

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: P270674

Luminaire Tested: **NAV-AF-06-D-UNV-SL3-7027-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270674
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-06-D-UNV-SL3-7027-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 2700K, 615mA 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: 20593.5 lumens
Efficiency: N/A
Efficacy: 106.7 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): 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

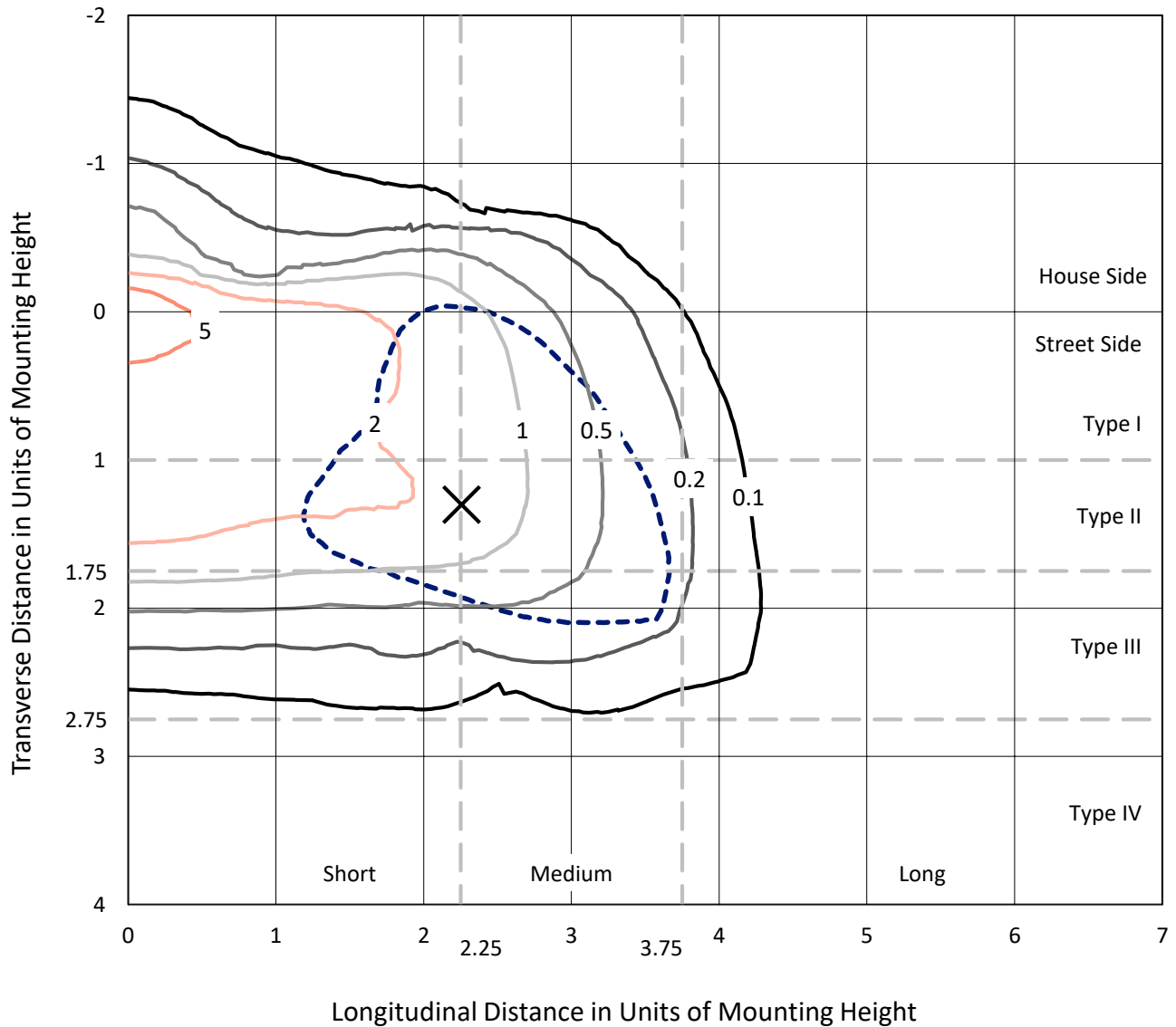


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

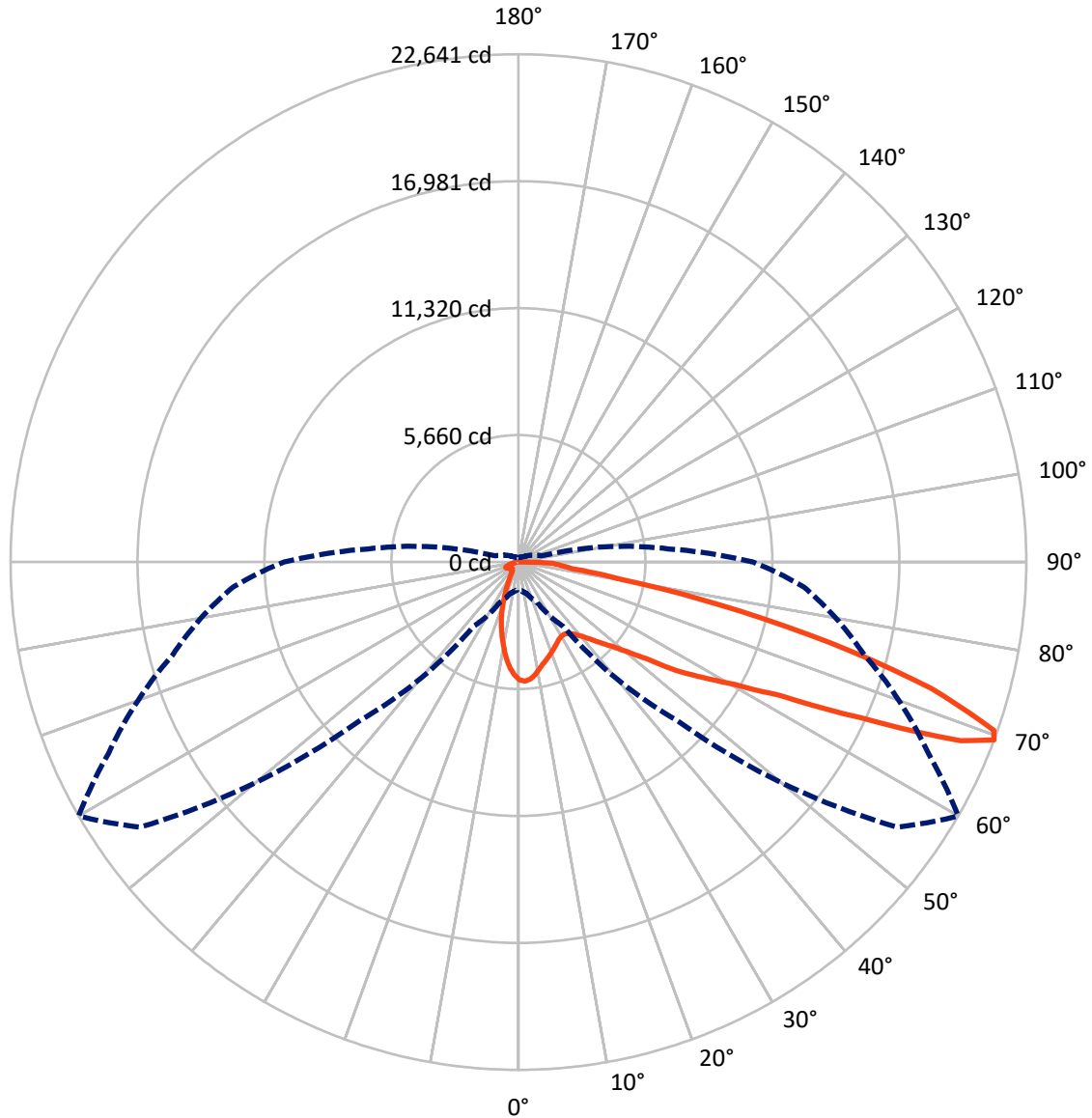


Based on 25 foot mounting height. Maximum calculated value = 8.4 fc
 Type III - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



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

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2937.3	0.0	2937.3
	% Fixture	14.3	0.0	14.3
Street Side	Lumens	17656.1	0.0	17656.1
	% Fixture	85.7	0.0	85.7
Total	Lumens	20593.5	0.0	20593.5
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	445.8	2.2
10°-20°	954.4	4.6
20°-30°	1217.5	5.9
30°-40°	1675.5	8.1
40°-50°	2713.9	13.2
50°-60°	4259.4	20.7
60°-70°	5678.5	27.6
70°-80°	3158.6	15.3
80°-90°	489.9	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°	20593.5	100.0
0°-180°	20593.5	100.0

Coefficient of Utilization



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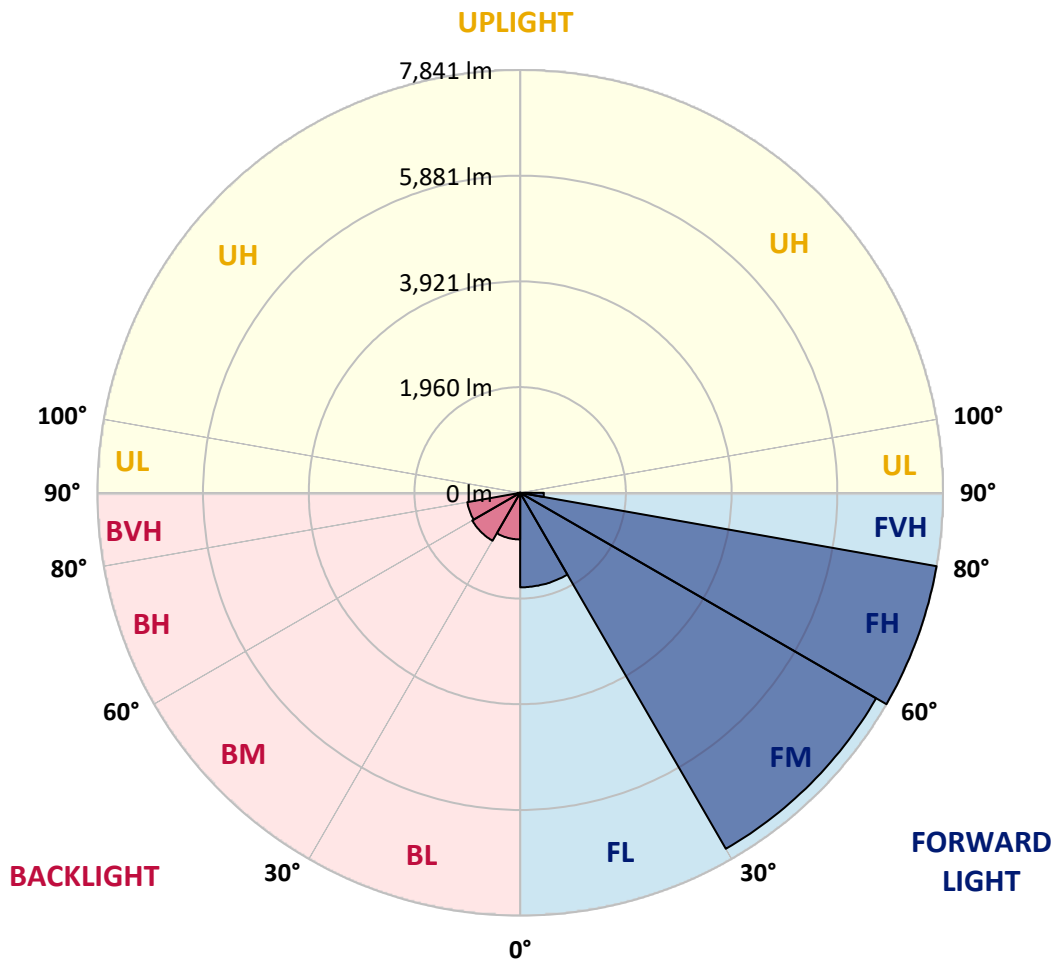
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1752.1	8.5			
FM	(30°-60°)	7622.6	37.0			
FH	(60°-80°)	7841.2	38.1			G4/12000
FVH	(80°-90°)	440.2	2.1			G3/500
BL	(0°-30°)	865.6	4.2	B2/1000		
BM	(30°-60°)	1026.1	5.0	B2/2500		
BH	(60°-80°)	995.9	4.8	B2/1000		G2/1000
BVH	(80°-90°)	49.7	0.2			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°	60°	65°	75°	85°
0°	5254.5	5254.5	5254.5	5254.5	5254.5	5254.5	5254.5	5254.5	5254.5	5254.5	5254.5
2.5°	5394.4	5409.0	5409.0	5397.0	5390.5	5352.2	5329.7	5314.0	5286.2	5234.7	5188.5
5°	5201.6	5229.5	5241.3	5246.6	5280.9	5269.0	5270.4	5259.8	5236.0	5180.5	5105.2
7.5°	4847.8	4853.1	4874.2	4909.9	4993.0	5051.1	5098.7	5107.9	5102.6	5061.7	4955.9
10°	4499.2	4508.4	4533.4	4594.2	4673.4	4756.6	4859.7	4902.0	4933.6	4920.3	4787.0
12.5°	4209.9	4211.3	4239.0	4309.0	4397.5	4501.8	4641.7	4707.7	4783.0	4813.4	4664.2
15°	3931.3	3949.8	3976.2	4060.7	4170.3	4302.3	4463.5	4554.5	4653.6	4740.7	4569.0
17.5°	3720.1	3734.6	3750.3	3820.3	3947.2	4112.3	4311.7	4409.3	4540.0	4673.4	4471.5
20°	3603.8	3609.1	3597.3	3631.5	3738.4	3916.8	4147.8	4265.4	4421.2	4608.8	4371.1
22.5°	3580.0	3580.0	3536.4	3529.8	3577.4	3728.0	3978.9	4122.9	4312.9	4563.7	4281.2
25°	3691.0	3683.1	3601.1	3525.8	3508.7	3585.3	3817.7	3994.7	4220.4	4562.5	4213.9
27.5°	3900.9	3890.4	3788.7	3661.9	3552.3	3519.3	3693.7	3874.5	4147.8	4607.3	4179.5
30°	4162.3	4158.4	4055.4	3896.9	3716.1	3545.7	3644.8	3812.4	4099.0	4690.6	4178.2
32.5°	4448.9	4430.5	4367.1	4208.6	3973.6	3692.3	3673.8	3815.1	4085.9	4812.1	4208.6
35°	4754.0	4740.7	4724.9	4565.1	4301.1	3951.0	3801.8	3906.2	4150.4	4981.1	4294.4
37.5°	5142.3	5127.7	5154.1	4979.8	4690.6	4290.5	4018.5	4088.5	4282.6	5226.8	4454.2
40°	5832.9	5790.7	5716.6	5448.6	5144.9	4706.5	4331.4	4342.0	4508.4	5555.6	4710.4
42.5°	6967.3	6831.3	6465.5	5972.9	5624.3	5189.8	4739.5	4689.3	4820.0	5990.1	5082.8
45°	8104.1	7951.1	7333.0	6544.6	6120.8	5708.8	5243.9	5123.8	5208.3	6495.9	5562.1
47.5°	8838.5	8763.1	8065.9	7116.5	6641.1	6273.9	5820.9	5622.9	5683.7	7068.9	6153.7
50°	9053.7	8989.0	8441.0	7564.2	7132.4	6956.7	6535.3	6272.7	6283.1	7738.4	6863.0
52.5°	8892.6	8866.2	8503.0	7841.5	7583.9	7676.3	7524.6	7158.8	7071.5	8472.6	7631.6
55°	8677.4	8686.6	8546.7	8120.0	8043.6	8347.2	8818.7	8524.1	8154.5	9237.4	8431.8
57.5°	7999.9	8006.6	8373.6	8650.9	8920.3	9287.4	9826.2	9702.1	9271.5	10062.6	9328.4
60°	6441.7	6493.2	7310.5	8541.4	9922.7	11140.2	11272.2	11058.3	10460.1	11013.4	10494.4
62.5°	4602.1	4648.4	5595.3	7414.9	9805.1	13237.2	13942.5	13092.0	12072.5	12435.6	12134.6
65°	2418.0	2410.1	3142.9	5123.8	8258.7	13723.1	18149.6	16702.4	14788.8	14391.3	13719.3
67.5°	1351.0	1394.4	1678.5	2584.3	5382.6	12077.8	20837.1	21263.6	18565.7	15943.1	13650.6
69°	1249.3	1263.7	1453.9	1998.0	3508.7	9964.9	20606.0	22640.9	20158.2	15949.6	12771.1
70°	1213.6	1229.4	1402.4	1840.8	2947.5	8165.0	19764.7	22479.7	20545.1	15595.7	11970.9
72.5°	1088.1	1109.2	1277.0	1654.7	2484.0	4208.6	15920.7	19240.4	18610.5	13630.7	9282.1
75°	928.4	964.1	1217.6	1642.8	2353.2	2675.4	10617.2	14334.7	13851.2	9748.3	5266.4
77.5°	384.2	388.2	532.2	1203.0	2469.4	2560.6	5706.2	9080.1	8038.3	4274.7	1586.0
80°	268.1	262.8	265.4	351.2	1992.7	2577.7	2927.7	4617.9	3589.3	1127.7	742.2
82.5°	225.8	223.1	233.6	220.5	674.7	2925.1	2448.3	2407.4	1690.3	607.4	353.9
85°	149.2	145.3	191.5	200.7	320.9	2322.8	2633.2	1892.4	1259.9	324.8	150.6
87.5°	72.7	73.9	109.7	136.1	170.4	735.5	2522.3	1496.1	973.3	141.4	60.7
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°	5254.5	5254.5	5254.5	5254.5	5254.5	5254.5	5254.5	5254.5	5254.5	5254.5	5254.5
2.5°	5169.9	5130.3	5094.6	5049.8	5015.4	4986.4	4946.7	4945.4	4938.9	4948.1	4950.7
5°	5055.1	4989.0	4888.7	4776.5	4697.1	4592.9	4491.2	4456.9	4418.6	4414.6	4426.5
7.5°	4882.1	4779.2	4607.3	4435.7	4264.1	4088.5	3922.0	3837.5	3755.6	3730.7	3742.5
10°	4689.3	4558.5	4295.8	4015.9	3774.1	3512.6	3259.1	3095.4	2946.1	2882.8	2898.7
12.5°	4538.7	4372.4	4002.6	3639.5	3277.6	2902.6	2568.4	2245.0	2000.6	1891.0	1897.6
15°	4409.3	4196.7	3728.0	3244.6	2791.7	2277.9	1814.4	1439.4	1225.5	1146.2	1143.6
17.5°	4269.4	4011.8	3441.3	2877.5	2289.8	1654.7	1214.9	993.0	908.5	882.1	882.1
20°	4120.2	3821.7	3141.6	2477.3	1761.7	1155.5	913.8	828.0	796.3	788.4	787.0
22.5°	3981.5	3635.5	2840.5	2050.8	1274.3	876.8	777.8	744.8	739.6	746.1	746.1
25°	3871.9	3471.7	2535.5	1601.9	927.1	734.3	692.0	688.0	707.9	731.6	735.5
27.5°	3789.9	3325.2	2234.4	1170.0	729.0	639.1	624.6	641.7	688.0	735.5	744.8
30°	3733.1	3199.8	1873.9	841.3	607.4	560.0	566.6	597.0	666.9	739.6	759.2
32.5°	3708.2	3098.1	1510.7	645.7	519.0	492.6	509.8	549.4	621.9	694.6	718.4
35°	3731.9	3024.1	1175.3	536.2	454.3	434.5	454.3	495.2	542.8	578.4	592.9
37.5°	3817.7	2997.6	884.8	475.5	412.1	392.2	408.1	435.8	456.9	470.2	476.7
40°	3998.6	3025.4	693.3	443.8	388.2	365.8	369.7	382.9	397.5	408.1	409.4
42.5°	4286.5	3116.5	616.6	431.8	373.8	344.7	338.0	347.4	363.2	377.6	380.3
45°	4669.5	3268.4	608.8	435.8	367.0	327.5	314.2	323.5	344.7	368.5	372.3
47.5°	5164.6	3508.7	645.7	456.9	371.1	318.3	298.4	307.7	335.3	367.0	372.3
50°	5750.9	3841.5	714.4	488.6	389.5	318.3	291.8	299.8	328.8	364.4	369.7
52.5°	6441.7	4304.9	785.7	520.3	415.9	330.1	294.5	293.1	319.5	352.6	359.2
55°	7203.6	4880.9	854.4	548.1	430.5	345.9	301.1	285.2	306.3	332.8	338.0
57.5°	8100.2	5669.2	974.7	574.5	438.5	357.9	308.9	277.2	289.3	307.7	311.6
60°	9316.5	6827.3	1208.3	619.3	452.9	363.2	310.4	269.4	268.1	281.3	282.5
62.5°	10902.5	8183.5	1431.4	672.1	482.0	364.4	305.1	264.1	250.8	254.8	254.8
65°	12030.2	8682.7	1366.9	717.0	508.4	363.2	299.8	260.1	237.7	231.1	231.1
67.5°	11388.4	7669.8	1160.8	729.0	511.0	348.6	287.8	250.8	225.8	209.9	209.9
69°	10445.6	6722.9	1065.7	707.9	489.9	331.5	274.7	241.6	217.8	199.5	199.5
70°	9677.0	6005.9	1007.5	682.7	464.9	316.9	262.8	232.4	209.9	194.2	192.7
72.5°	7224.8	4007.9	860.9	589.0	381.6	268.1	229.7	207.2	188.9	178.3	178.3
75°	3812.4	2008.6	705.2	480.8	294.5	213.9	188.9	174.4	163.8	162.5	161.1
77.5°	1249.3	908.5	507.2	361.8	216.6	166.4	150.6	141.4	140.0	145.3	145.3
80°	674.7	542.8	326.2	244.2	150.6	124.1	116.2	115.0	118.8	126.8	126.8
82.5°	327.5	268.1	194.2	150.6	102.9	91.1	91.1	92.4	97.7	107.0	107.0
85°	141.4	126.8	112.3	84.5	63.4	56.9	64.7	71.3	75.3	81.8	84.5
87.5°	67.4	59.4	51.6	33.0	27.8	29.0	34.3	42.3	50.1	55.4	56.9
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)