

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: P196485

Luminaire Tested: **NAV-AF-03-D-UNV-AFL-7030-1200-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196485
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-7030-1200-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 3000K, 1200mA 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: 16131 lumens
Efficiency: N/A
Efficacy: 84.5 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): 191
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

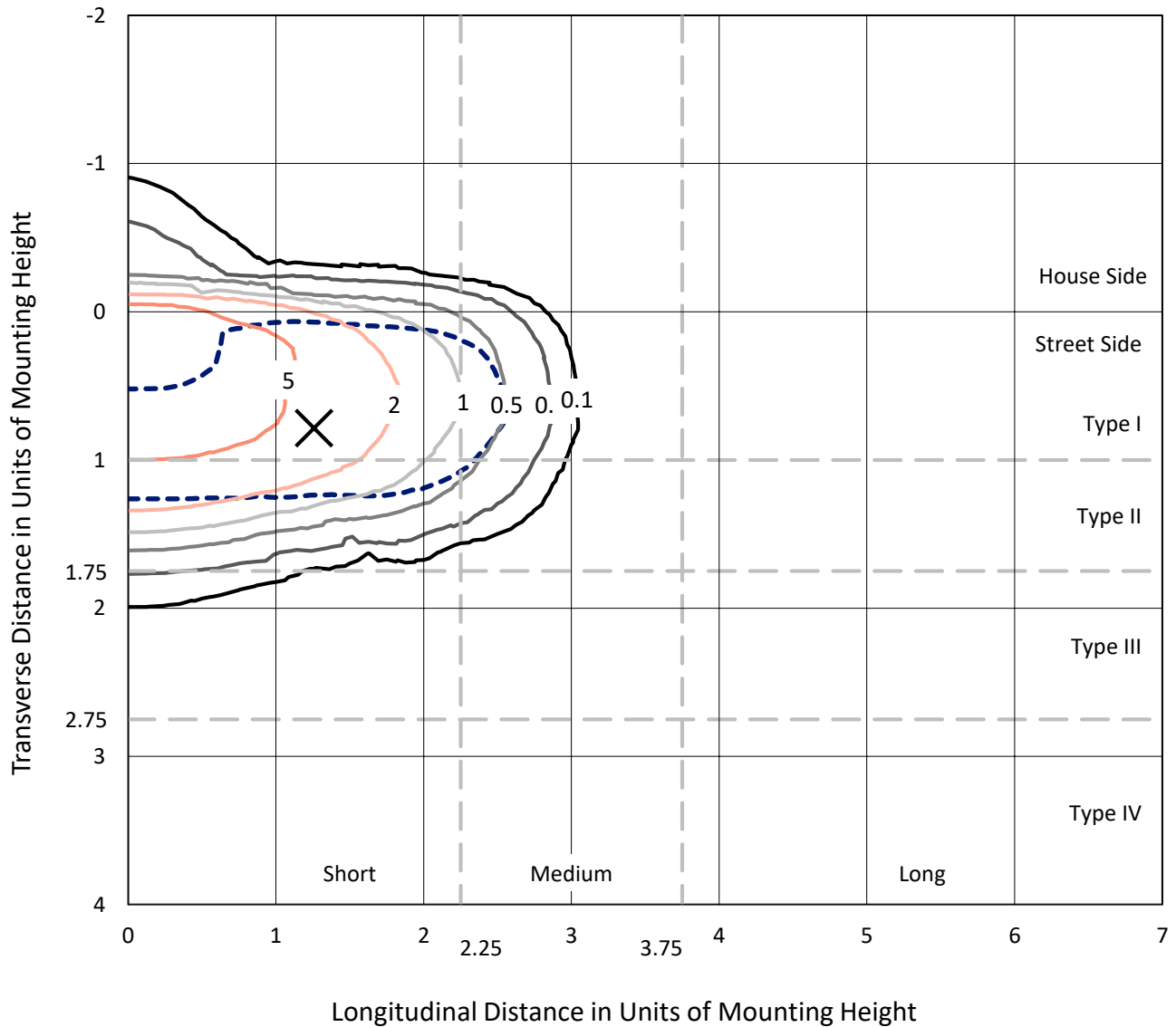


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

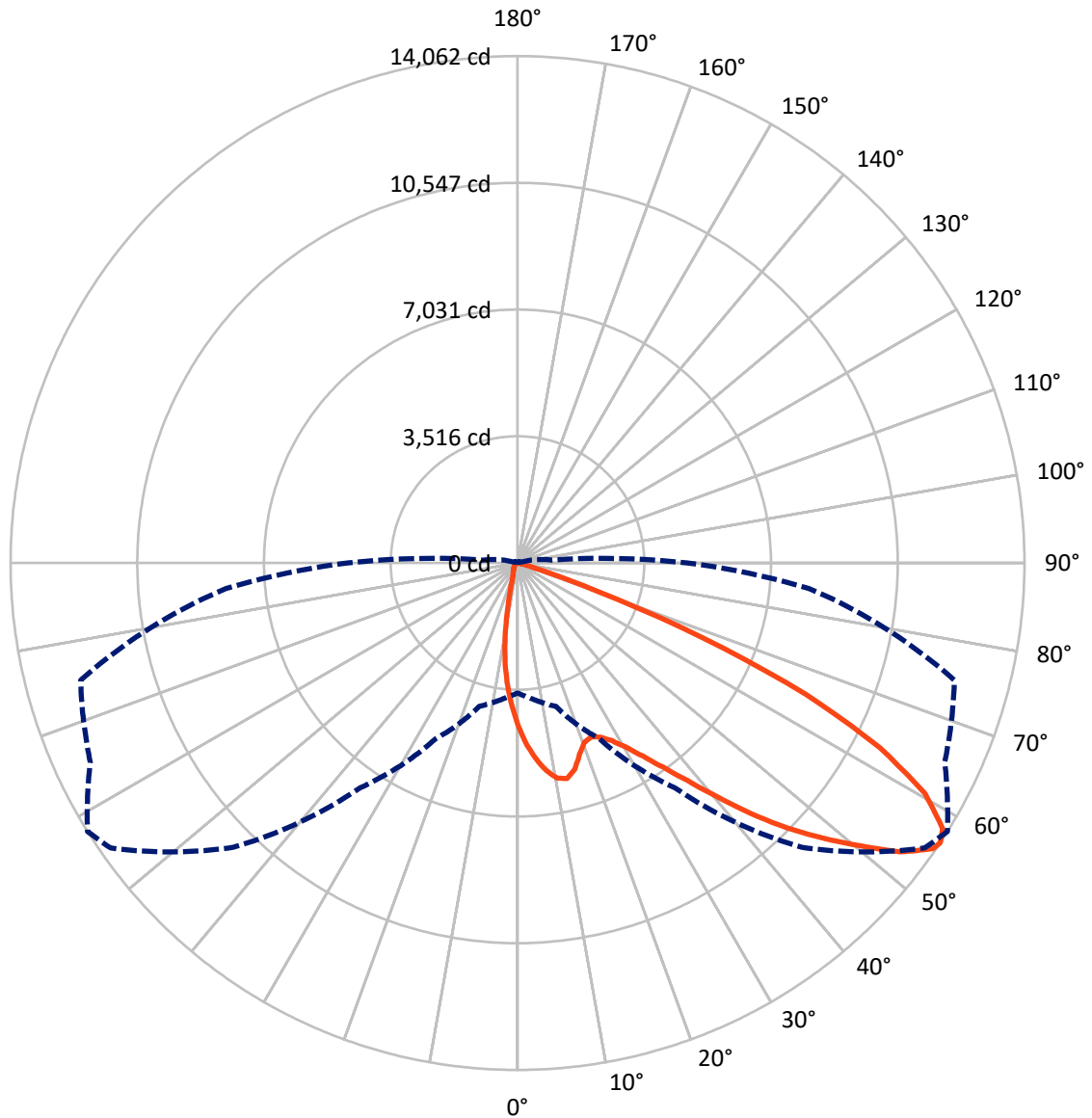


Based on 25 foot mounting height. Maximum calculated value = 9.1 fc
 Type II - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral - - - Horizontal Cone Through 56-Deg Vertical

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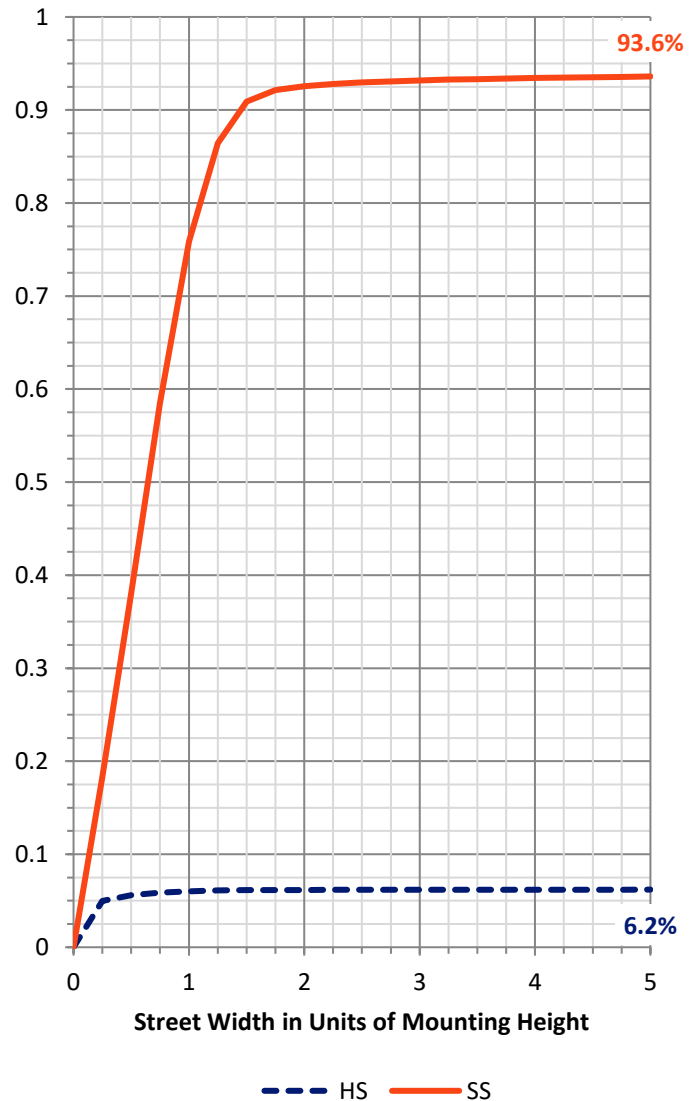
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1006.9	0.0	1006.9
	% Fixture	6.2	0.0	6.2
Street Side	Lumens	15124.1	0.0	15124.1
	% Fixture	93.8	0.0	93.8
Total	Lumens	16131.0	0.0	16131.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	389.6	2.4
10°-20°	906.6	5.6
20°-30°	1525.4	9.5
30°-40°	2612.1	16.2
40°-50°	3941.8	24.4
50°-60°	4097.4	25.4
60°-70°	2300.2	14.3
70°-80°	315.2	2.0
80°-90°	42.7	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°	16131.0	100.0
0°-180°	16131.0	100.0



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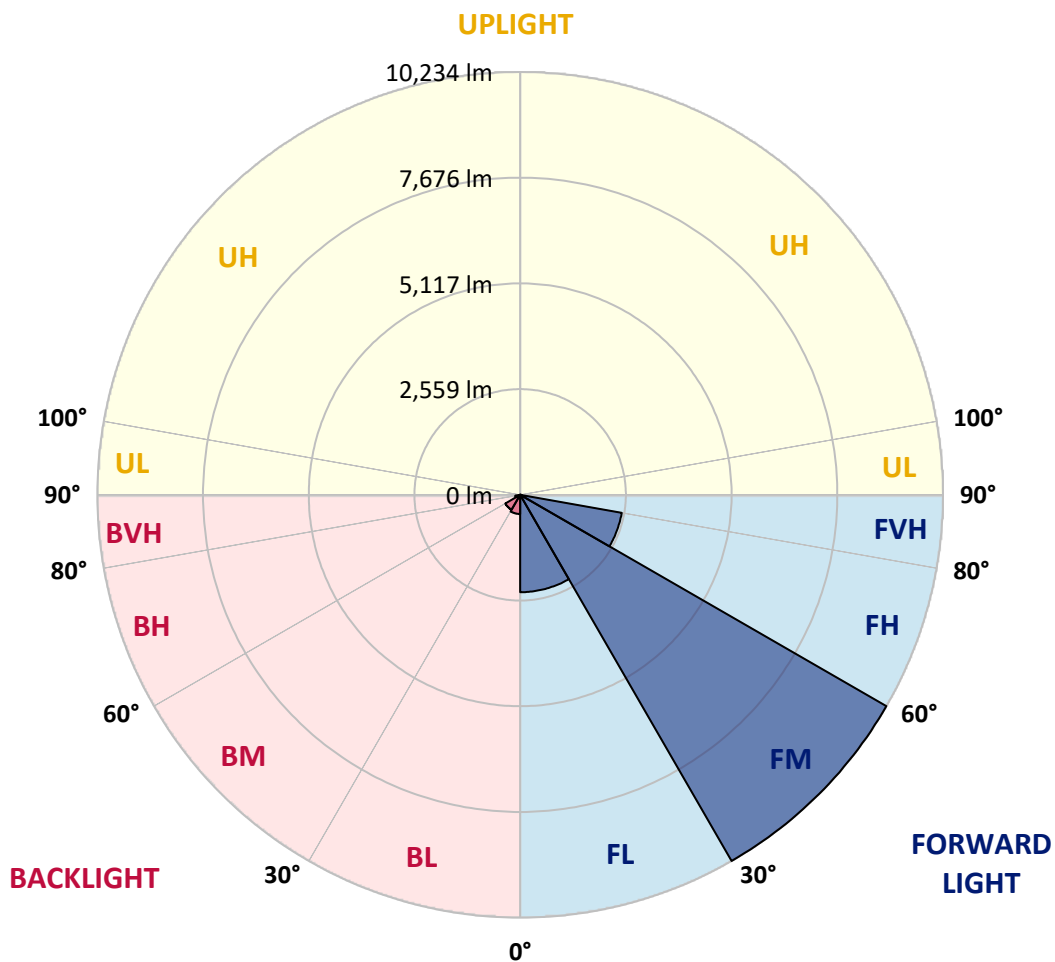
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2357.1	14.6			
FM	(30°-60°)	10234.2	63.4			
FH	(60°-80°)	2496.0	15.5			G2/5000
FVH	(80°-90°)	36.8	0.2			G1/100
BL	(0°-30°)	464.5	2.9	B1/500		
BM	(30°-60°)	417.1	2.6	B1/1000		
BH	(60°-80°)	119.4	0.7	B1/500		G1/500
BVH	(80°-90°)	5.9	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°	4567.1	4567.1	4567.1	4567.1	4567.1	4567.1	4567.1	4567.1	4567.1	4567.1	4567.1
2.5°	5495.2	5461.9	5427.5	5363.4	5304.4	5213.3	5087.7	5056.9	4958.5	4796.1	4644.7
5°	5969.0	5962.9	5939.5	5887.8	5823.7	5712.9	5571.4	5476.7	5324.1	5068.1	4776.4
7.5°	5688.4	5740.1	5824.9	5945.6	6026.8	6015.7	5907.4	5824.9	5673.7	5324.1	4905.6
10°	4794.9	4804.6	4921.6	5175.2	5576.4	5950.5	6092.1	6069.9	5930.8	5548.0	5018.9
12.5°	4479.8	4485.9	4513.1	4594.3	4855.2	5376.9	6018.2	6134.0	6122.8	5762.3	5139.4
15°	4504.4	4508.1	4515.4	4541.4	4615.2	4877.4	5644.2	5938.2	6246.0	5965.2	5257.7
17.5°	4698.9	4696.4	4673.0	4648.4	4671.8	4757.9	5262.6	5572.7	6220.0	6136.3	5354.8
20°	5078.0	5090.3	5011.5	4901.9	4845.3	4849.0	5074.2	5306.8	6074.9	6269.3	5427.5
22.5°	5610.8	5619.4	5490.2	5300.7	5134.5	5050.8	5113.7	5236.7	5907.4	6392.3	5486.6
25°	6247.1	6247.1	6066.2	5796.6	5539.5	5356.1	5302.0	5348.7	5843.4	6531.4	5545.6
27.5°	6933.8	6958.5	6722.1	6368.9	6029.3	5761.0	5591.2	5582.5	5892.7	6706.2	5612.1
30°	7680.9	7703.0	7422.4	6990.5	6588.0	6244.6	5983.7	5927.1	6081.0	6941.2	5709.4
32.5°	8424.2	8442.7	8132.6	7692.0	7223.0	6819.4	6476.1	6386.2	6419.4	7284.7	5852.0
35°	9369.4	9373.2	8980.6	8456.2	7955.3	7481.5	7047.1	6958.5	6921.6	7717.8	6057.6
37.5°	10121.4	10091.8	9843.2	9347.2	8772.5	8277.8	7767.0	7651.3	7562.7	8326.9	6376.4
40°	10298.7	10298.7	10261.7	10112.8	9656.3	9179.9	8685.1	8512.8	8317.2	9044.5	6804.6
42.5°	9837.1	9866.6	10110.3	10434.0	10437.6	10132.4	9648.8	9503.6	9158.9	9861.7	7272.3
45°	8804.5	8813.2	9397.7	10271.6	10864.7	11039.5	10682.6	10482.0	10004.5	10710.9	7700.6
47.5°	8432.8	8460.0	8708.5	9776.8	10896.8	11774.3	11674.6	11398.9	10787.1	11486.3	8100.6
50°	7861.9	7895.1	8199.1	9048.2	10608.7	12245.7	12623.5	12328.0	11499.7	12132.3	8298.7
52.5°	6495.7	6547.4	6977.0	8084.5	9888.8	12265.3	13492.3	13315.1	12229.6	12478.2	8275.3
55°	4469.9	4508.1	5009.0	6311.2	8436.6	11663.5	13866.4	13988.4	12880.7	12555.7	8162.1
56°	3606.0	3748.8	4115.5	5376.9	7609.5	11151.5	13780.4	14062.1	13073.9	12543.4	8112.8
57.5°	2383.9	2411.1	2810.9	3896.4	6110.6	10040.2	13391.4	13904.7	13322.5	12480.6	8077.2
60°	1121.2	1133.4	1277.5	1798.1	3307.0	7316.6	12127.4	12979.1	13413.5	12349.0	8076.0
62.5°	731.1	733.4	750.7	857.8	1352.5	3985.0	10053.7	11279.5	12659.1	12334.3	8052.5
65°	601.8	608.0	587.0	600.6	707.7	1502.8	7091.4	8793.5	10888.1	11987.2	7789.2
67.5°	530.5	531.6	503.3	487.4	518.1	659.7	3572.8	5546.9	8143.6	10185.3	6415.7
70°	483.7	482.5	450.4	413.5	414.7	438.1	1164.2	2304.0	4505.7	6047.7	3683.5
72.5°	429.5	432.0	413.5	361.8	344.6	310.2	438.1	621.4	1533.5	1942.1	971.0
75°	376.6	371.7	353.2	320.0	288.0	208.0	220.2	264.6	400.0	396.3	209.2
77.5°	285.5	280.6	289.2	273.2	225.2	145.2	120.6	137.8	181.0	168.6	84.9
80°	217.9	215.3	196.8	233.9	205.5	109.6	82.5	84.9	98.5	89.8	41.8
82.5°	157.6	156.3	148.9	144.0	130.4	80.0	62.8	66.4	73.9	62.8	30.8
85°	60.3	60.3	116.9	98.5	89.8	54.2	44.4	48.0	56.6	45.6	20.9
87.5°	9.9	9.9	78.7	65.2	40.7	27.1	28.3	30.8	33.3	27.1	16.0
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°	4567.1	4567.1	4567.1	4567.1	4567.1	4567.1	4567.1	4567.1	4567.1	4567.1	4567.1
2.5°	4554.9	4472.4	4291.4	4116.8	3964.2	3796.8	3711.9	3613.4	3576.5	3502.7	3510.0
5°	4601.7	4429.4	4066.3	3683.5	3332.7	2975.9	2722.3	2483.6	2350.7	2218.9	2218.9
7.5°	4649.6	4386.3	3825.0	3213.5	2622.7	2011.0	1577.8	1230.7	1037.5	908.3	904.5
10°	4682.9	4330.9	3550.6	2668.2	1796.9	1036.3	625.2	492.3	444.2	423.4	422.2
12.5°	4725.9	4275.6	3238.0	2025.7	998.1	492.3	390.2	369.2	360.5	355.6	355.6
15°	4762.8	4196.7	2859.0	1362.4	524.3	369.2	336.0	328.7	327.3	326.1	327.3
17.5°	4771.5	4084.7	2404.8	797.5	380.3	322.5	307.7	301.5	301.5	300.3	300.3
20°	4751.8	3937.0	1902.6	492.3	328.7	296.6	280.6	273.2	271.9	271.9	271.9
22.5°	4711.2	3748.8	1406.7	372.9	299.1	273.2	252.3	245.0	245.0	246.2	247.4
25°	4660.7	3526.1	966.1	321.2	276.9	248.6	227.7	220.2	222.8	225.2	226.5
27.5°	4596.7	3260.2	632.6	278.2	247.4	224.0	205.5	200.6	205.5	210.5	212.9
30°	4532.7	2968.5	428.3	241.3	214.1	196.8	185.8	184.6	192.0	203.1	204.4
32.5°	4490.9	2669.4	323.6	216.6	188.3	173.5	168.6	171.1	182.1	194.5	196.8
35°	4487.2	2377.7	275.7	196.8	171.1	157.6	155.0	162.5	174.9	184.6	187.1
37.5°	4545.0	2104.6	249.8	182.1	157.6	144.0	140.3	153.8	164.9	174.9	177.2
40°	4662.0	1859.6	232.6	168.6	146.4	130.4	128.0	139.1	150.1	161.2	164.9
42.5°	4808.4	1630.7	212.9	155.0	134.2	115.7	113.2	121.9	133.0	148.9	151.4
45°	4935.1	1417.7	192.0	140.3	120.6	99.7	98.5	108.2	116.9	131.6	134.2
47.5°	5042.2	1240.5	172.3	124.3	103.4	88.6	87.4	92.4	97.2	110.8	113.2
50°	4985.6	1090.4	152.6	102.1	83.7	76.3	75.1	75.1	81.2	94.7	97.2
52.5°	4846.5	996.9	134.2	84.9	69.0	65.2	61.5	62.8	69.0	75.1	76.3
55°	4734.5	952.5	118.1	75.1	57.8	54.2	50.5	49.2	50.5	48.0	45.6
56°	4707.4	947.6	114.5	72.6	55.4	50.5	45.6	43.0	41.8	36.9	35.7
57.5°	4695.2	947.6	108.2	67.7	51.7	45.6	39.4	34.4	29.5	25.9	25.9
60°	4685.4	953.9	100.9	59.1	44.4	36.9	28.3	20.9	17.3	17.3	17.3
62.5°	4664.4	951.3	92.4	49.2	38.1	28.3	17.3	13.5	12.3	13.5	14.7
65°	4429.4	883.7	81.2	39.4	29.5	19.6	9.9	9.9	11.0	13.5	14.7
67.5°	3569.1	669.5	66.4	30.8	20.9	14.7	8.6	8.6	11.0	13.5	14.7
70°	1960.5	353.2	56.6	22.2	16.0	12.3	8.6	7.4	11.0	13.5	14.7
72.5°	478.8	147.7	51.7	17.3	14.7	11.0	7.4	7.4	11.0	13.5	14.7
75°	118.1	110.8	41.8	13.5	12.3	9.9	7.4	7.4	11.0	13.5	14.7
77.5°	55.4	146.4	28.3	12.3	11.0	8.6	7.4	7.4	11.0	13.5	13.5
80°	33.3	110.8	17.3	11.0	9.9	8.6	7.4	7.4	11.0	13.5	14.7
82.5°	19.6	32.0	12.3	11.0	9.9	7.4	7.4	7.4	11.0	13.5	14.7
85°	17.3	16.0	12.3	11.0	9.9	8.6	7.4	7.4	12.3	14.7	14.7
87.5°	13.5	12.3	11.0	9.9	9.9	8.6	7.4	7.4	11.0	13.5	14.7
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)