

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: P270666

Luminaire Tested: **NAV-AF-06-D-UNV-SL2-7027-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270666
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-06-D-UNV-SL2-7027-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 2700K, 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: 20215.6 lumens
Efficiency: N/A
Efficacy: 104.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type II - Medium - Semi-Cutoff
BUG Rating: B3 - U0 - G3

Input Watts (W): 193
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

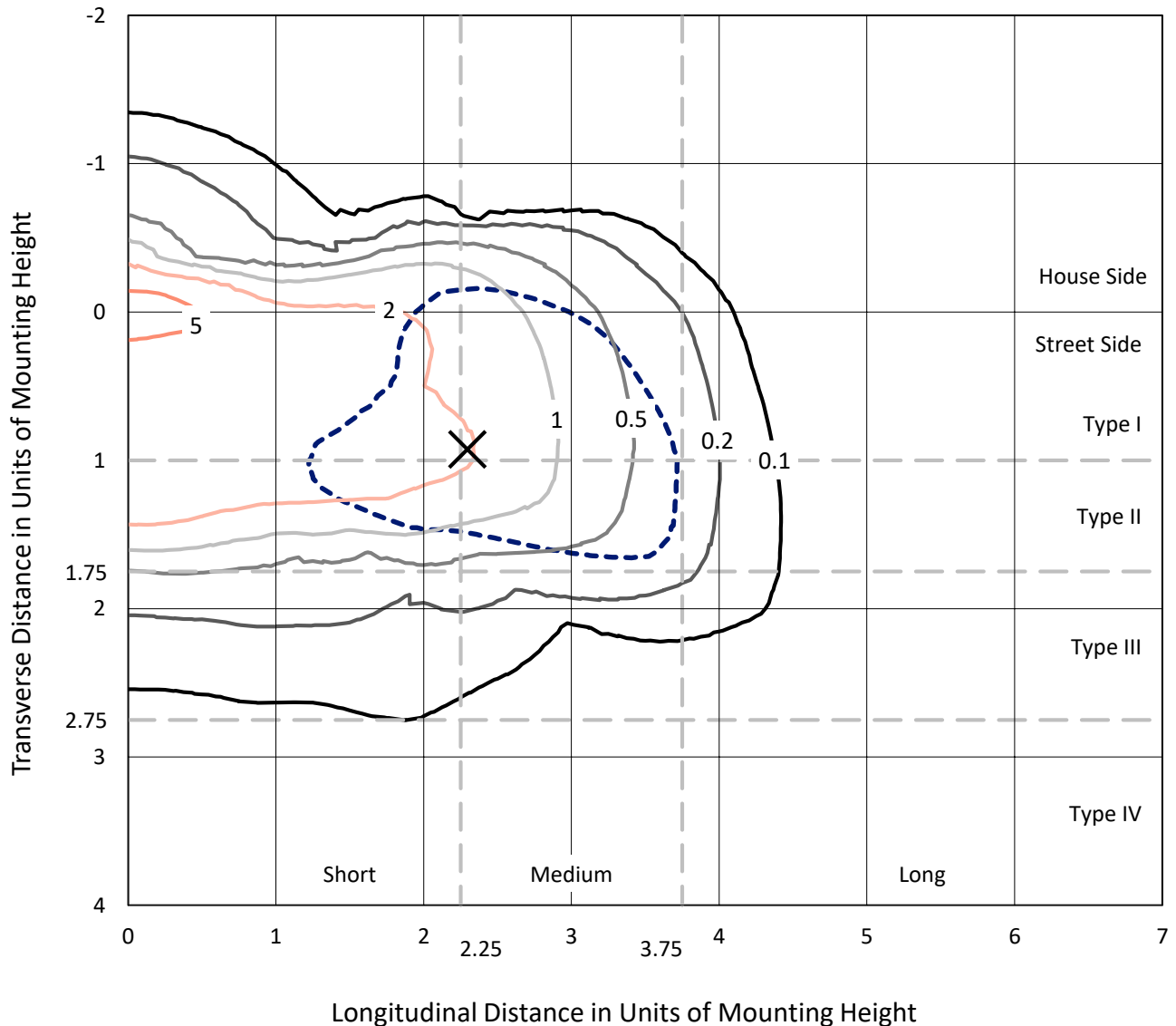


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Iso-Footcandle Lines of Horizontal Illumination

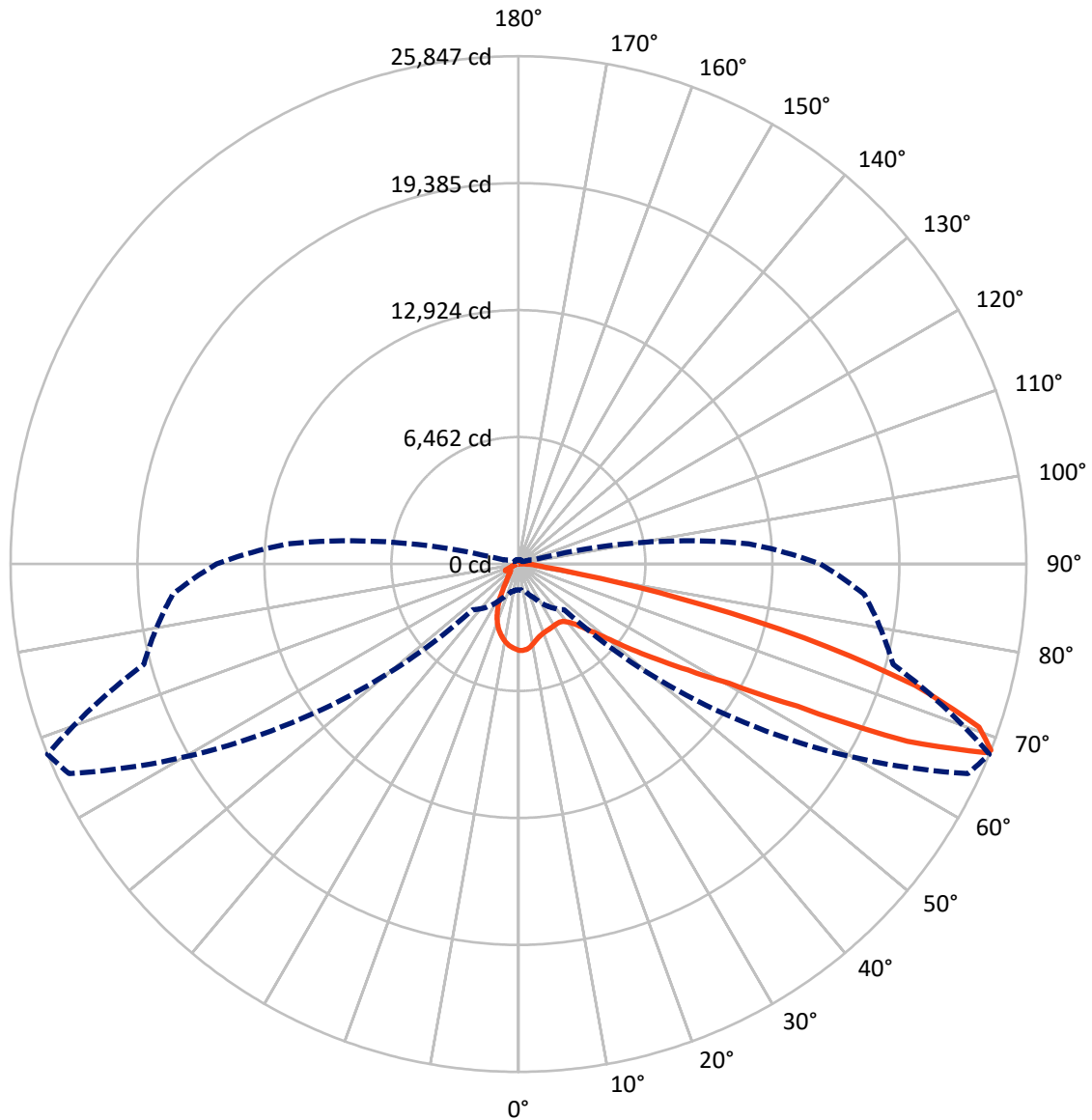
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 7 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
House Side	Lumens	3307.3	0.0	3307.3
	% Fixture	16.4	0.0	16.4
Street Side	Lumens	16908.3	0.0	16908.3
	% Fixture	83.6	0.0	83.6
Total	Lumens	20215.6	0.0	20215.6
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	376.9	1.9
10°-20°	874.2	4.3
20°-30°	1182.3	5.8
30°-40°	1667.0	8.2
40°-50°	2741.1	13.6
50°-60°	4248.9	21.0
60°-70°	5509.0	27.3
70°-80°	3161.4	15.6
80°-90°	454.9	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°	20215.6	100.0
0°-180°	20215.6	100.0



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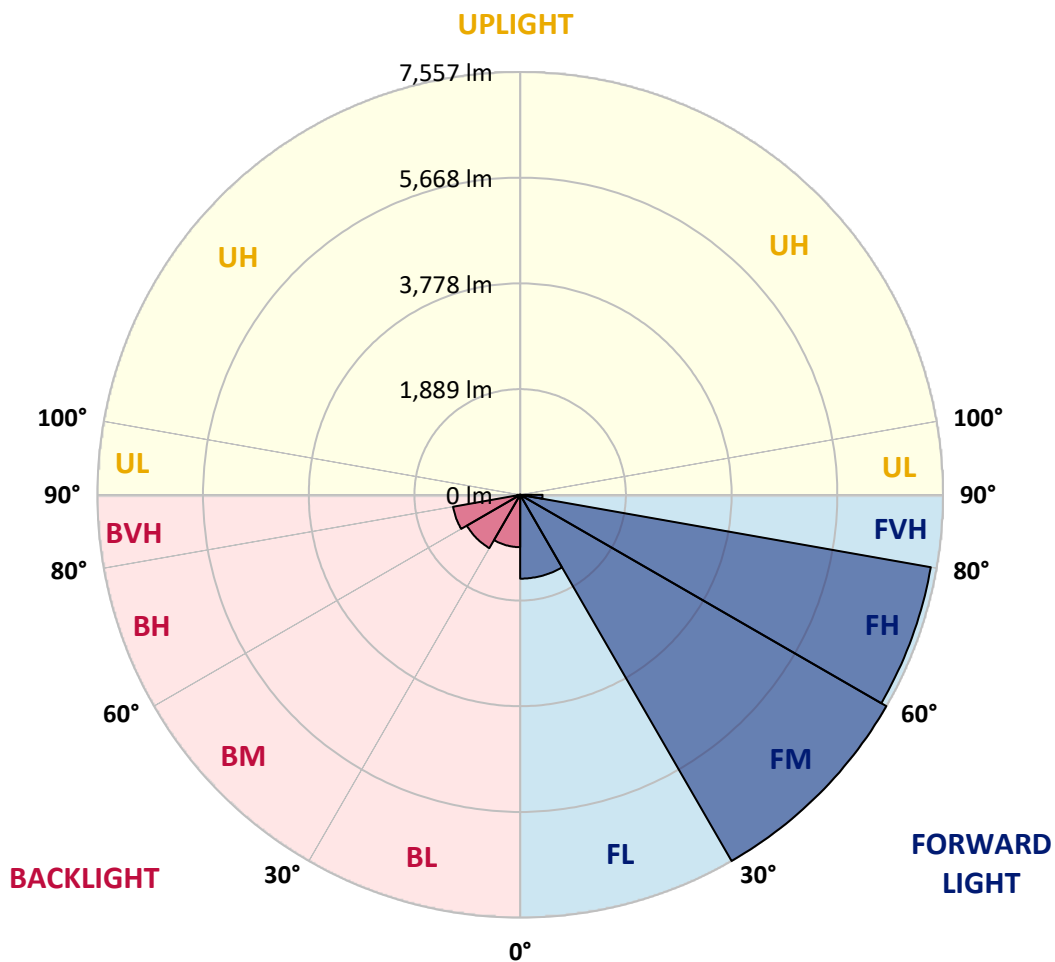
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1498.3	7.4			
FM (30°-60°)	7556.9	37.4			
FH (60°-80°)	7452.4	36.9			G3/7500
FVH (80°-90°)	400.6	2.0			G3/500
BL (0°-30°)	935.0	4.6	B2/1000		
BM (30°-60°)	1100.0	5.4	B2/2500		
BH (60°-80°)	1218.0	6.0	B3/2500		G3/2500
BVH (80°-90°)	54.2	0.3			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G3

Type II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	4398.7	4398.7	4398.7	4398.7	4398.7	4398.7	4398.7	4398.7	4398.7	4398.7	4398.7
2.5°	4281.2	4315.5	4315.5	4340.6	4363.1	4381.6	4397.5	4397.5	4397.5	4386.9	4377.6
5°	3830.9	3877.2	3883.7	3947.2	4030.2	4131.9	4245.6	4345.9	4365.8	4402.8	4417.2
7.5°	3517.9	3532.4	3557.6	3601.1	3685.7	3811.1	3989.4	4213.9	4267.9	4384.2	4445.0
10°	3296.2	3308.0	3329.1	3372.6	3449.2	3562.8	3738.4	4030.2	4120.0	4326.1	4446.3
12.5°	3133.6	3142.9	3162.8	3202.3	3280.3	3381.8	3561.5	3865.2	3976.2	4267.9	4464.8
15°	3006.8	3022.7	3038.5	3076.9	3156.0	3253.8	3436.0	3745.0	3865.2	4221.8	4499.2
17.5°	2956.7	2964.6	2967.2	2987.0	3058.4	3157.5	3339.7	3660.6	3784.6	4184.8	4525.5
20°	2988.4	2989.6	2963.2	2950.2	2991.0	3082.2	3259.1	3597.2	3724.0	4151.7	4536.1
22.5°	3127.0	3127.0	3058.4	3000.2	2972.5	3029.4	3205.0	3553.5	3691.0	4126.8	4536.1
25°	3391.1	3379.2	3272.3	3157.5	3034.7	3010.8	3170.6	3525.8	3665.9	4113.5	4519.0
27.5°	3738.4	3727.8	3591.9	3421.6	3199.7	3050.5	3158.7	3503.4	3640.7	4093.7	4482.0
30°	4160.9	4151.7	3997.3	3774.0	3446.5	3175.9	3186.5	3487.6	3620.9	4060.7	4419.9
32.5°	4582.3	4577.0	4454.2	4225.7	3787.3	3388.4	3259.1	3485.0	3610.4	4021.1	4344.7
35°	5006.2	5006.2	4930.8	4738.1	4245.6	3708.1	3411.0	3533.8	3630.2	4000.0	4279.9
37.5°	5632.2	5607.0	5467.1	5267.7	4822.6	4122.7	3656.6	3636.8	3706.8	4035.5	4258.8
40°	6601.4	6528.7	6178.8	5843.5	5452.5	4653.6	4015.8	3836.2	3878.4	4157.0	4308.9
42.5°	7615.7	7500.7	7037.2	6501.0	6103.5	5308.5	4487.3	4159.7	4158.3	4392.2	4468.7
45°	8485.7	8426.5	7924.6	7244.6	6847.1	6045.5	5082.8	4640.4	4592.9	4756.5	4776.4
47.5°	8991.6	8952.0	8649.6	8031.6	7729.1	6915.7	5838.2	5307.2	5217.4	5315.2	5284.8
50°	8851.5	8889.8	8802.8	8487.1	8677.3	8138.6	6800.8	6221.1	6050.8	6148.4	6074.5
52.5°	8114.7	8217.8	8295.7	8356.5	9222.7	9774.6	8010.5	7362.0	7220.8	7203.6	7132.3
55°	6787.7	6951.4	7197.0	7643.3	9076.0	11088.6	10123.3	8741.9	8536.0	8427.7	8455.4
57.5°	4619.3	4867.6	5397.0	6246.2	8314.2	11648.5	13247.7	10524.7	10176.1	9790.4	9880.3
60°	2544.7	2752.0	3381.8	4237.7	6575.0	11565.3	16016.9	13421.9	12324.7	11302.6	11487.3
62.5°	1646.8	1691.6	2160.5	2894.6	4035.5	10210.5	17555.2	18264.3	15938.9	13296.5	13556.7
65°	1323.2	1354.9	1584.7	2334.8	2811.4	6568.3	17623.9	23287.8	21754.7	16006.3	16014.3
67.5°	1292.8	1307.4	1440.7	1963.7	2637.2	3576.1	15233.7	25268.7	25623.9	19204.7	17658.3
68°	1311.3	1328.5	1463.2	1902.9	2635.7	3296.2	14079.7	25238.2	25847.0	19739.4	17658.3
70°	1156.7	1177.9	1492.3	1968.9	2523.6	2834.0	9641.2	23897.9	24877.8	20968.9	16755.0
72.5°	604.7	587.6	738.1	1554.2	2840.5	2952.6	5093.3	19965.3	21108.9	19419.9	14475.7
75°	471.4	429.2	413.3	614.0	2498.5	3062.3	2957.9	14190.5	15054.2	13999.0	9675.6
77.5°	443.8	392.2	361.8	363.2	1100.1	3186.5	2392.8	8351.2	8351.2	6678.0	3087.5
80°	356.5	308.9	289.3	330.1	530.9	2936.9	2497.2	3805.8	3245.8	1726.0	850.4
82.5°	235.0	209.9	211.3	268.1	402.8	1961.0	2892.1	1879.2	1411.6	764.5	500.4
85°	149.2	128.1	142.7	187.6	301.1	874.2	2863.0	1306.0	935.0	429.2	249.5
87.5°	75.3	58.1	71.3	97.7	183.6	250.8	2357.2	1166.0	693.3	178.3	136.1
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°	4398.7	4398.7	4398.7	4398.7	4398.7	4398.7	4398.7	4398.7	4398.7	4398.7	4398.7
2.5°	4377.6	4348.5	4334.1	4310.2	4281.2	4252.1	4232.4	4223.1	4217.8	4220.4	4219.1
5°	4409.3	4371.1	4308.9	4220.4	4129.2	4032.9	3959.0	3902.1	3866.6	3856.0	3853.3
7.5°	4433.0	4377.6	4261.4	4100.3	3944.5	3775.4	3631.5	3516.7	3438.7	3403.0	3401.7
10°	4429.2	4357.8	4174.2	3936.6	3708.1	3459.8	3234.0	3041.2	2901.3	2834.0	2831.3
12.5°	4433.0	4335.3	4067.3	3745.0	3417.5	3062.3	2727.0	2427.2	2218.5	2119.6	2115.5
15°	4448.9	4311.5	3957.7	3531.1	3078.2	2576.3	2097.1	1720.7	1530.5	1465.9	1465.9
17.5°	4447.6	4272.0	3830.9	3282.9	2675.4	2003.3	1431.4	1199.1	1180.6	1240.0	1249.3
20°	4421.2	4208.6	3667.2	2988.4	2202.6	1386.5	970.6	937.7	1085.5	1249.3	1267.7
22.5°	4380.2	4126.8	3478.2	2646.3	1652.1	903.2	748.7	799.0	999.6	1203.0	1232.0
25°	4323.5	4027.6	3261.7	2248.8	1098.6	649.7	624.6	686.7	828.0	964.1	985.1
27.5°	4240.3	3902.1	3025.3	1818.3	701.1	534.9	544.1	587.6	648.3	706.4	718.4
30°	4135.9	3755.6	2767.9	1341.7	532.2	478.1	493.9	520.3	546.7	583.7	591.7
32.5°	4030.2	3606.3	2499.9	921.8	464.9	447.6	463.5	478.1	500.4	525.6	530.9
35°	3935.3	3467.7	2223.8	643.0	435.8	427.9	435.8	445.0	467.5	492.6	495.1
37.5°	3866.6	3354.2	1935.8	508.4	418.6	410.6	414.7	418.6	445.0	482.0	486.0
40°	3857.3	3279.0	1644.1	456.9	405.5	394.9	392.2	394.9	429.2	471.4	475.5
42.5°	3947.2	3282.9	1358.9	435.8	394.9	382.9	372.3	377.6	408.0	441.1	443.8
45°	4159.7	3375.3	1111.9	426.5	385.6	376.4	360.5	363.2	377.6	394.9	397.5
47.5°	4534.7	3577.3	923.1	421.2	377.6	369.7	349.9	342.1	343.3	352.6	352.6
50°	5134.3	3915.4	808.1	415.9	371.1	356.5	334.1	318.3	314.2	319.5	320.9
52.5°	6028.3	4495.1	752.7	405.5	359.2	339.4	314.2	298.4	291.8	297.1	297.1
55°	7236.6	5420.8	726.3	390.9	344.7	318.3	295.8	282.5	277.2	281.3	281.3
57.5°	8613.8	6623.8	771.1	371.1	326.2	295.8	279.9	270.7	266.7	270.7	272.0
60°	10250.1	8197.9	1080.2	345.9	306.3	276.0	266.7	261.4	258.8	262.8	262.8
62.5°	12424.9	10292.3	1671.8	326.2	285.2	257.5	254.8	252.2	249.5	253.5	253.5
65°	14772.8	12197.8	1720.7	314.2	266.7	241.6	243.0	243.0	240.3	244.2	244.2
67.5°	15520.3	12032.7	961.4	299.8	244.2	225.8	231.1	231.1	229.7	233.6	232.4
68°	15361.8	11771.3	837.2	295.8	240.3	221.8	227.1	228.4	227.1	231.1	229.7
70°	14181.4	10334.6	550.8	273.4	223.1	208.6	216.6	217.8	216.6	221.8	220.5
72.5°	11706.6	7751.6	406.8	238.9	202.1	191.5	199.5	200.7	202.1	207.2	206.0
75°	7434.6	4281.2	320.9	203.3	180.9	171.7	179.7	183.6	186.2	194.2	190.1
77.5°	2036.3	1299.4	260.1	173.1	155.9	151.9	157.2	162.5	165.1	174.4	167.8
80°	713.1	574.5	216.6	146.6	129.4	128.1	133.4	138.7	141.4	149.2	141.4
82.5°	433.2	375.0	173.1	115.0	101.7	100.4	107.0	112.3	115.0	115.0	109.7
85°	225.8	198.0	126.8	80.6	70.0	66.0	78.0	84.5	85.9	84.5	80.6
87.5°	126.8	112.3	67.4	38.3	31.7	33.0	41.0	50.1	54.2	52.8	50.1
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)