

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: P196002

Luminaire Tested: **NAV-AF-06-D-UNV-AFL-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196002  
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-06-D-UNV-AFL-HSS  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(6) 70 CRI, 4000K, 1050mA 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: 30928.9 lumens  
Efficiency: N/A  
Efficacy: 92.9 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')  
IES Classification: Type II - Short - Full Cutoff  
BUG Rating: B2 - U0 - G2

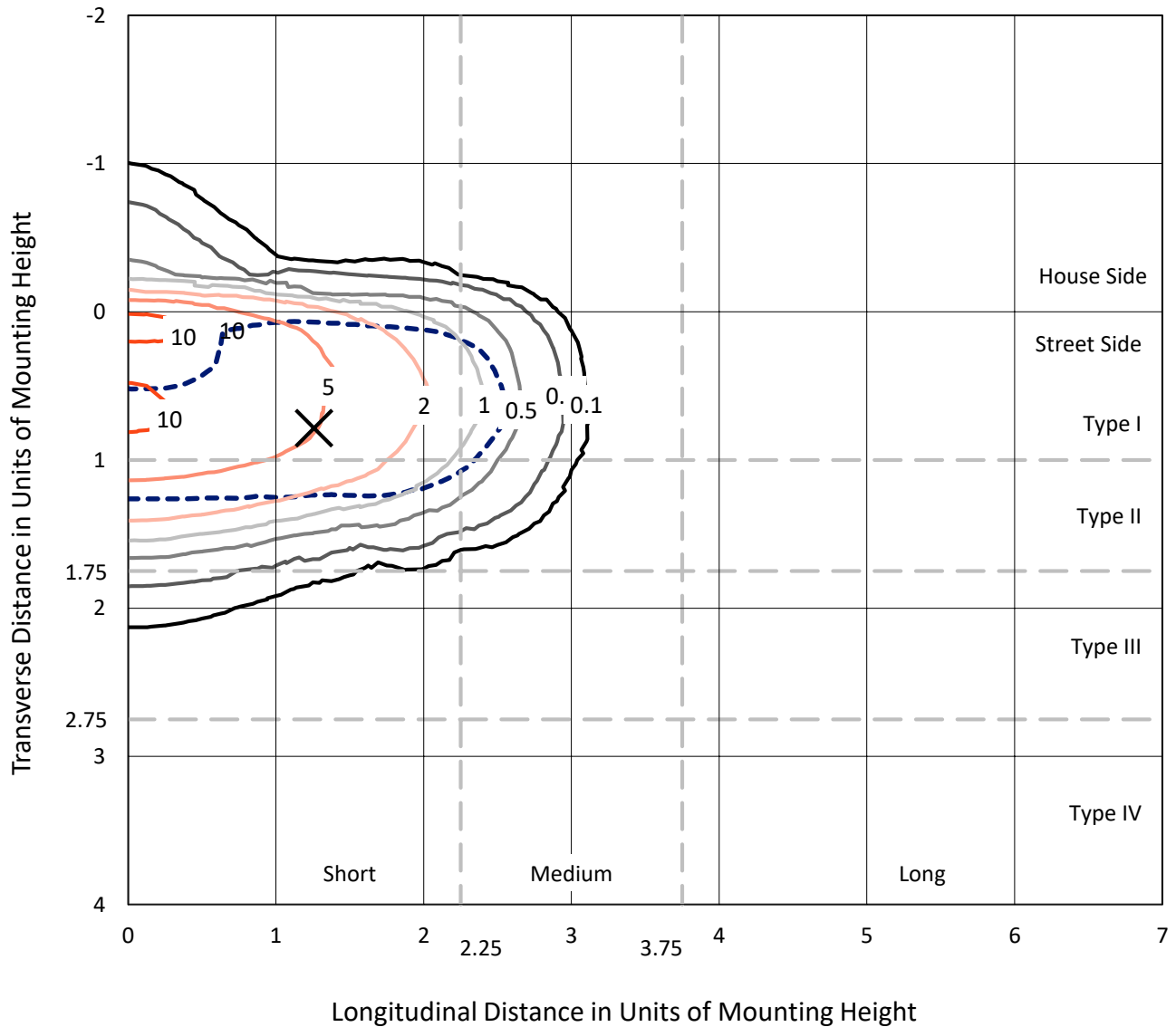
Input Watts (W): 333  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

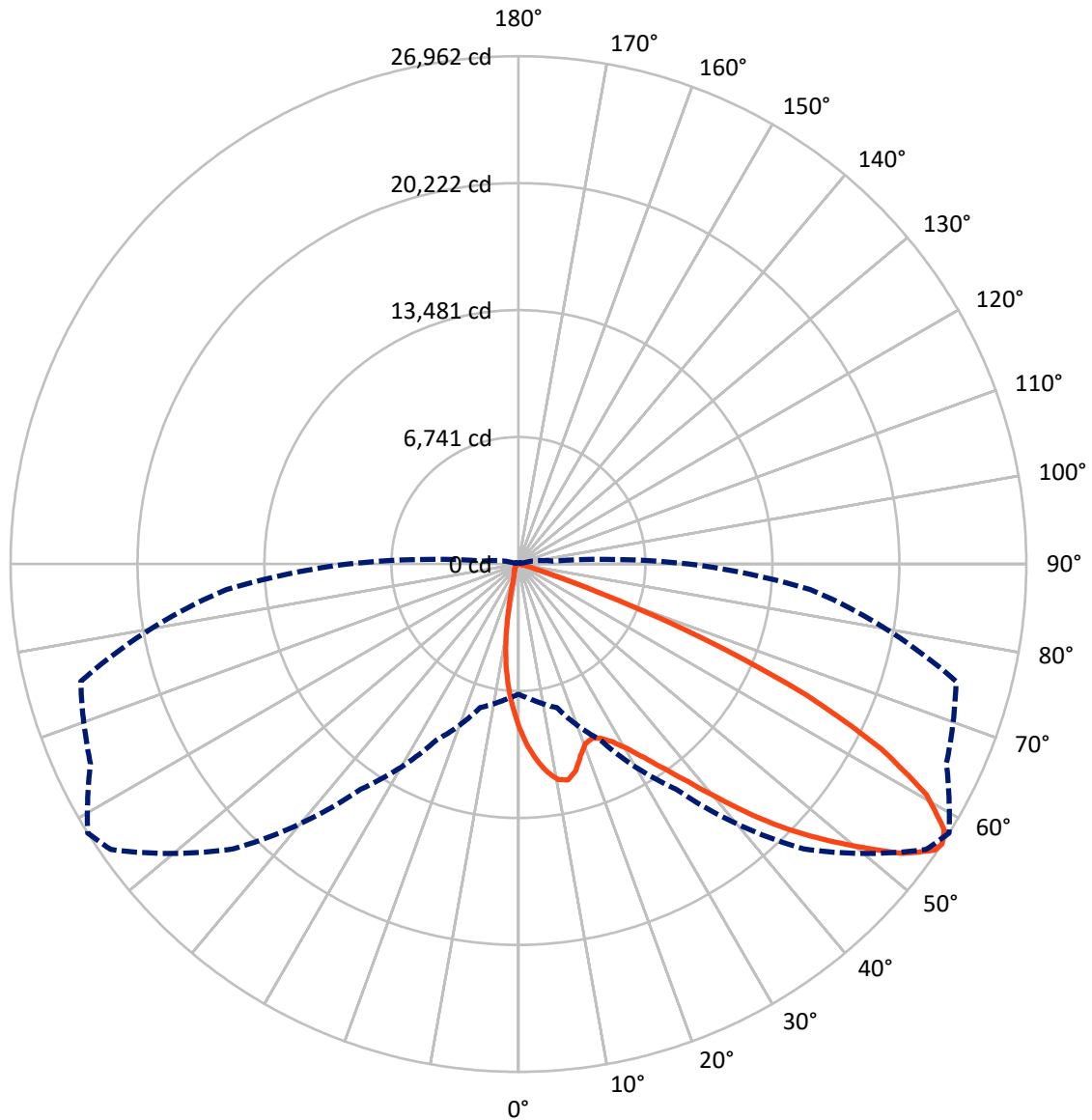
✕ Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 12.1 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
<b>House Side</b>	Lumens	1930.6	0.0	1930.6
	% Fixture	6.2	0.0	6.2
<b>Street Side</b>	Lumens	28998.3	0.0	28998.3
	% Fixture	93.8	0.0	93.8
<b>Total</b>	Lumens	30928.9	0.0	30928.9
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	747.0	2.4
10°-20°	1738.2	5.6
20°-30°	2924.8	9.5
30°-40°	5008.4	16.2
40°-50°	7557.8	24.4
50°-60°	7856.1	25.4
60°-70°	4410.3	14.3
70°-80°	604.5	2.0
80°-90°	81.9	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°	30928.9	100.0
0°-180°	30928.9	100.0



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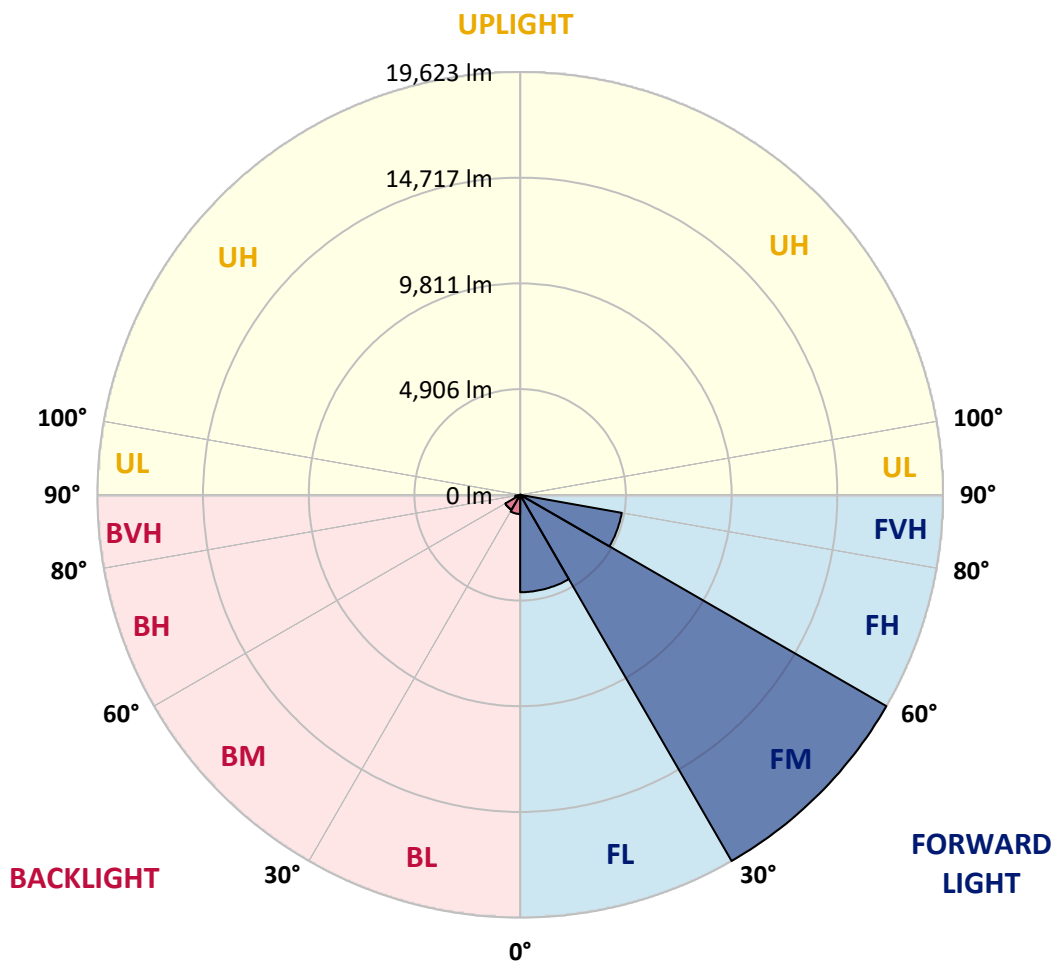
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	4519.4	14.6			
FM (30°-60°)	19622.6	63.4			
FH (60°-80°)	4785.7	15.5			G2/5000
FVH (80°-90°)	70.6	0.2			G1/100
BL (0°-30°)	890.6	2.9	B2/1000		
BM (30°-60°)	799.7	2.6	B1/1000		
BH (60°-80°)	229.0	0.7	B1/500		G1/500
BVH (80°-90°)	11.3	0.0			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G2**

Type II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	8756.9	8756.9	8756.9	8756.9	8756.9	8756.9	8756.9	8756.9	8756.9	8756.9	8756.9
2.5°	10536.2	10472.5	10406.4	10283.6	10170.4	9995.8	9755.1	9696.0	9507.3	9195.8	8905.6
5°	11444.7	11432.8	11388.0	11288.9	11166.2	10953.9	10682.5	10500.7	10208.1	9717.3	9158.1
7.5°	10906.6	11005.7	11168.6	11399.8	11555.6	11534.3	11326.6	11168.6	10878.3	10208.1	9405.8
10°	9193.5	9212.4	9436.5	9922.6	10691.9	11409.3	11680.6	11638.1	11371.5	10637.6	9622.9
12.5°	8589.4	8601.2	8653.0	8808.8	9309.1	10309.6	11539.0	11760.9	11739.6	11048.2	9854.2
15°	8636.6	8643.6	8657.8	8707.4	8848.9	9351.6	10821.7	11385.6	11975.6	11437.5	10080.7
17.5°	9009.4	9004.7	8959.8	8912.7	8957.5	9122.7	10090.2	10684.8	11926.0	11765.6	10267.2
20°	9736.2	9759.8	9608.8	9398.8	9290.2	9297.3	9729.1	10175.1	11647.5	12020.4	10406.4
22.5°	10758.0	10774.4	10526.7	10163.3	9844.8	9684.3	9804.7	10040.6	11326.6	12256.4	10519.6
25°	11977.9	11977.9	11631.1	11114.3	10621.1	10269.5	10165.7	10255.3	11204.0	12523.1	10632.9
27.5°	13294.7	13341.8	12888.8	12211.6	11560.3	11045.8	10720.2	10703.6	11298.3	12858.1	10760.3
30°	14727.0	14769.5	14231.5	13403.2	12631.6	11973.2	11472.9	11364.4	11659.4	13308.8	10946.7
32.5°	16152.3	16187.7	15593.0	14748.2	13849.2	13075.2	12416.9	12244.6	12308.2	13967.2	11220.4
35°	17964.6	17971.6	17218.8	16213.7	15253.2	14344.7	13511.7	13341.8	13271.0	14797.8	11614.5
37.5°	19406.3	19349.7	18873.0	17922.1	16820.1	15871.5	14892.2	14670.3	14500.4	15965.8	12225.7
40°	19746.1	19746.1	19675.3	19389.8	18514.4	17601.1	16652.5	16322.2	15947.0	17341.6	13046.9
42.5°	18861.3	18917.8	19385.1	20005.6	20012.8	19427.6	18500.2	18221.7	17561.0	18908.4	13943.5
45°	16881.5	16897.9	18018.8	19694.2	20831.6	21166.7	20482.3	20097.7	19182.2	20536.7	14764.8
47.5°	16168.8	16220.7	16697.3	18745.6	20893.0	22575.4	22384.3	21855.8	20682.9	22023.2	15531.7
50°	15073.9	15137.6	15720.4	17348.6	20340.8	23479.2	24203.6	23637.3	22049.2	23262.1	15911.6
52.5°	12454.6	12553.7	13377.2	15501.0	18960.3	23516.9	25869.6	25529.8	23448.5	23925.2	15866.8
55°	8570.5	8643.6	9604.1	12100.6	16175.8	22363.0	26586.9	26820.5	24696.8	24073.8	15649.6
56°	6914.0	7187.7	7890.9	10309.6	14590.1	21381.4	26421.8	26962.1	25067.3	24050.3	15555.3
57.5°	4570.7	4622.7	5389.6	7470.9	11716.0	19250.6	25676.1	26660.0	25543.9	23929.9	15486.9
60°	2149.7	2173.3	2449.4	3447.5	6340.6	14028.5	23252.7	24885.6	25718.5	23677.4	15484.5
62.5°	1401.6	1406.4	1439.4	1644.7	2593.3	7640.7	19276.5	21626.8	24272.1	23649.1	15439.6
65°	1153.9	1165.7	1125.6	1151.5	1356.8	2881.2	13596.7	16860.2	20876.4	22983.7	14934.7
67.5°	1017.0	1019.4	965.2	934.5	993.5	1264.8	6850.3	10635.2	15614.2	19529.1	12301.2
70°	927.4	925.1	863.7	792.9	795.2	840.0	2232.3	4417.4	8638.9	11595.7	7062.7
72.5°	823.6	828.3	792.9	693.8	660.7	594.6	840.0	1191.6	2940.2	3723.6	1861.8
75°	722.1	712.6	677.2	613.6	552.2	398.7	422.4	507.4	766.9	759.8	401.2
77.5°	547.5	538.0	554.5	523.9	431.8	278.4	231.3	264.3	346.9	323.3	162.9
80°	417.7	413.0	377.6	448.4	394.0	210.0	158.1	162.9	188.7	172.3	80.2
82.5°	302.1	299.7	285.5	276.1	250.1	153.3	120.3	127.5	141.6	120.3	59.0
85°	115.6	115.6	224.1	188.7	172.3	103.8	84.9	92.1	108.5	87.4	40.1
87.5°	18.9	18.9	151.0	125.1	77.8	51.9	54.3	59.0	63.7	51.9	30.7
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°	8756.9	8756.9	8756.9	8756.9	8756.9	8756.9	8756.9	8756.9	8756.9	8756.9	8756.9
2.5°	8733.3	8575.2	8228.3	7893.3	7600.6	7279.7	7116.9	6928.1	6857.4	6715.8	6729.9
5°	8823.0	8492.6	7796.5	7062.7	6390.1	5705.8	5219.7	4761.9	4507.0	4254.6	4254.6
7.5°	8915.0	8410.0	7334.0	6161.2	5028.5	3855.8	3025.2	2359.7	1989.2	1741.5	1734.4
10°	8978.7	8303.8	6807.7	5115.9	3445.2	1986.9	1198.7	943.9	851.8	811.7	809.4
12.5°	9061.3	8197.6	6208.4	3884.1	1913.7	943.9	748.0	707.9	691.4	682.0	682.0
15°	9132.1	8046.6	5481.6	2612.2	1005.3	707.9	644.2	630.0	627.7	625.3	627.7
17.5°	9148.7	7831.9	4610.8	1529.1	729.2	618.3	589.9	578.2	578.2	575.8	575.8
20°	9110.9	7548.8	3648.1	943.9	630.0	568.7	538.0	523.9	521.5	521.5	521.5
22.5°	9033.0	7187.7	2697.1	715.0	573.4	523.9	483.8	469.5	469.5	472.0	474.3
25°	8936.3	6760.6	1852.4	615.9	530.9	476.7	436.6	422.4	427.1	431.8	434.1
27.5°	8813.5	6250.8	1212.9	533.3	474.3	429.4	394.0	384.6	394.0	403.6	408.3
30°	8690.9	5691.6	821.2	462.5	410.6	377.6	356.3	353.9	368.2	389.3	391.7
32.5°	8610.6	5118.2	620.6	415.3	361.0	332.8	323.3	328.0	349.2	372.9	377.6
35°	8603.5	4559.0	528.6	377.6	328.0	302.1	297.4	311.5	335.1	353.9	358.6
37.5°	8714.4	4035.1	479.0	349.2	302.1	276.1	269.0	294.9	316.2	335.1	339.8
40°	8938.6	3565.5	446.0	323.3	280.8	250.1	245.4	266.7	287.9	309.1	316.2
42.5°	9219.4	3126.6	408.3	297.4	257.2	221.8	217.1	233.6	254.8	285.5	290.2
45°	9462.5	2718.4	368.2	269.0	231.3	191.1	188.7	207.7	224.1	252.5	257.2
47.5°	9667.8	2378.6	330.3	238.3	198.2	169.9	167.6	177.0	186.4	212.4	217.1
50°	9559.2	2090.7	292.6	195.9	160.5	146.3	143.9	143.9	155.7	181.7	186.4
52.5°	9292.6	1911.4	257.2	162.9	132.2	125.1	117.9	120.3	132.2	143.9	146.3
55°	9077.9	1826.4	226.6	143.9	110.9	103.8	96.8	94.4	96.8	92.1	87.4
56°	9025.9	1817.0	219.4	139.2	106.2	96.8	87.4	82.6	80.2	70.8	68.4
57.5°	9002.3	1817.0	207.7	129.8	99.1	87.4	75.5	66.1	56.7	49.5	49.5
60°	8983.5	1828.8	193.5	113.2	84.9	70.8	54.3	40.1	33.0	33.0	33.0
62.5°	8943.4	1824.0	177.0	94.4	73.1	54.3	33.0	26.0	23.6	26.0	28.3
65°	8492.6	1694.3	155.7	75.5	56.7	37.7	18.9	18.9	21.3	26.0	28.3
67.5°	6843.1	1283.7	127.5	59.0	40.1	28.3	16.5	16.5	21.3	26.0	28.3
70°	3759.0	677.2	108.5	42.5	30.7	23.6	16.5	14.1	21.3	26.0	28.3
72.5°	917.9	283.2	99.1	33.0	28.3	21.3	14.1	14.1	21.3	26.0	28.3
75°	226.6	212.4	80.2	26.0	23.6	18.9	14.1	14.1	21.3	26.0	28.3
77.5°	106.2	280.8	54.3	23.6	21.3	16.5	14.1	14.1	21.3	26.0	26.0
80°	63.7	212.4	33.0	21.3	18.9	16.5	14.1	14.1	21.3	26.0	28.3
82.5°	37.7	61.4	23.6	21.3	18.9	14.1	14.1	14.1	21.3	26.0	28.3
85°	33.0	30.7	23.6	21.3	18.9	16.5	14.1	14.1	23.6	28.3	28.3
87.5°	26.0	23.6	21.3	18.9	18.9	16.5	14.1	14.1	21.3	26.0	28.3
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)