3865.8	3714.7	3328.5	2907.1	2674.2	2770.5	2846.1	3135.9	3355.4
37.5°	4415.6	4395.9	4286.2	4129.8	3780.9	3232.2	2866.8	2851.2	2906.1	3163.9	3338.9
40°	5175.5	5118.5	4844.2	4581.2	4274.8	3648.4	3148.4	3007.6	3040.7	3259.1	3378.2
42.5°	5970.6	5880.5	5517.1	5096.8	4785.2	4161.9	3518.0	3261.2	3260.2	3443.4	3503.5
45°	6652.9	6606.3	6212.9	5679.7	5368.1	4739.6	3984.9	3638.1	3600.8	3729.2	3744.7
47.5°	7049.4	7018.3	6781.2	6296.7	6059.6	5421.9	4577.1	4160.9	4090.5	4167.1	4143.3
50°	6939.6	6969.7	6901.3	6653.9	6803.0	6380.6	5331.8	4877.3	4743.8	4820.4	4762.4
52.5°	6361.9	6442.7	6503.8	6551.4	7230.6	7663.3	6280.2	5771.8	5661.0	5647.6	5591.7
55°	5321.5	5449.8	5642.4	5992.3	7115.7	8693.5	7936.6	6853.7	6692.2	6607.3	6629.1
57.5°	3621.5	3816.1	4231.3	4897.0	6518.3	9132.4	10386.2	8251.4	7978.1	7675.8	7746.2
60°	1995.0	2157.6	2651.4	3322.3	5154.8	9067.2	12557.2	10522.8	9662.5	8861.2	9006.1
62.5°	1291.0	1326.2	1693.8	2269.4	3163.9	8005.0	13763.3	14319.3	12496.1	10424.5	10628.4
65°	1037.4	1062.2	1242.4	1830.4	2204.2	5149.6	13817.2	18257.6	17055.6	12548.9	12555.1
67.5°	1013.6	1025.0	1129.5	1539.5	2067.5	2803.6	11943.3	19810.6	20089.1	15056.4	13844.1
68°	1028.1	1041.5	1147.1	1491.9	2066.5	2584.1	11038.4	19786.7	20264.0	15475.7	13844.1
70°	906.9	923.5	1169.9	1543.6	1978.5	2221.8	7558.8	18735.9	19504.1	16439.6	13136.0
72.5°	474.2	460.7	578.7	1218.6	2226.9	2314.9	3993.2	15652.8	16549.4	15225.2	11349.0
75°	369.6	336.5	324.1	481.4	1958.8	2400.9	2319.1	11125.4	11802.5	10975.3	7585.7
77.5°	347.9	307.5	283.7	284.7	862.4	2498.2	1876.0	6547.3	6547.3	5235.5	2420.5
80°	279.5	242.3	226.7	258.8	416.2	2302.5	1957.8	2983.7	2544.8	1353.1	666.7
82.5°	184.3	164.6	165.6	210.2	315.8	1537.4	2267.3	1473.2	1106.7	599.4	392.4
85°	117.0	100.4	111.8	147.0	236.0	685.4	2244.5	1023.9	733.0	336.5	195.7
87.5°	59.0	45.6	55.9	76.6	143.9	196.7	1848.0	914.2	543.5	139.8	106.6
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°	3448.6	3448.6	3448.6	3448.6	3448.6	3448.6	3448.6	3448.6	3448.6	3448.6	3448.6
2.5°	3432.0	3409.3	3397.9	3379.2	3356.5	3333.7	3318.2	3310.9	3306.8	3308.8	3307.8
5°	3456.9	3426.9	3378.2	3308.8	3237.4	3161.8	3103.8	3059.3	3031.4	3023.1	3021.0
7.5°	3475.5	3432.0	3340.9	3214.6	3092.5	2959.9	2847.1	2757.0	2695.9	2668.0	2666.9
10°	3472.4	3416.5	3272.6	3086.2	2907.1	2712.5	2535.5	2384.3	2274.6	2221.8	2219.7
12.5°	3475.5	3398.9	3188.7	2936.1	2679.4	2400.9	2137.9	1902.9	1739.3	1661.7	1658.6
15°	3487.9	3380.3	3102.8	2768.4	2413.3	2019.9	1644.1	1349.0	1199.9	1149.2	1149.2
17.5°	3486.9	3349.2	3003.4	2573.8	2097.5	1570.6	1122.3	940.1	925.6	972.2	979.4
20°	3466.2	3299.5	2875.0	2342.9	1726.9	1087.1	760.9	735.1	851.0	979.4	993.9
22.5°	3434.1	3235.3	2727.0	2074.8	1295.2	708.1	587.0	626.4	783.7	943.2	965.9
25°	3389.6	3157.7	2557.2	1763.1	861.4	509.4	489.7	538.4	649.1	755.8	772.3
27.5°	3324.4	3059.3	2371.9	1425.6	549.7	419.3	426.5	460.7	508.3	553.9	563.2
30°	3242.6	2944.4	2170.0	1051.9	417.2	374.8	387.2	407.9	428.6	457.6	463.8
32.5°	3159.8	2827.4	1959.8	722.6	364.4	351.0	363.4	374.8	392.4	412.1	416.2
35°	3085.2	2718.7	1743.5	504.2	341.7	335.4	341.7	348.9	366.5	386.2	388.2
37.5°	3031.4	2629.7	1517.8	398.6	328.2	322.0	325.1	328.2	348.9	377.9	381.0
40°	3024.1	2570.7	1289.0	358.2	317.8	309.6	307.5	309.6	336.5	369.6	372.7
42.5°	3094.5	2573.8	1065.3	341.7	309.6	300.2	292.0	296.1	319.9	345.8	347.9
45°	3261.2	2646.2	871.7	334.4	302.3	295.1	282.6	284.7	296.1	309.6	311.6
47.5°	3555.2	2804.6	723.7	330.3	296.1	289.9	274.4	268.1	269.2	276.4	276.4
50°	4025.3	3069.7	633.6	326.1	290.9	279.5	261.9	249.5	246.4	250.5	251.6
52.5°	4726.2	3524.2	590.1	317.8	281.6	266.1	246.4	234.0	228.8	232.9	232.9
55°	5673.5	4249.9	569.4	306.5	270.2	249.5	231.9	221.6	217.4	220.5	220.5
57.5°	6753.3	5193.1	604.6	290.9	255.7	231.9	219.5	212.2	209.1	212.2	213.3
60°	8036.0	6427.2	846.9	271.2	240.2	216.4	209.1	205.0	202.9	206.0	206.0
62.5°	9741.2	8069.2	1310.7	255.7	223.6	201.9	199.8	197.7	195.7	198.8	198.8
65°	11582.0	9563.1	1349.0	246.4	209.1	189.5	190.5	190.5	188.4	191.5	191.5
67.5°	12167.9	9433.7	753.7	235.0	191.5	177.0	181.2	181.2	180.1	183.2	182.2
68°	12043.7	9228.7	656.4	231.9	188.4	173.9	178.1	179.1	178.1	181.2	180.1
70°	11118.1	8102.3	431.7	214.3	175.0	163.6	169.8	170.8	169.8	173.9	172.9
72.5°	9178.0	6077.2	318.9	187.4	158.4	150.1	156.3	157.4	158.4	162.5	161.5
75°	5828.8	3356.5	251.6	159.4	141.8	134.6	140.8	143.9	146.0	152.2	149.1
77.5°	1596.4	1018.7	204.0	135.6	122.2	119.1	123.2	127.3	129.4	136.7	131.5
80°	559.1	450.4	169.8	114.9	101.5	100.4	104.6	108.7	110.8	117.0	110.8
82.5°	339.6	294.0	135.6	90.1	79.7	78.7	83.9	88.0	90.1	90.1	85.9
85°	177.0	155.3	99.4	63.2	54.9	51.8	61.1	66.3	67.3	66.3	63.2
87.5°	99.4	88.0	52.8	30.0	24.8	25.9	32.1	39.3	42.4	41.4	39.3
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)