

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: P196086

Luminaire Tested: **NAV-AF-06-D-UNV-SL2-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196086
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24257)
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-SL2-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 4000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II SPILL
LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 23802 lumens
Efficiency: N/A
Efficacy: 123.3 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type II - Medium - Semi-Cutoff
BUG Rating: B3 - U0 - G4

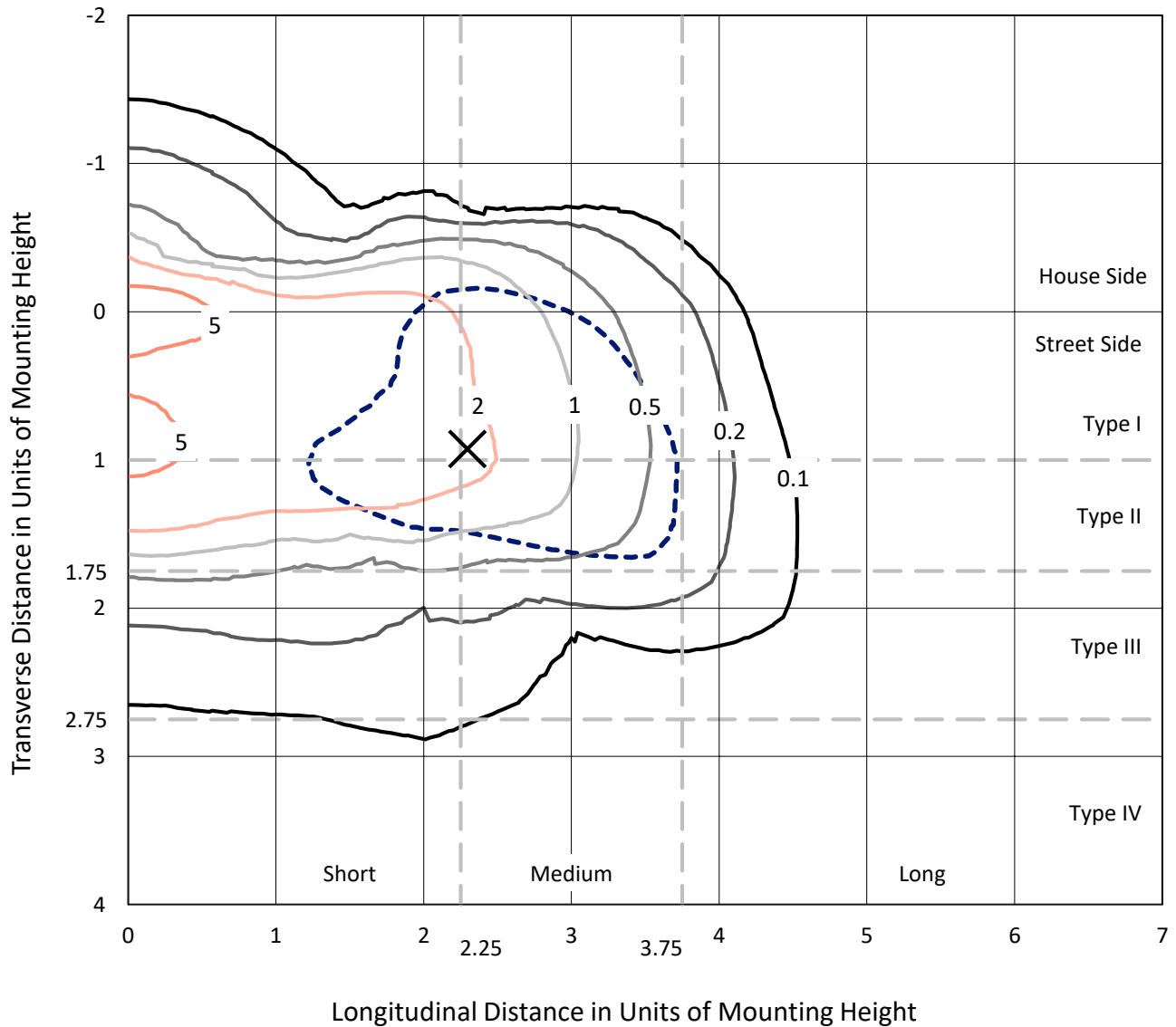
Input Watts (W): 193
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

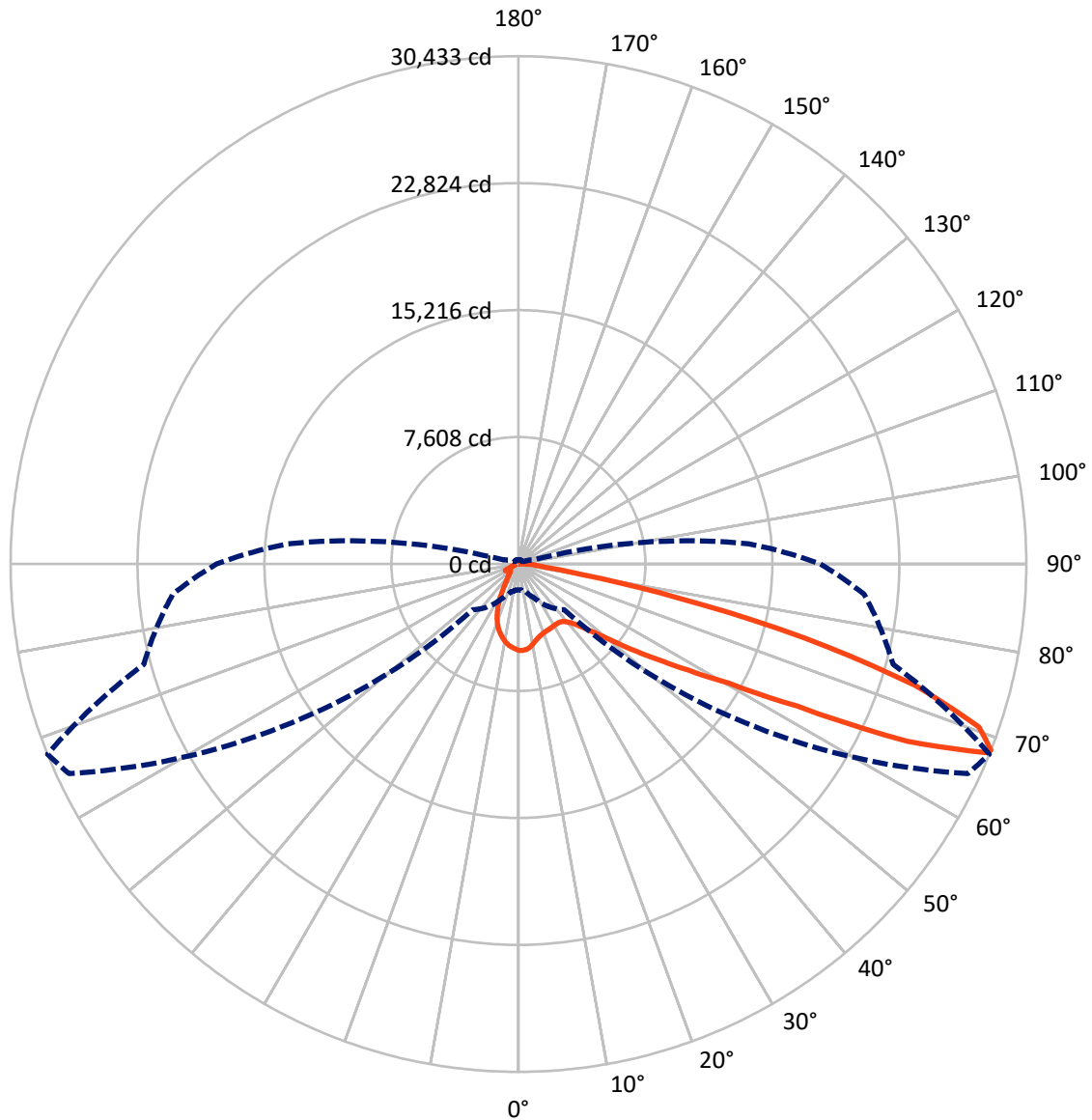
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 8.3 fc
 Type II - Medium - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 68-Deg Lateral - - - Horizontal Cone Through 68-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3894.1	0.0	3894.1
	% Fixture	16.4	0.0	16.4
Street Side	Lumens	19907.9	0.0	19907.9
	% Fixture	83.6	0.0	83.6
Total	Lumens	23802.0	0.0	23802.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	443.7	1.9
10°-20°	1029.2	4.3
20°-30°	1392.0	5.8
30°-40°	1962.7	8.2
40°-50°	3227.4	13.6
50°-60°	5002.7	21.0
60°-70°	6486.4	27.3
70°-80°	3722.2	15.6
80°-90°	535.5	2.3
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°	23802.0	100.0
0°-180°	23802.0	100.0



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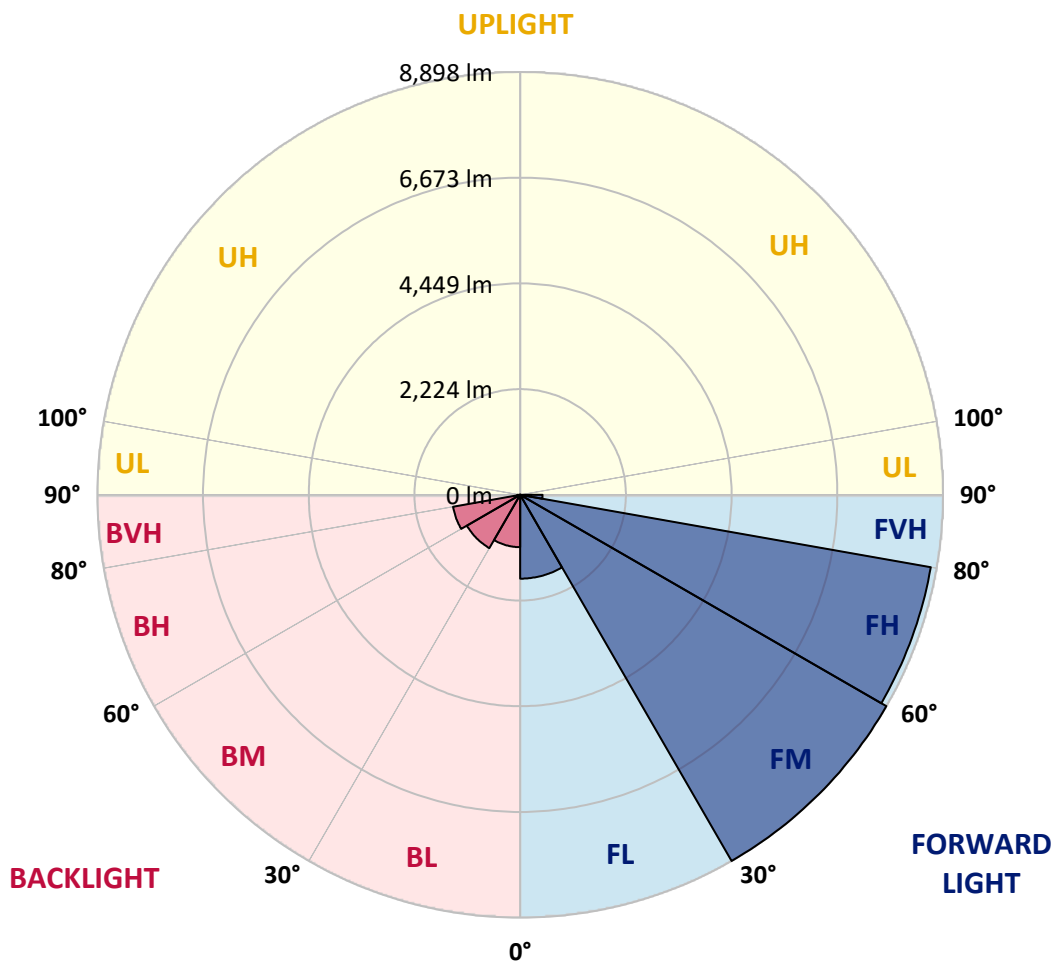
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1764.1	7.4			
FM (30°-60°)	8897.6	37.4			
FH (60°-80°)	8774.5	36.9			G4/12000
FVH (80°-90°)	471.7	2.0			G3/500
BL (0°-30°)	1100.9	4.6	B3/2500		
BM (30°-60°)	1295.2	5.4	B2/2500		
BH (60°-80°)	1434.1	6.0	B3/2500		G3/2500
BVH (80°-90°)	63.8	0.3			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 II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	5179.1	5179.1	5179.1	5179.1	5179.1	5179.1	5179.1	5179.1	5179.1	5179.1	5179.1
2.5°	5040.7	5081.2	5081.2	5110.7	5137.2	5158.9	5177.6	5177.6	5177.6	5165.1	5154.2
5°	4510.5	4564.9	4572.7	4647.4	4745.3	4865.1	4998.8	5116.9	5140.2	5183.8	5200.9
7.5°	4142.0	4159.1	4188.7	4240.0	4339.5	4487.2	4697.1	4961.4	5025.1	5162.0	5233.5
10°	3880.9	3894.8	3919.7	3971.0	4061.2	4194.9	4401.7	4745.3	4851.0	5093.6	5235.1
12.5°	3689.6	3700.4	3723.7	3770.4	3862.2	3981.9	4193.4	4551.0	4681.5	5025.1	5256.8
15°	3540.3	3558.9	3577.7	3622.8	3716.0	3831.1	4045.7	4409.4	4551.0	4970.7	5297.2
17.5°	3481.2	3490.6	3493.7	3517.0	3601.0	3717.6	3932.1	4310.0	4456.1	4927.2	5328.3
20°	3518.5	3520.1	3489.0	3473.4	3521.7	3628.9	3837.3	4235.3	4384.6	4888.4	5340.8
22.5°	3681.8	3681.8	3601.0	3532.6	3499.9	3566.7	3773.6	4184.0	4345.7	4858.8	5340.8
25°	3992.8	3978.8	3852.8	3717.6	3573.0	3545.0	3733.2	4151.3	4316.1	4843.3	5320.6
27.5°	4401.7	4389.3	4229.1	4028.6	3767.3	3591.7	3719.1	4124.9	4286.7	4819.9	5277.1
30°	4899.2	4888.4	4706.4	4443.7	4058.0	3739.3	3751.8	4106.3	4263.4	4781.1	5204.0
32.5°	5395.2	5389.0	5244.4	4975.4	4459.2	3989.7	3837.3	4103.2	4250.9	4734.4	5115.4
35°	5894.3	5894.3	5805.7	5578.7	4998.8	4366.0	4016.1	4160.8	4274.2	4709.6	5039.2
37.5°	6631.3	6601.8	6436.9	6202.2	5678.2	4854.1	4305.3	4282.0	4364.4	4751.5	5014.3
40°	7772.6	7687.1	7275.0	6880.1	6419.8	5479.2	4728.2	4516.7	4566.6	4894.6	5073.4
42.5°	8966.7	8831.3	8285.6	7654.3	7186.3	6250.3	5283.2	4897.7	4896.1	5171.3	5261.5
45°	9991.3	9921.3	9330.4	8529.8	8061.8	7118.0	5984.5	5463.7	5407.6	5600.5	5623.8
47.5°	10586.7	10540.2	10184.1	9456.5	9100.4	8142.6	6873.8	6248.8	6143.1	6258.1	6222.4
50°	10421.9	10467.0	10364.4	9992.8	10216.7	9582.4	8007.4	7324.7	7124.2	7239.2	7152.2
52.5°	9554.4	9675.7	9767.3	9838.9	10858.8	11508.8	9431.5	8668.1	8501.7	8481.6	8397.6
55°	7991.8	8184.5	8473.8	8999.3	10686.3	13055.8	11919.2	10292.9	10050.4	9922.8	9955.6
57.5°	5438.7	5731.1	6354.6	7354.3	9789.1	13715.1	15598.0	12391.9	11981.4	11527.4	11633.2
60°	2996.1	3240.2	3981.9	4989.4	7741.5	13617.1	18858.4	15803.2	14511.2	13307.7	13525.4
62.5°	1938.9	1991.7	2543.7	3408.2	4751.5	12021.9	20669.7	21504.7	18766.6	15655.4	15961.8
65°	1558.0	1595.3	1865.8	2748.9	3310.2	7733.7	20750.7	27419.3	25614.1	18846.0	18855.3
67.5°	1522.2	1539.2	1696.4	2312.0	3105.0	4210.5	17936.4	29751.5	30169.8	22611.7	20791.1
68°	1543.9	1564.2	1722.8	2240.5	3103.4	3880.9	16577.5	29715.7	30432.5	23241.4	20791.1
70°	1362.1	1386.9	1756.9	2318.2	2971.3	3336.7	11351.8	28137.6	29291.3	24689.0	19727.6
72.5°	712.1	691.9	869.1	1830.1	3344.4	3476.6	5996.9	23507.3	24853.8	22865.2	17043.9
75°	555.1	505.3	486.6	723.0	2941.7	3605.6	3482.8	16708.1	17725.0	16482.6	11392.2
77.5°	522.4	461.8	426.1	427.6	1295.2	3751.8	2817.3	9832.7	9832.7	7862.7	3635.2
80°	419.8	363.9	340.5	388.7	625.0	3457.9	2940.2	4481.0	3821.7	2032.2	1001.3
82.5°	276.7	247.2	248.8	315.6	474.2	2308.9	3405.1	2212.5	1662.1	900.2	589.3
85°	175.7	150.8	168.0	220.8	354.5	1029.3	3370.8	1537.7	1100.8	505.3	293.9
87.5°	88.6	68.4	84.0	115.1	216.1	295.4	2775.4	1372.9	816.3	209.9	160.2
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°	5179.1	5179.1	5179.1	5179.1	5179.1	5179.1	5179.1	5179.1	5179.1	5179.1	5179.1
2.5°	5154.2	5120.1	5102.9	5075.0	5040.7	5006.5	4983.2	4972.4	4966.1	4969.2	4967.7
5°	5191.6	5146.5	5073.4	4969.2	4861.9	4748.4	4661.4	4594.5	4552.5	4540.1	4537.0
7.5°	5219.5	5154.2	5017.4	4827.7	4644.3	4445.2	4275.7	4140.5	4048.7	4006.8	4005.3
10°	5214.9	5130.9	4914.8	4634.9	4366.0	4073.6	3807.7	3580.7	3415.9	3336.7	3333.5
12.5°	5219.5	5104.5	4788.8	4409.4	4023.9	3605.6	3210.7	2857.7	2612.1	2495.5	2490.8
15°	5238.2	5076.5	4659.8	4157.6	3624.3	3033.5	2469.1	2026.0	1802.0	1725.8	1725.8
17.5°	5236.6	5029.8	4510.5	3865.3	3150.1	2358.6	1685.4	1411.8	1390.0	1460.0	1470.9
20°	5205.5	4955.2	4317.8	3518.5	2593.5	1632.5	1142.8	1104.0	1278.1	1470.9	1492.6
22.5°	5157.3	4858.8	4095.4	3115.9	1945.0	1063.5	881.6	940.7	1177.0	1416.5	1450.6
25°	5090.5	4742.2	3840.4	2647.9	1293.6	765.0	735.4	808.5	974.9	1135.1	1159.9
27.5°	4992.5	4594.5	3562.1	2141.0	825.6	629.7	640.6	691.9	763.4	831.9	845.8
30°	4869.7	4421.9	3258.9	1579.7	626.6	562.8	581.5	612.6	643.7	687.2	696.5
32.5°	4745.3	4246.2	2943.2	1085.2	547.3	527.1	545.7	562.8	589.3	618.8	625.0
35°	4633.4	4083.0	2618.3	757.2	513.1	503.8	513.1	524.0	550.4	579.9	583.1
37.5°	4552.5	3949.2	2279.3	598.6	492.9	483.5	488.3	492.9	524.0	567.5	572.1
40°	4541.6	3860.6	1935.7	538.0	477.3	464.9	461.8	464.9	505.3	555.1	559.8
42.5°	4647.4	3865.3	1599.9	513.1	464.9	450.9	438.4	444.7	480.5	519.4	522.4
45°	4897.7	3974.2	1309.2	502.2	454.0	443.1	424.4	427.6	444.7	464.9	468.0
47.5°	5339.3	4212.0	1086.8	496.0	444.7	435.4	412.0	402.7	404.3	415.1	415.1
50°	6045.1	4610.0	951.5	489.8	436.9	419.8	393.3	374.7	370.0	376.2	377.8
52.5°	7097.7	5292.6	886.3	477.3	422.9	399.6	370.0	351.4	343.6	349.8	349.8
55°	8520.5	6382.5	855.2	460.2	405.8	374.7	348.3	332.8	326.5	331.1	331.1
57.5°	10142.0	7799.0	908.0	436.9	384.0	348.3	329.6	318.8	314.0	318.8	320.3
60°	12068.5	9652.4	1271.8	407.3	360.7	325.0	314.0	307.8	304.7	309.4	309.4
62.5°	14629.3	12118.3	1968.4	384.0	335.8	303.2	300.0	297.0	293.9	298.5	298.5
65°	17393.7	14361.9	2026.0	370.0	314.0	284.5	286.1	286.1	282.9	287.7	287.7
67.5°	18273.8	14167.6	1131.9	352.9	287.7	265.9	272.1	272.1	270.6	275.2	273.6
68°	18087.2	13859.7	985.7	348.3	282.9	261.2	267.4	268.9	267.4	272.1	270.6
70°	16697.2	12168.0	648.3	321.8	262.8	245.7	255.0	256.6	255.0	261.2	259.6
72.5°	13783.4	9126.8	478.8	281.4	237.9	225.5	234.8	236.3	237.9	244.1	242.5
75°	8753.6	5040.7	377.8	239.5	213.0	202.1	211.4	216.1	219.2	228.5	223.9
77.5°	2397.5	1529.9	306.3	203.7	183.5	178.8	185.1	191.3	194.4	205.2	197.4
80°	839.6	676.4	255.0	172.6	152.4	150.8	157.0	163.3	166.3	175.7	166.3
82.5°	509.9	441.6	203.7	135.2	119.7	118.2	125.9	132.2	135.2	135.2	129.1
85°	265.9	233.2	149.2	94.8	82.4	77.7	91.8	99.5	101.1	99.5	94.8
87.5°	149.2	132.2	79.3	45.1	37.3	38.9	48.2	59.1	63.7	62.2	59.1
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)