

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: P195641

Luminaire Tested: **NAV-AF-05-D-UNV-SL3-7050-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195641
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24263)
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-SL3-7050-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 70 CRI, 5000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III
SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 25526 lumens
Efficiency: N/A
Efficacy: 91.5 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type III - Medium - Non-Cutoff
BUG Rating: B2 - U0 - G4

Input Watts (W): 279
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

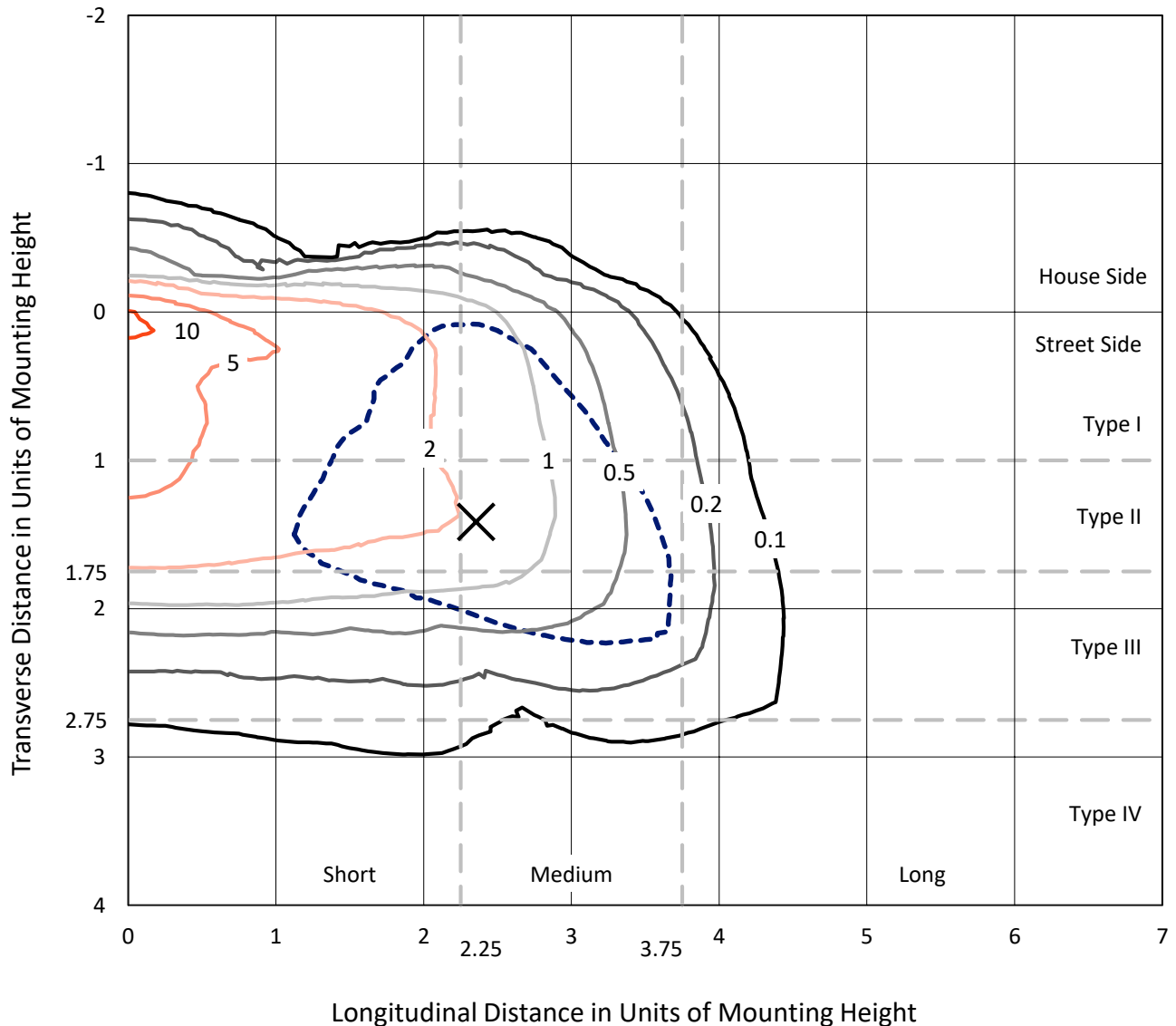


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Iso-Footcandle Lines of Horizontal Illumination

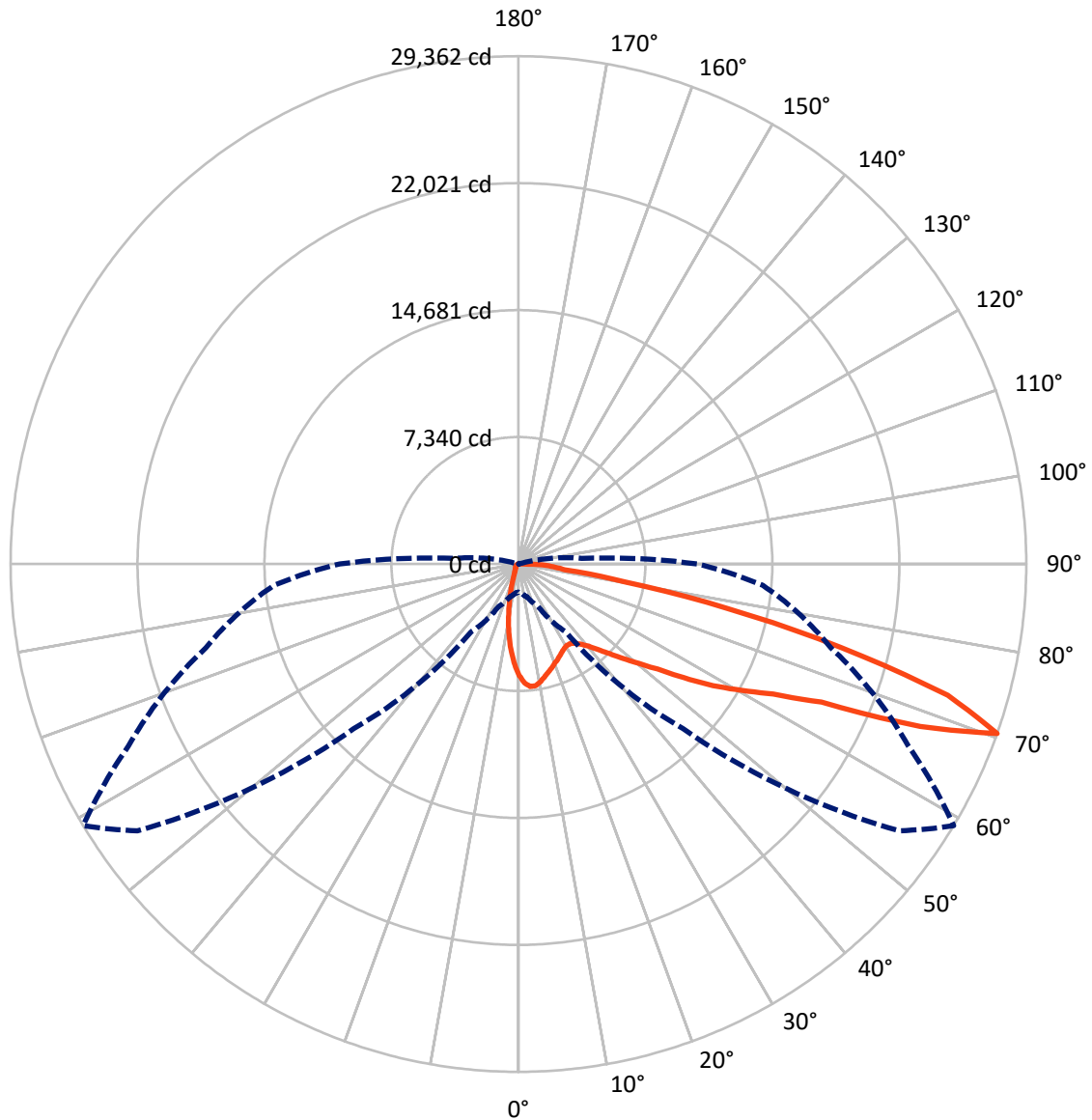
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 11 fc
 Type III - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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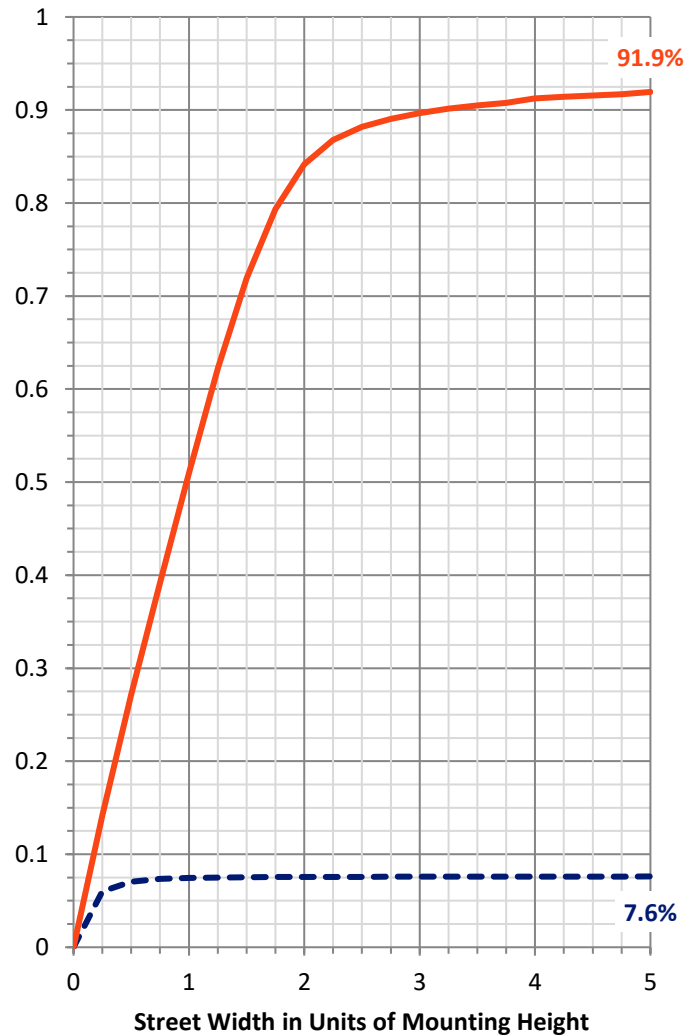
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1962.3	0.0	1962.3
	% Fixture	7.7	0.0	7.7
Street Side	Lumens	23563.7	0.0	23563.7
	% Fixture	92.3	0.0	92.3
Total	Lumens	25526.0	0.0	25526.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	530.8	2.1
10°-20°	1113.2	4.4
20°-30°	1507.0	5.9
30°-40°	2174.8	8.5
40°-50°	3611.8	14.1
50°-60°	5524.7	21.6
60°-70°	6871.4	26.9
70°-80°	3798.5	14.9
80°-90°	393.9	1.5
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°	25526.0	100.0
0°-180°	25526.0	100.0



--- HS — SS

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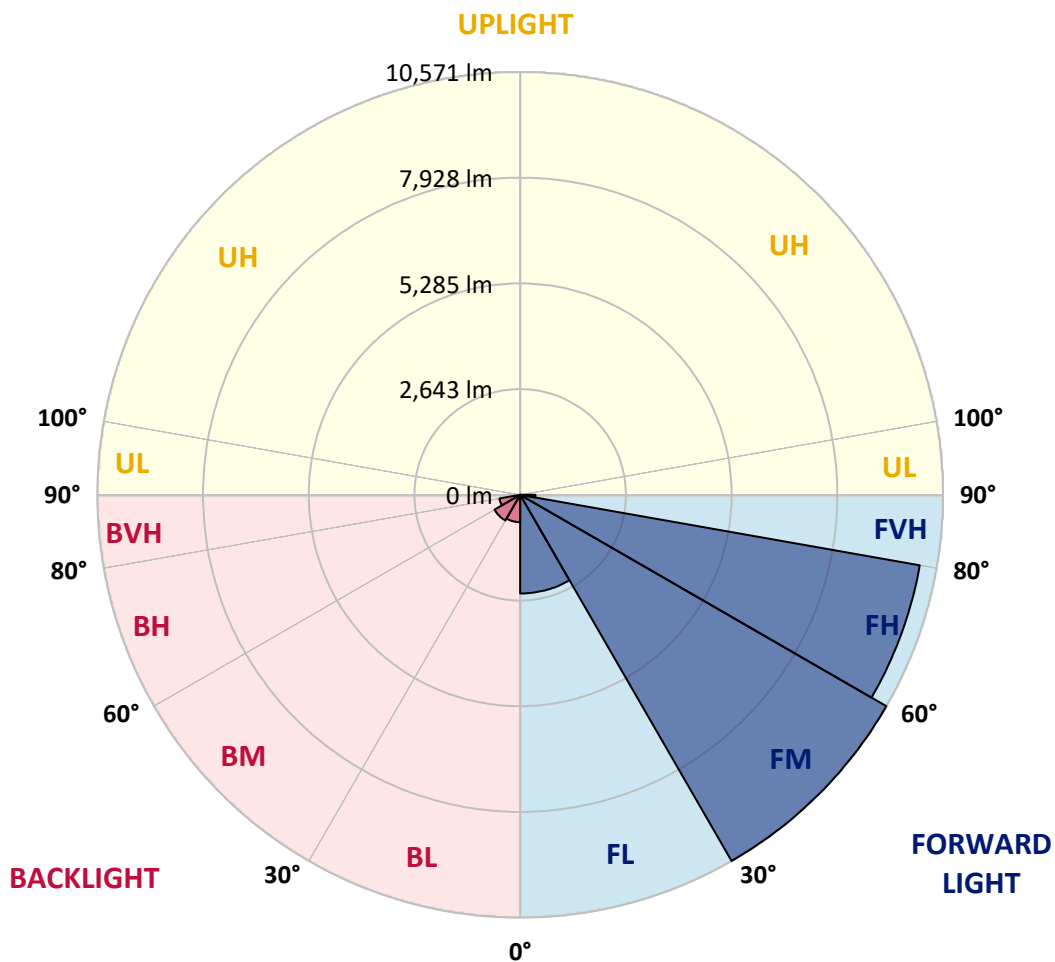
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2467.2	9.7			
FM	(30°-60°)	10570.6	41.4			
FH	(60°-80°)	10143.5	39.7			G4/12000
FVH	(80°-90°)	382.5	1.5			G3/500
BL	(0°-30°)	683.8	2.7	B2/1000		
BM	(30°-60°)	740.7	2.9	B1/1000		
BH	(60°-80°)	526.4	2.1	B2/1000		G2/1000
BVH	(80°-90°)	11.4	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-G4

Type III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	6454.6	6454.6	6454.6	6454.6	6454.6	6454.6	6454.6	6454.6	6454.6	6454.6	6454.6
2.5°	7296.1	7284.5	7236.4	7226.8	7172.9	7065.0	6939.9	6889.8	6787.7	6626.0	6446.9
5°	7417.4	7423.2	7427.0	7405.9	7398.2	7309.6	7170.9	7111.2	6974.5	6708.8	6381.4
7.5°	6963.0	6978.4	7026.5	7047.7	7140.1	7174.8	7145.9	7107.4	6999.6	6685.7	6225.5
10°	6483.5	6512.4	6564.4	6599.0	6712.6	6805.1	6922.5	6932.2	6909.0	6608.7	6050.2
12.5°	6071.4	6098.4	6156.1	6225.5	6341.0	6460.4	6635.6	6697.2	6774.3	6558.6	5925.1
15°	5717.1	5724.8	5780.6	5867.3	6019.4	6183.1	6391.1	6481.6	6631.8	6539.3	5828.8
17.5°	5407.1	5409.0	5445.6	5524.5	5709.4	5925.1	6167.7	6287.1	6477.7	6512.4	5744.1
20°	5203.0	5201.0	5203.0	5245.3	5409.0	5665.1	5959.7	6084.9	6329.4	6479.6	5657.4
22.5°	5133.6	5124.0	5079.7	5064.3	5168.3	5393.6	5746.0	5909.7	6196.6	6470.0	5593.9
25°	5218.4	5212.6	5118.2	5029.7	5039.3	5179.9	5528.4	5728.7	6092.6	6504.7	5578.5
27.5°	5491.8	5480.3	5335.8	5162.5	5052.8	5077.8	5366.6	5576.5	6009.8	6589.4	5599.6
30°	5850.0	5851.9	5697.8	5488.0	5229.9	5087.4	5280.0	5478.3	5954.0	6716.5	5645.9
32.5°	6248.6	6246.6	6136.9	5894.3	5565.0	5264.6	5318.5	5486.0	5961.7	6903.3	5734.4
35°	6660.6	6639.5	6602.9	6389.1	6004.0	5574.6	5493.7	5617.0	6042.5	7149.7	5884.6
37.5°	7136.3	7128.6	7165.2	6939.9	6547.0	6031.0	5801.8	5884.6	6246.6	7513.7	6127.3
40°	7893.0	7850.7	7868.0	7561.8	7159.4	6645.2	6233.2	6254.3	6572.1	7995.1	6510.4
42.5°	9335.3	9163.9	8842.3	8268.5	7833.3	7326.9	6797.4	6760.8	7032.3	8578.5	7015.0
45°	11058.7	10862.3	10051.6	9048.4	8507.3	8058.6	7494.4	7396.2	7598.4	9273.7	7665.8
47.5°	12497.1	12285.3	11210.8	9862.9	9192.8	8813.5	8266.6	8151.1	8276.2	10080.5	8447.6
50°	12988.2	12870.7	11927.2	10540.7	9884.1	9660.7	9235.2	9042.6	9073.4	10950.9	9360.3
52.5°	12762.9	12722.4	12090.8	11004.8	10523.4	10596.6	10296.2	10094.0	10059.3	11902.1	10369.3
55°	12287.2	12268.0	11959.9	11262.8	11087.6	11453.5	11784.7	11609.4	11282.1	12913.1	11203.1
57.5°	11607.5	11680.7	11902.1	11759.6	11780.8	12358.5	13167.2	13257.7	12768.6	13718.0	11821.3
60°	9791.7	9988.1	11002.9	12293.0	13280.9	13864.3	14648.0	14817.5	14028.0	14268.7	12535.6
62.5°	7238.3	7519.5	8965.6	11336.0	14106.9	16727.7	16617.9	16542.8	15229.6	15006.2	13835.4
65°	4251.7	4581.0	5803.8	8857.8	12861.1	18568.5	20295.8	19256.0	17060.8	16539.0	15905.4
67.5°	2118.2	2120.1	2672.7	4675.4	9504.8	17284.2	25664.4	25063.6	20954.4	18797.7	16721.9
70°	1629.1	1673.3	1977.6	2717.0	4806.3	13461.9	26894.8	29361.5	24867.2	18697.6	14187.8
72.5°	1380.7	1409.5	1760.0	2364.6	3593.2	7390.4	23282.4	25953.2	23729.2	15797.6	10457.9
75°	993.6	1016.7	1557.8	2145.1	3308.2	3666.3	15970.9	19248.3	17804.1	11112.6	5755.6
77.5°	246.5	244.6	543.0	1740.7	2959.6	3054.0	9163.9	12343.1	10215.3	4550.2	1478.9
80°	109.8	105.9	123.2	365.9	2753.6	2882.6	4030.3	6233.2	3918.6	737.5	452.5
82.5°	77.0	73.2	77.0	134.8	920.4	2674.7	2435.9	2701.6	1434.6	252.3	192.6
85°	25.0	23.1	42.4	113.6	258.0	1542.4	2376.2	2018.0	1066.8	107.8	129.0
87.5°	3.9	3.9	15.4	61.6	75.1	514.1	1394.1	1398.0	479.5	63.5	57.8
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°	6454.6	6454.6	6454.6	6454.6	6454.6	6454.6	6454.6	6454.6	6454.6	6454.6	6454.6
2.5°	6356.4	6242.8	6083.0	5923.1	5778.7	5630.5	5511.1	5455.2	5430.2	5395.5	5320.4
5°	6210.1	6004.0	5653.6	5308.9	4987.3	4679.2	4415.4	4265.2	4103.5	4095.7	4016.8
7.5°	5975.1	5682.4	5129.8	4594.5	4103.5	3633.6	3229.2	2967.3	2788.3	2676.6	2599.6
10°	5713.3	5337.8	4606.0	3853.1	3184.9	2557.2	2037.3	1698.4	1492.3	1388.4	1328.7
12.5°	5505.3	5033.5	4090.0	3142.6	2304.9	1584.8	1101.4	855.0	745.2	702.8	683.6
15°	5326.2	4754.3	3606.6	2507.1	1538.6	910.8	637.4	556.5	539.2	539.2	537.2
17.5°	5145.2	4484.7	3136.8	1883.2	968.6	596.9	502.6	491.0	493.0	498.7	498.7
20°	4973.8	4228.6	2684.3	1342.1	635.4	477.5	456.4	452.5	458.3	466.0	464.1
22.5°	4835.2	4003.3	2260.7	922.4	489.1	433.3	419.8	414.0	417.9	423.6	421.7
25°	4737.0	3810.8	1871.7	643.1	425.6	394.7	379.3	371.6	367.8	371.6	369.7
27.5°	4677.3	3649.0	1505.8	483.3	381.3	356.2	337.0	321.6	311.9	311.9	308.1
30°	4638.8	3496.9	1180.4	400.5	344.7	317.7	290.8	269.6	254.2	250.3	248.4
32.5°	4636.8	3365.9	881.9	354.3	310.0	279.2	246.5	219.5	202.2	198.3	196.4
35°	4685.0	3260.0	648.9	319.6	279.2	242.6	206.0	177.2	161.8	161.8	159.8
37.5°	4810.1	3198.4	491.0	292.7	254.2	211.8	173.3	146.3	132.9	136.7	136.7
40°	5043.1	3186.9	400.5	271.5	233.0	184.9	140.6	119.4	113.6	119.4	119.4
42.5°	5399.4	3248.5	356.2	256.1	213.7	157.9	117.5	102.1	100.1	105.9	105.9
45°	5863.4	3369.8	331.2	242.6	192.6	130.9	98.2	88.6	86.7	94.4	94.4
47.5°	6425.7	3533.5	308.1	227.2	171.4	107.8	82.8	75.1	75.1	82.8	84.7
50°	7092.0	3754.9	285.0	211.8	154.0	90.5	69.3	63.5	65.5	73.2	75.1
52.5°	7858.4	4026.4	263.8	198.3	134.8	73.2	57.8	53.9	55.8	63.5	65.5
55°	8518.8	4263.3	238.8	184.9	109.8	59.7	48.1	46.2	48.1	57.8	57.8
57.5°	9094.6	4490.5	215.7	163.7	86.7	48.1	38.5	38.5	42.4	52.0	53.9
60°	9859.1	4848.7	196.4	138.6	65.5	36.6	30.8	32.7	38.5	46.2	48.1
62.5°	11212.8	5457.1	171.4	115.5	48.1	28.9	25.0	27.0	34.7	44.3	46.2
65°	12907.3	6032.9	142.5	96.3	36.6	21.2	19.3	25.0	34.7	44.3	46.2
67.5°	12734.0	5247.3	111.7	77.0	27.0	17.3	15.4	23.1	32.7	44.3	46.2
70°	10327.0	3677.9	82.8	52.0	21.2	15.4	15.4	23.1	32.7	42.4	44.3
72.5°	7163.2	2046.9	63.5	34.7	19.3	15.4	13.5	21.2	30.8	42.4	44.3
75°	3408.3	627.7	50.1	25.0	17.3	13.5	11.6	21.2	30.8	42.4	44.3
77.5°	654.7	159.8	40.4	21.2	15.4	13.5	11.6	19.3	30.8	40.4	42.4
80°	221.4	71.2	32.7	19.3	15.4	13.5	11.6	19.3	28.9	38.5	40.4
82.5°	121.3	40.4	28.9	17.3	15.4	11.6	9.6	17.3	27.0	38.5	40.4
85°	94.4	28.9	23.1	17.3	15.4	11.6	9.6	17.3	27.0	36.6	38.5
87.5°	48.1	21.2	19.3	17.3	15.4	11.6	9.6	15.4	25.0	34.7	38.5
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)