

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: P196479

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196479
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-03-D-UNV-AFL-7030-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 3000K, 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: 14705.2 lumens
Efficiency: N/A
Efficacy: 88.6 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type II - Short - Full Cutoff
BUG Rating: B1 - U0 - G2

Input Watts (W): 166
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

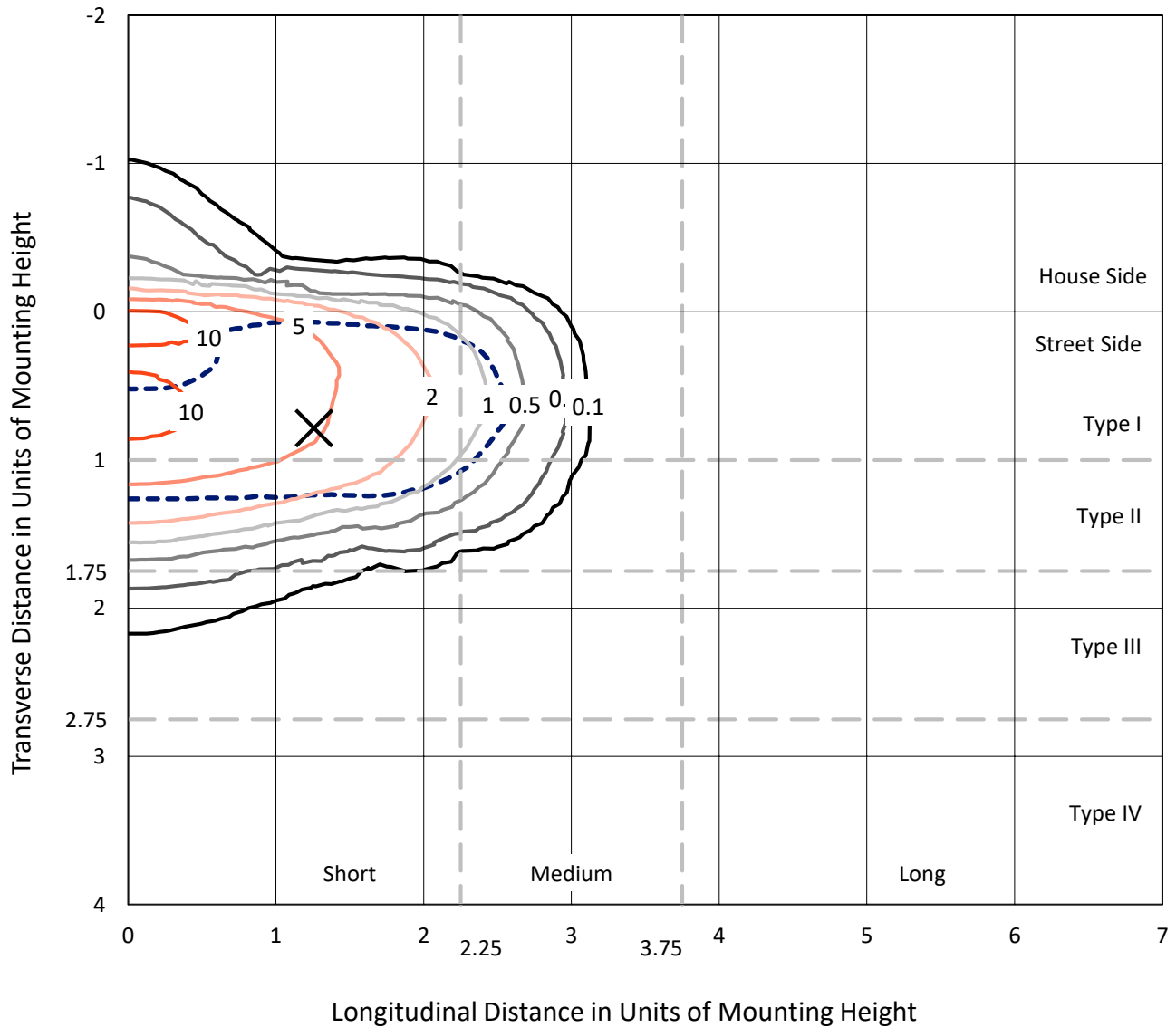


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Iso-Footcandle Lines of Horizontal Illumination

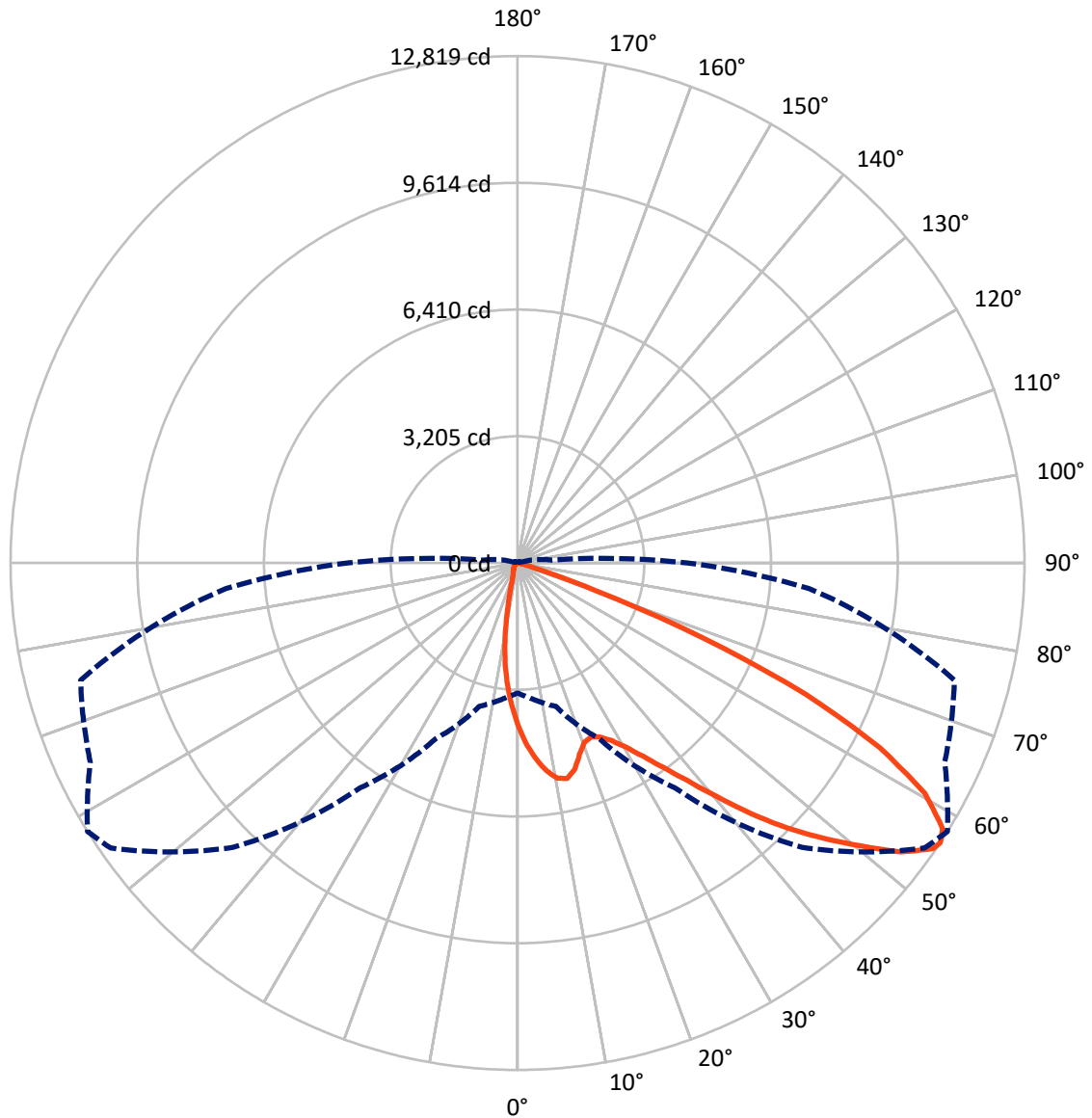
✕ Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 12.9 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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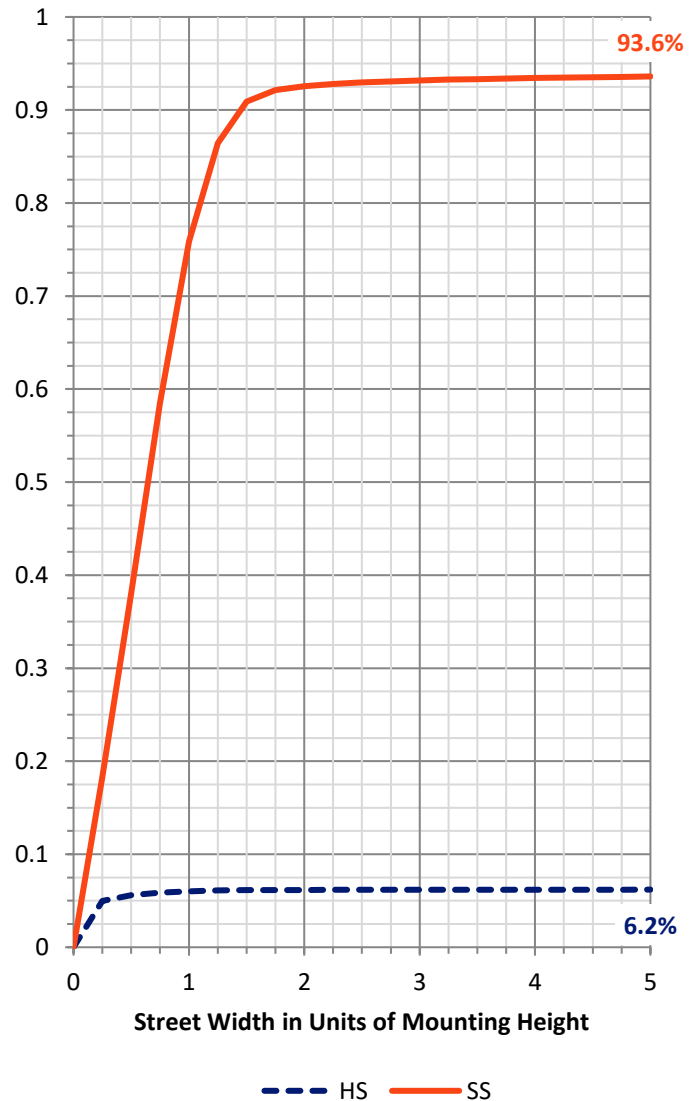
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	917.9	0.0	917.9
	% Fixture	6.2	0.0	6.2
Street Side	Lumens	13787.3	0.0	13787.3
	% Fixture	93.8	0.0	93.8
Total	Lumens	14705.2	0.0	14705.2
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	355.2	2.4
10°-20°	826.4	5.6
20°-30°	1390.6	9.5
30°-40°	2381.3	16.2
40°-50°	3593.4	24.4
50°-60°	3735.2	25.4
60°-70°	2096.9	14.3
70°-80°	287.4	2.0
80°-90°	38.9	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°	14705.2	100.0
0°-180°	14705.2	100.0



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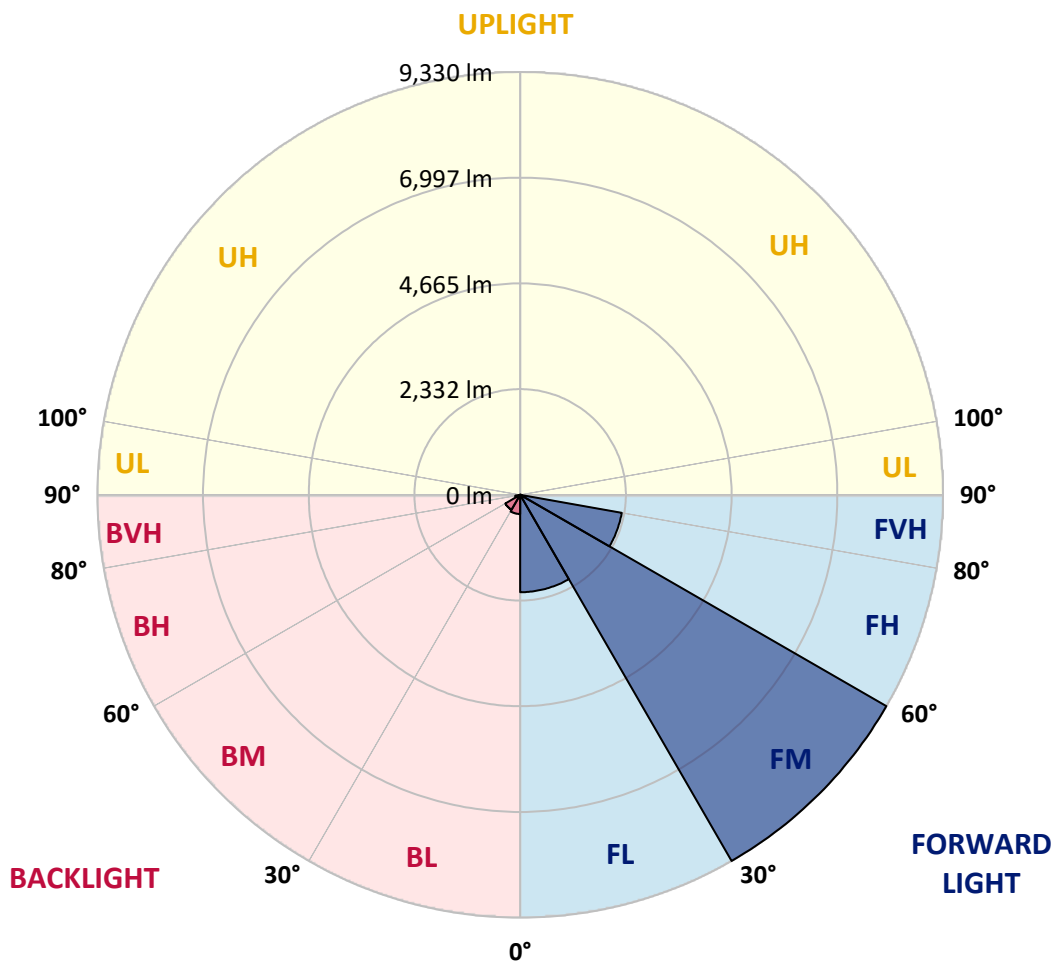
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2148.8	14.6			
FM (30°-60°)	9329.6	63.4			
FH (60°-80°)	2275.4	15.5			G2/5000
FVH (80°-90°)	33.6	0.2			G1/100
BL (0°-30°)	423.4	2.9	B1/500		
BM (30°-60°)	380.2	2.6	B1/1000		
BH (60°-80°)	108.9	0.7	B0/110		G0/110
BVH (80°-90°)	5.4	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G2

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	4163.5	4163.5	4163.5	4163.5	4163.5	4163.5	4163.5	4163.5	4163.5	4163.5	4163.5
2.5°	5009.4	4979.2	4947.7	4889.4	4835.5	4752.4	4638.0	4609.9	4520.3	4372.1	4234.2
5°	5441.3	5435.7	5414.5	5367.4	5309.0	5208.0	5079.0	4992.6	4853.6	4620.1	4354.2
7.5°	5185.6	5232.7	5310.1	5420.1	5494.1	5484.0	5385.3	5310.1	5172.2	4853.6	4472.0
10°	4371.0	4379.9	4486.6	4717.7	5083.5	5424.5	5553.5	5533.3	5406.5	5057.7	4575.2
12.5°	4083.8	4089.5	4114.1	4188.1	4426.0	4901.7	5486.2	5591.7	5581.6	5252.8	4685.1
15°	4106.3	4109.7	4116.4	4140.0	4207.2	4446.2	5145.1	5413.4	5693.8	5438.1	4792.8
17.5°	4283.5	4281.4	4260.0	4237.5	4258.8	4337.4	4797.3	5080.1	5670.2	5594.0	4881.4
20°	4629.1	4640.3	4568.4	4468.7	4417.1	4420.4	4625.7	4837.8	5537.8	5715.2	4947.7
22.5°	5114.9	5122.7	5004.9	4832.2	4680.6	4604.4	4661.6	4773.9	5385.3	5827.4	5001.6
25°	5694.9	5694.9	5530.0	5284.4	5049.9	4882.7	4833.3	4875.9	5326.9	5954.1	5055.4
27.5°	6320.9	6343.4	6128.1	5806.0	5496.4	5251.8	5097.0	5089.1	5371.8	6113.4	5115.9
30°	7002.0	7022.2	6766.3	6372.5	6005.7	5692.7	5454.9	5403.2	5543.5	6327.6	5204.7
32.5°	7679.7	7696.4	7413.7	7012.0	6584.6	6216.7	5903.6	5821.7	5852.0	6640.7	5334.8
35°	8541.3	8544.6	8186.7	7708.8	7252.2	6820.2	6424.2	6343.4	6309.7	7035.6	5522.2
37.5°	9226.7	9199.8	8973.3	8521.0	7997.1	7546.1	7080.5	6975.0	6894.3	7591.0	5812.7
40°	9388.3	9388.3	9354.7	9218.9	8802.7	8368.5	7917.5	7760.3	7582.0	8245.0	6203.2
42.5°	8967.6	8994.6	9216.7	9511.8	9515.1	9236.9	8795.9	8663.6	8349.4	8990.1	6629.6
45°	8026.3	8034.2	8567.0	9363.6	9904.5	10063.8	9738.4	9555.5	9120.2	9764.2	7019.9
47.5°	7687.5	7712.2	7938.8	8912.6	9933.7	10733.5	10642.6	10391.3	9833.8	10471.0	7384.5
50°	7166.9	7197.2	7474.3	8248.4	9671.1	11163.2	11507.6	11238.4	10483.3	11060.0	7565.2
52.5°	5921.6	5968.8	6360.2	7370.0	9014.8	11181.1	12299.8	12138.1	11148.6	11375.3	7544.0
55°	4074.9	4109.7	4566.3	5753.3	7690.9	10632.6	12640.7	12751.8	11742.1	11446.0	7440.7
56°	3287.3	3417.4	3751.8	4901.7	6936.9	10165.8	12562.3	12819.2	11918.3	11434.7	7395.8
57.5°	2173.1	2197.9	2562.4	3552.0	5570.4	9152.7	12207.7	12675.6	12144.9	11377.5	7363.2
60°	1022.1	1033.3	1164.6	1639.1	3014.7	6669.8	11055.5	11831.9	12228.0	11257.4	7362.1
62.5°	666.5	668.6	684.4	782.0	1233.0	3632.8	9165.1	10282.5	11540.2	11244.0	7340.8
65°	548.6	554.3	535.2	547.5	645.0	1369.9	6464.6	8016.3	9925.7	10927.6	7100.8
67.5°	483.6	484.7	458.9	444.2	472.3	601.4	3257.0	5056.5	7423.8	9285.1	5848.6
70°	441.0	439.8	410.6	377.0	378.0	399.5	1061.4	2100.3	4107.4	5513.2	3358.0
72.5°	391.5	393.8	377.0	329.9	314.1	282.8	399.5	566.6	1398.0	1770.4	885.2
75°	343.3	338.8	322.0	291.7	262.6	189.6	200.8	241.3	364.6	361.2	190.7
77.5°	260.2	255.7	263.7	249.1	205.3	132.4	110.0	125.6	164.9	153.7	77.5
80°	198.7	196.3	179.5	213.2	187.4	99.9	75.2	77.5	89.7	82.0	38.1
82.5°	143.5	142.5	135.7	131.2	118.9	72.8	57.3	60.6	67.3	57.3	28.1
85°	54.9	54.9	106.6	89.7	82.0	49.3	40.4	43.7	51.6	41.5	19.1
87.5°	9.0	9.0	71.8	59.4	37.0	24.7	25.7	28.1	30.3	24.7	14.5
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°	4163.5	4163.5	4163.5	4163.5	4163.5	4163.5	4163.5	4163.5	4163.5	4163.5	4163.5
2.5°	4152.3	4077.1	3912.1	3752.8	3613.7	3461.2	3383.8	3293.9	3260.3	3193.0	3199.7
5°	4194.9	4037.7	3706.8	3358.0	3038.2	2712.8	2481.8	2264.1	2142.9	2022.8	2022.8
7.5°	4238.6	3998.6	3487.0	2929.3	2390.8	1833.3	1438.3	1122.0	945.7	827.9	824.6
10°	4269.0	3948.1	3236.8	2432.3	1638.1	944.6	569.9	448.7	405.1	385.9	384.8
12.5°	4308.2	3897.6	2951.7	1846.7	909.9	448.7	355.6	336.6	328.8	324.3	324.3
15°	4341.9	3825.8	2606.3	1242.0	477.9	336.6	306.3	299.6	298.4	297.3	298.4
17.5°	4349.7	3723.7	2192.3	727.0	346.7	293.9	280.5	274.9	274.9	273.8	273.8
20°	4331.8	3589.0	1734.5	448.7	299.6	270.4	255.7	249.1	247.9	247.9	247.9
22.5°	4294.8	3417.4	1282.3	339.9	272.6	249.1	230.0	223.2	223.2	224.4	225.5
25°	4248.8	3214.3	880.7	292.9	252.4	226.6	207.6	200.8	203.1	205.3	206.4
27.5°	4190.4	2972.0	576.7	253.6	225.5	204.2	187.4	182.9	187.4	191.9	194.1
30°	4132.0	2706.2	390.4	219.9	195.2	179.5	169.5	168.3	175.1	185.0	186.3
32.5°	4094.0	2433.4	295.1	197.4	171.6	158.2	153.7	155.9	166.1	177.2	179.5
35°	4090.5	2167.6	251.3	179.5	155.9	143.5	141.4	148.0	159.3	168.3	170.6
37.5°	4143.3	1918.5	227.8	166.1	143.5	131.2	128.0	140.3	150.3	159.3	161.6
40°	4249.8	1695.2	212.1	153.7	133.6	118.9	116.7	126.7	136.9	147.0	150.3
42.5°	4383.4	1486.6	194.1	141.4	122.3	105.4	103.2	111.1	121.2	135.7	138.0
45°	4499.0	1292.4	175.1	128.0	110.0	90.9	89.7	98.8	106.6	120.0	122.3
47.5°	4596.5	1131.0	157.2	113.3	94.3	80.8	79.6	84.1	88.6	100.9	103.2
50°	4544.9	994.0	139.1	93.1	76.3	69.6	68.4	68.4	74.1	86.5	88.6
52.5°	4418.1	908.8	122.3	77.5	62.9	59.4	56.0	57.3	62.9	68.4	69.6
55°	4316.1	868.4	107.7	68.4	52.8	49.3	46.0	44.9	46.0	43.7	41.5
56°	4291.3	863.9	104.4	66.2	50.5	46.0	41.5	39.3	38.1	33.7	32.6
57.5°	4280.1	863.9	98.8	61.7	47.1	41.5	35.9	31.4	26.9	23.6	23.6
60°	4271.2	869.4	92.0	53.9	40.4	33.7	25.7	19.1	15.8	15.8	15.8
62.5°	4252.2	867.3	84.1	44.9	34.8	25.7	15.8	12.3	11.3	12.3	13.4
65°	4037.7	805.6	74.1	35.9	26.9	17.9	9.0	9.0	10.1	12.3	13.4
67.5°	3253.6	610.3	60.6	28.1	19.1	13.4	7.8	7.8	10.1	12.3	13.4
70°	1787.3	322.0	51.6	20.2	14.5	11.3	7.8	6.8	10.1	12.3	13.4
72.5°	436.4	134.6	47.1	15.8	13.4	10.1	6.8	6.8	10.1	12.3	13.4
75°	107.7	100.9	38.1	12.3	11.3	9.0	6.8	6.8	10.1	12.3	13.4
77.5°	50.5	133.6	25.7	11.3	10.1	7.8	6.8	6.8	10.1	12.3	12.3
80°	30.3	100.9	15.8	10.1	9.0	7.8	6.8	6.8	10.1	12.3	13.4
82.5°	17.9	29.2	11.3	10.1	9.0	6.8	6.8	6.8	10.1	12.3	13.4
85°	15.8	14.5	11.3	10.1	9.0	7.8	6.8	6.8	11.3	13.4	13.4
87.5°	12.3	11.3	10.1	9.0	9.0	7.8	6.8	6.8	10.1	12.3	13.4
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)