

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: P270518

Luminaire Tested: **NAV-AF-04-D-UNV-SL3-7027-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270518
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24262)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-04-D-UNV-SL3-7027-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(4) 70 CRI, 2700K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III
SPILL LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 23221.9 lumens
Efficiency: N/A
Efficacy: 90.0 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Medium - Non-Cutoff
BUG Rating: B3 - U0 - G4

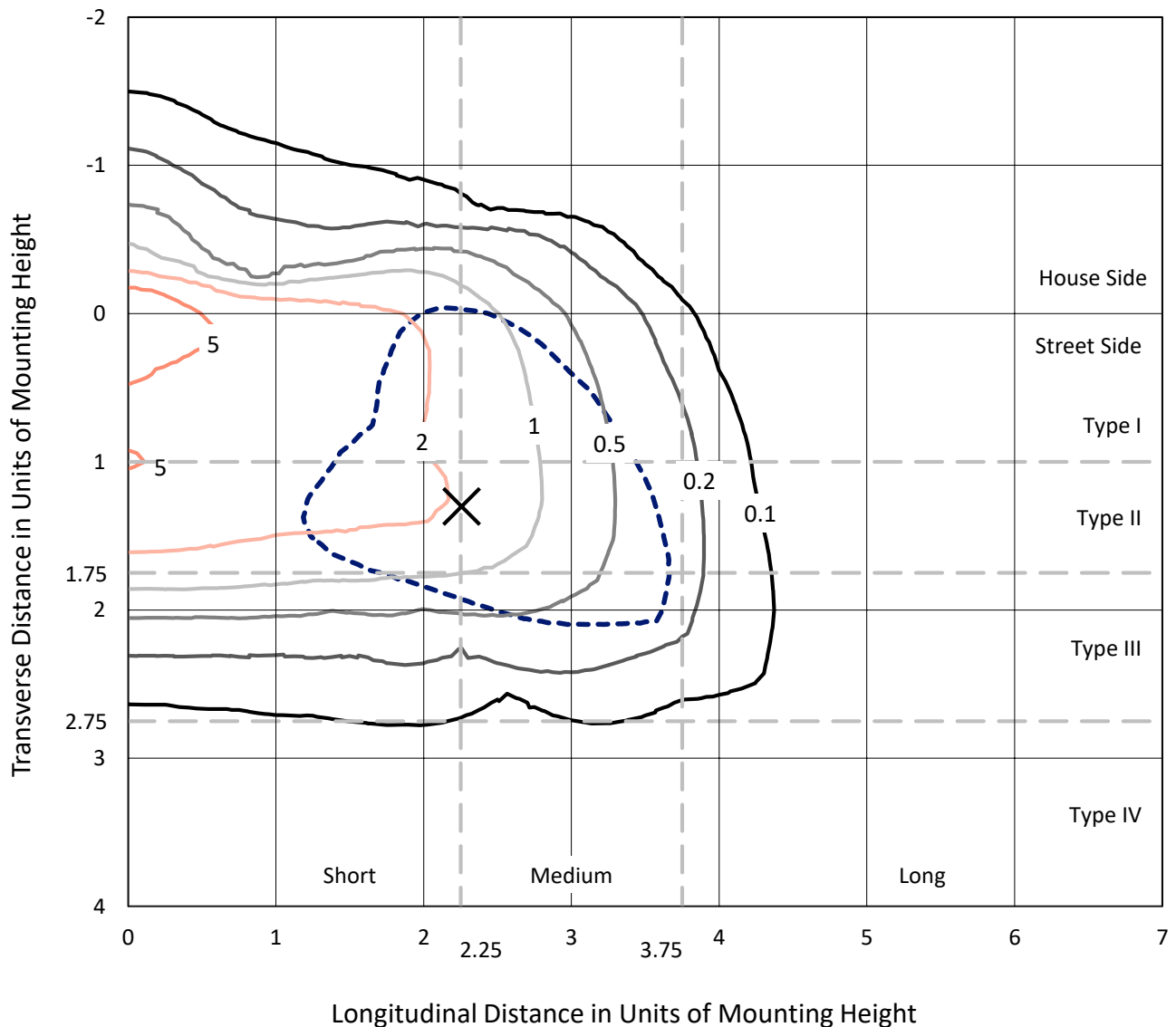
Input Watts (W): 258
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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 CATALOG NUMBER: NAV-AF-04-D-UNV-SL3-7027-1200

Iso-Footcandle Lines of Horizontal Illumination

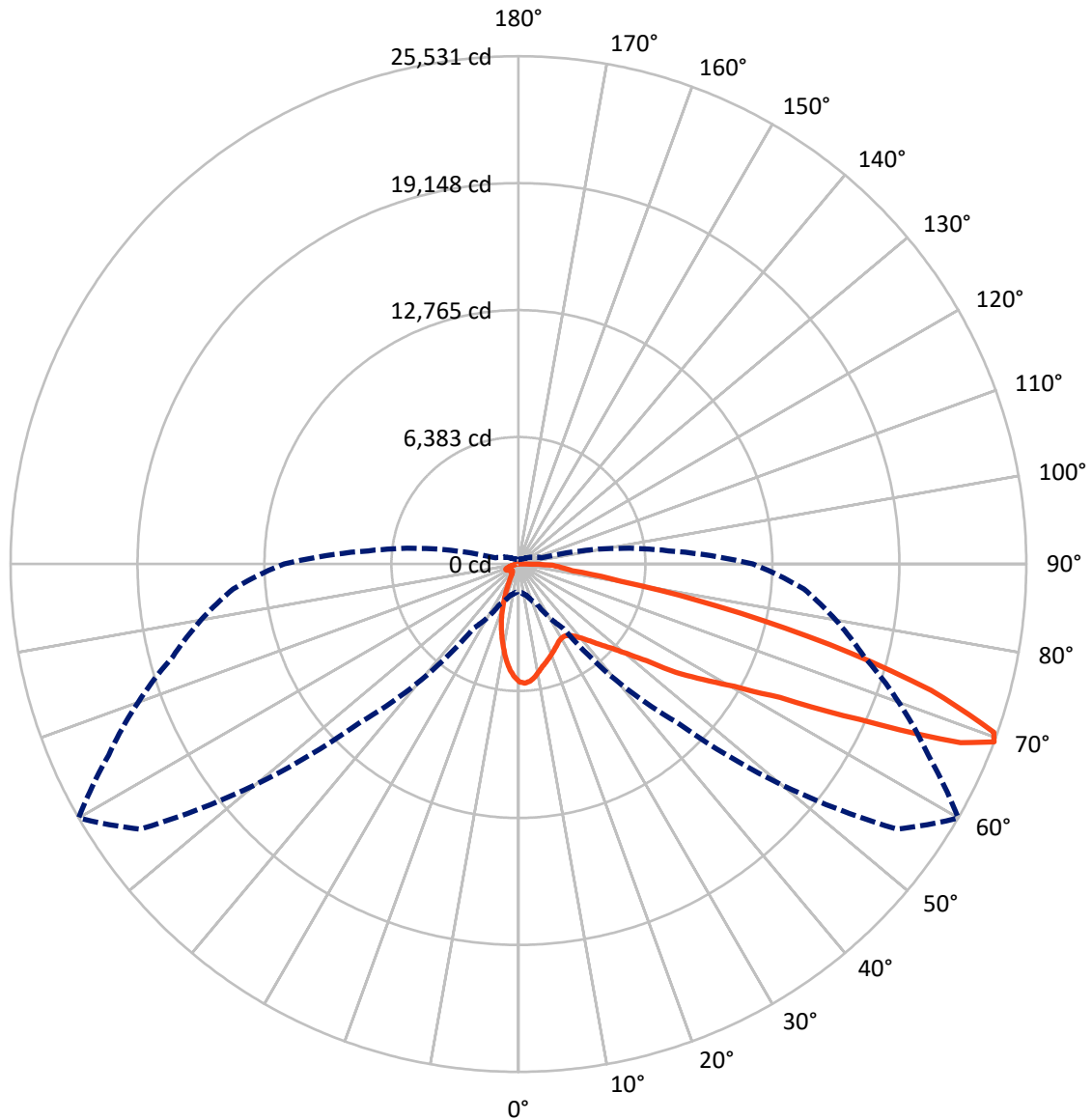
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 9.5 fc
 Type III - Medium - Non-Cutoff

REPORT NUMBER: P270518
CATALOG NUMBER: NAV-AF-04-D-UNV-SL3-7027-1200

Luminous Intensity Polar Plot



— Vertical Plane Through 60-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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CATALOG NUMBER: NAV-AF-04-D-UNV-SL3-7027-1200

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3312.2	0.0	3312.2
	% Fixture	14.3	0.0	14.3
Street Side	Lumens	19909.6	0.0	19909.6
	% Fixture	85.7	0.0	85.7
Total	Lumens	23221.9	0.0	23221.9
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	502.6	2.2
10°-20°	1076.2	4.6
20°-30°	1372.9	5.9
30°-40°	1889.3	8.1
40°-50°	3060.3	13.2
50°-60°	4803.0	20.7
60°-70°	6403.3	27.6
70°-80°	3561.7	15.3
80°-90°	552.4	2.4
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°	23221.9	100.0
0°-180°	23221.9	100.0

Coefficient of Utilization



REPORT NUMBER: P270518

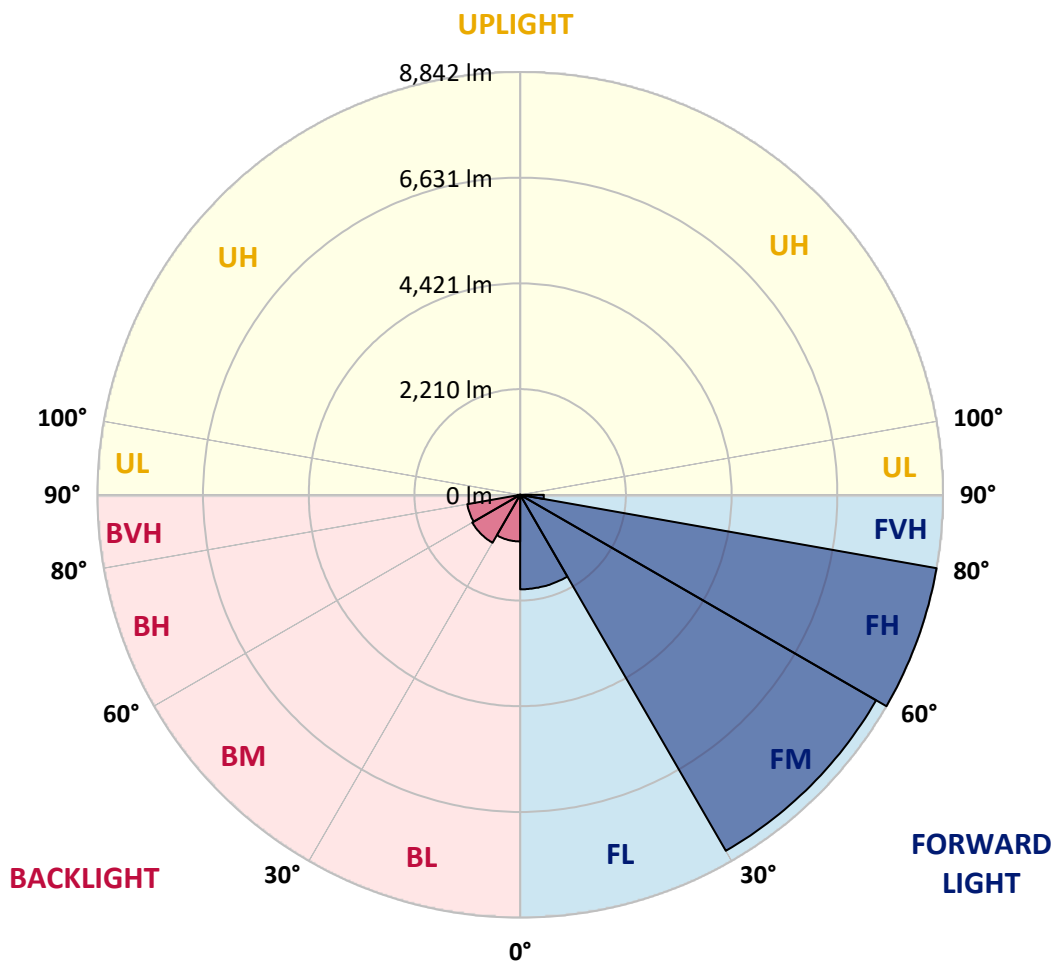
CATALOG NUMBER: NAV-AF-04-D-UNV-SL3-7027-1200

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1975.7	8.5			
FM	(30°-60°)	8595.5	37.0			
FH	(60°-80°)	8842.0	38.1			G4/12000
FVH	(80°-90°)	496.4	2.1			G3/500
BL	(0°-30°)	976.1	4.2	B2/1000		
BM	(30°-60°)	1157.1	5.0	B2/2500		
BH	(60°-80°)	1123.0	4.8	B3/2500		G3/2500
BVH	(80°-90°)	56.0	0.2			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G4

Type III Medium





REPORT NUMBER: P270518

CATALOG NUMBER: NAV-AF-04-D-UNV-SL3-7027-1200

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	60°	65°	75°	85°
0°	5925.1	5925.1	5925.1	5925.1	5925.1	5925.1	5925.1	5925.1	5925.1	5925.1	5925.1
2.5°	6083.0	6099.3	6099.3	6085.9	6078.6	6035.4	6010.0	5992.1	5960.9	5902.9	5850.8
5°	5865.6	5896.8	5910.3	5916.1	5955.0	5941.5	5942.9	5931.1	5904.3	5841.8	5756.9
7.5°	5466.5	5472.5	5496.3	5536.4	5630.2	5695.9	5749.4	5759.8	5753.9	5707.7	5588.5
10°	5073.4	5083.8	5112.1	5180.5	5269.9	5363.7	5479.9	5527.5	5563.3	5548.4	5397.9
12.5°	4747.3	4748.7	4780.1	4858.9	4958.7	5076.3	5234.2	5308.7	5393.6	5427.7	5259.4
15°	4433.0	4453.8	4483.7	4579.0	4702.5	4851.4	5033.2	5135.9	5247.5	5345.9	5152.3
17.5°	4194.7	4211.2	4229.0	4307.9	4450.9	4637.1	4861.8	4972.1	5119.5	5269.9	5042.0
20°	4063.8	4069.7	4056.2	4095.1	4215.7	4416.6	4677.3	4809.7	4985.6	5197.0	4928.9
22.5°	4037.0	4037.0	3987.8	3980.4	4034.0	4203.7	4486.7	4649.0	4863.5	5146.3	4827.8
25°	4162.0	4153.1	4060.8	3975.9	3956.6	4042.9	4304.9	4504.6	4759.2	5144.9	4751.8
27.5°	4398.8	4387.0	4272.2	4129.2	4005.7	3968.4	4165.0	4369.0	4677.3	5195.4	4713.0
30°	4693.6	4689.2	4573.0	4394.2	4190.4	3998.3	4109.9	4299.0	4622.1	5289.3	4711.5
32.5°	5016.8	4996.0	4924.5	4745.7	4480.7	4163.6	4142.7	4302.1	4607.2	5426.3	4745.7
35°	5360.7	5345.9	5327.9	5147.7	4849.9	4455.5	4287.2	4404.7	4680.2	5616.9	4842.6
37.5°	5798.6	5782.2	5811.9	5615.3	5289.3	4838.1	4531.3	4610.2	4829.2	5893.9	5022.8
40°	6577.4	6529.7	6446.2	6144.0	5801.6	5307.1	4884.3	4896.1	5083.8	6264.6	5311.6
42.5°	7856.4	7703.1	7290.6	6735.2	6342.0	5852.2	5344.3	5287.9	5435.3	6754.5	5731.5
45°	9138.5	8965.9	8269.0	7379.9	6901.9	6437.3	5913.3	5777.7	5872.9	7324.9	6272.1
47.5°	9966.5	9881.6	9095.3	8024.7	7488.7	7074.7	6563.9	6340.5	6409.0	7971.2	6939.1
50°	10209.2	10136.4	9518.4	8529.5	8042.6	7844.5	7369.5	7073.3	7085.1	8726.1	7738.9
52.5°	10027.6	9997.9	9588.2	8842.2	8552.0	8656.2	8484.9	8072.3	7974.2	9554.1	8605.6
55°	9784.9	9795.3	9637.5	9156.5	9070.0	9412.6	9944.1	9612.1	9195.2	10416.2	9507.9
57.5°	9021.0	9028.4	9442.4	9755.1	10059.0	10472.8	11080.5	10940.4	10455.0	11346.9	10519.1
60°	7263.9	7321.9	8243.7	9631.4	11189.1	12562.1	12710.9	12469.7	11795.1	12419.1	11833.9
62.5°	5189.5	5241.6	6309.3	8361.3	11056.6	14926.7	15722.0	14762.9	13613.4	14022.8	13683.3
65°	2726.5	2717.6	3544.1	5777.7	9312.8	15474.7	20466.2	18834.1	16676.5	16228.2	15470.3
67.5°	1523.3	1572.6	1892.6	2914.2	6069.6	13619.4	23496.4	23977.5	20935.3	17977.9	15392.8
69°	1408.7	1425.2	1639.4	2252.9	3956.6	11236.8	23235.9	25530.5	22731.2	17985.3	14401.1
70°	1368.5	1386.4	1581.5	2075.9	3323.6	9207.1	22287.4	25348.9	23167.4	17586.3	13498.7
72.5°	1227.1	1250.8	1440.0	1865.8	2800.9	4745.7	17952.5	21696.1	20985.8	15370.4	10467.0
75°	1046.9	1087.0	1373.0	1852.5	2653.6	3016.9	11972.4	16164.2	15619.2	10992.5	5938.5
77.5°	433.3	437.8	600.1	1356.6	2784.7	2887.3	6434.4	10239.1	9064.2	4820.2	1788.4
80°	302.3	296.4	299.3	396.2	2247.0	2906.7	3301.4	5207.4	4047.4	1271.7	837.0
82.5°	254.6	251.6	263.6	248.7	761.0	3298.3	2760.9	2714.6	1906.1	685.0	399.0
85°	168.3	163.9	216.0	226.4	361.8	2619.3	2969.3	2133.8	1420.6	366.2	169.8
87.5°	81.8	83.5	123.5	153.4	192.1	829.5	2844.2	1687.1	1097.5	159.3	68.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P270518

CATALOG NUMBER: NAV-AF-04-D-UNV-SL3-7027-1200

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	5925.1	5925.1	5925.1	5925.1	5925.1	5925.1	5925.1	5925.1	5925.1	5925.1	5925.1
2.5°	5829.8	5785.2	5744.9	5694.4	5655.5	5622.9	5578.1	5576.7	5569.2	5579.6	5582.6
5°	5700.3	5625.8	5512.7	5386.1	5296.8	5179.1	5064.5	5025.7	4982.4	4978.0	4991.4
7.5°	5505.3	5389.0	5195.4	5001.9	4808.3	4610.2	4422.6	4327.3	4235.0	4206.8	4220.1
10°	5287.9	5140.5	4844.0	4528.4	4255.8	3960.9	3675.1	3490.5	3322.2	3250.6	3268.6
12.5°	5118.1	4930.3	4513.4	4103.9	3695.9	3273.1	2896.2	2531.5	2256.1	2132.3	2139.9
15°	4972.1	4732.4	4203.7	3658.7	3148.0	2568.8	2046.0	1623.1	1382.0	1292.5	1289.5
17.5°	4814.2	4523.9	3880.6	3244.8	2582.1	1865.8	1369.9	1119.7	1024.4	994.8	994.8
20°	4646.0	4309.4	3542.6	2793.5	1986.4	1302.9	1030.4	933.7	897.9	889.1	887.4
22.5°	4489.5	4099.4	3203.0	2312.5	1437.0	988.8	877.0	839.8	833.8	841.4	841.4
25°	4366.0	3914.9	2859.0	1806.3	1045.4	828.0	780.3	775.9	798.1	825.0	829.5
27.5°	4273.7	3749.5	2519.6	1319.3	821.9	720.7	704.4	723.8	775.9	829.5	839.8
30°	4209.6	3608.1	2113.1	948.6	685.0	631.4	638.9	673.1	752.1	833.8	856.3
32.5°	4181.4	3493.4	1703.5	728.2	585.2	555.4	574.7	619.6	701.3	783.2	810.1
35°	4208.2	3410.1	1325.3	604.6	512.3	489.9	512.3	558.3	612.0	652.2	668.6
37.5°	4304.9	3380.2	997.7	536.1	464.7	442.2	460.1	491.5	515.2	530.1	537.5
40°	4509.0	3411.6	781.7	500.4	437.8	412.5	417.0	431.8	448.3	460.1	461.5
42.5°	4833.6	3514.3	695.4	486.9	421.5	388.6	381.2	391.7	409.4	425.8	428.9
45°	5265.4	3685.6	686.5	491.5	413.9	369.4	354.4	364.8	388.6	415.5	419.9
47.5°	5823.9	3956.6	728.2	515.2	418.4	358.9	336.5	346.9	378.2	413.9	419.9
50°	6485.0	4331.7	805.6	551.0	439.4	358.9	329.0	338.0	370.8	411.0	417.0
52.5°	7263.9	4854.5	886.0	586.8	469.0	372.3	332.1	330.5	360.4	397.6	405.0
55°	8123.1	5503.7	963.4	617.9	485.4	390.1	339.5	321.7	345.5	375.2	381.2
57.5°	9134.1	6392.7	1098.9	647.8	494.3	403.6	348.5	312.7	326.2	346.9	351.4
60°	10505.6	7698.7	1362.5	698.4	510.7	409.4	349.9	303.7	302.3	317.2	318.7
62.5°	12294.1	9228.0	1614.2	758.0	543.6	411.0	344.1	297.8	283.0	287.4	287.4
65°	13565.8	9790.8	1541.2	808.6	573.3	409.4	338.0	293.3	268.1	260.6	260.6
67.5°	12842.0	8648.7	1308.9	821.9	576.4	393.1	324.6	283.0	254.6	236.8	236.8
69°	11778.8	7580.9	1201.8	798.1	552.5	373.8	309.7	272.5	245.6	224.8	224.8
70°	10912.2	6772.4	1136.1	769.8	524.3	357.3	296.4	262.0	236.8	218.8	217.4
72.5°	8146.9	4519.5	970.9	664.1	430.4	302.3	259.2	233.7	213.0	201.0	201.0
75°	4299.0	2264.9	795.2	542.0	332.1	241.3	213.0	196.5	184.6	183.2	181.6
77.5°	1408.7	1024.4	571.9	408.0	244.2	187.7	169.8	159.3	157.8	163.9	163.9
80°	761.0	612.0	367.8	275.5	169.8	140.0	131.1	129.5	133.9	143.0	143.0
82.5°	369.4	302.3	218.8	169.8	116.2	102.8	102.8	104.3	110.2	120.6	120.6
85°	159.3	143.0	126.7	95.3	71.4	64.0	72.9	80.4	84.9	92.3	95.3
87.5°	75.9	67.1	58.1	37.2	31.4	32.8	38.6	47.7	56.7	62.5	64.0
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)