

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: P197094

Luminaire Tested: **NAV-AF-06-D-UNV-SL3-8030-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197094
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-SL3-8030-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 80 CRI, 3000K, 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: 19342 lumens
Efficiency: N/A
Efficacy: 100.2 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 - G3

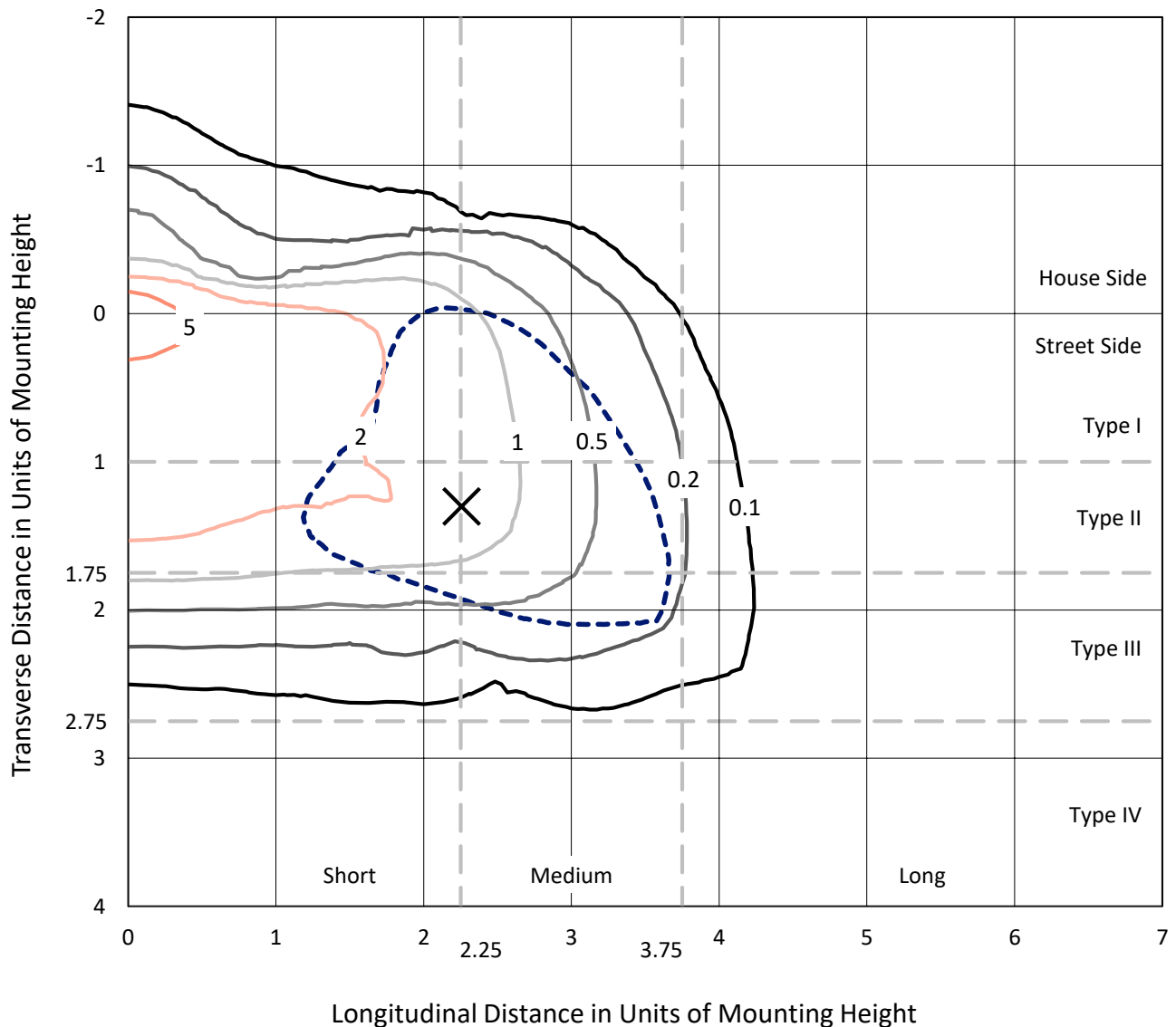
Input Watts (W): 193
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

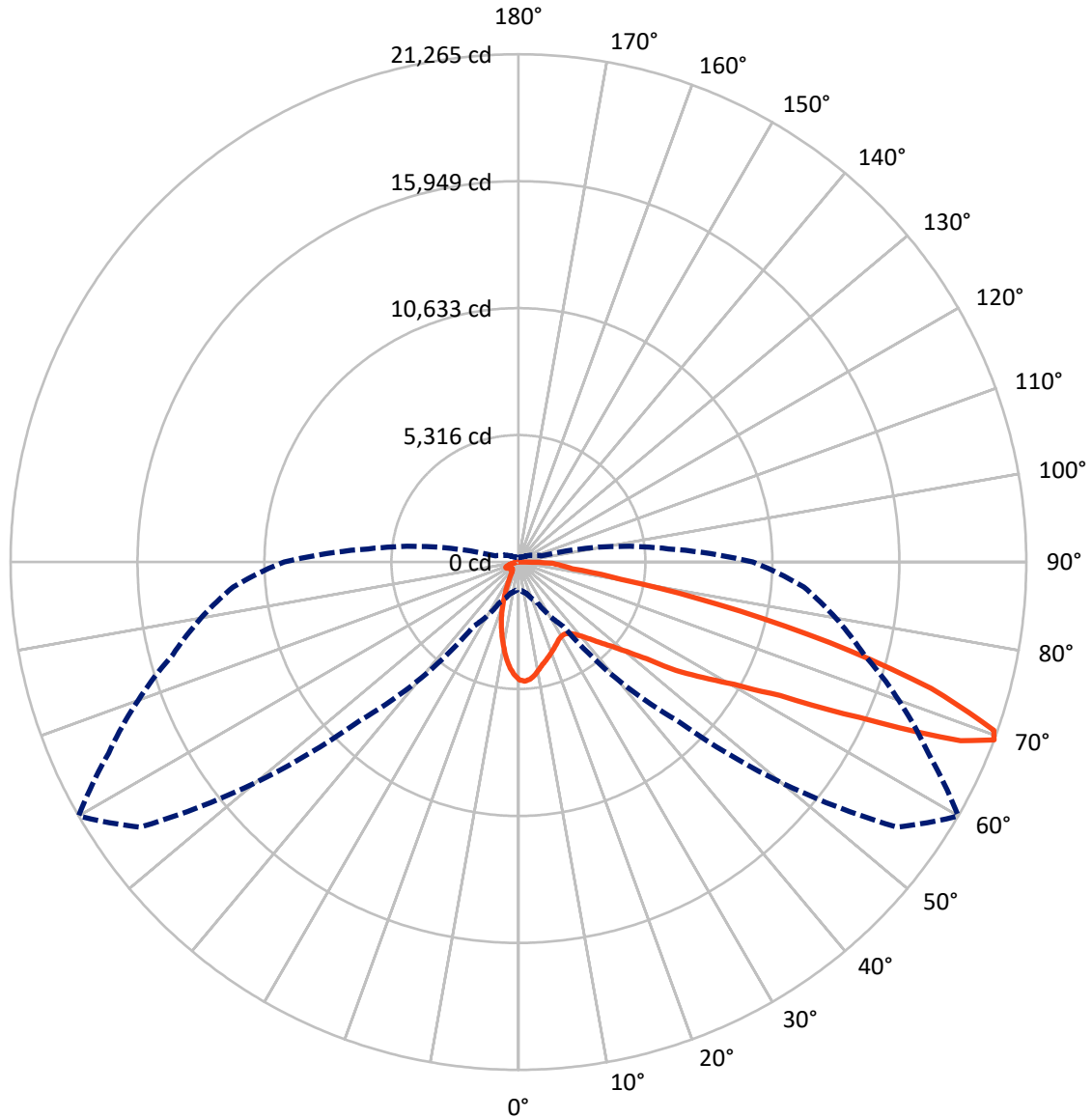
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 7.9 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	2758.8	0.0	2758.8
	% Fixture	14.3	0.0	14.3
Street Side	Lumens	16583.2	0.0	16583.2
	% Fixture	85.7	0.0	85.7
Total	Lumens	19342.0	0.0	19342.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	418.7	2.2
10°-20°	896.4	4.6
20°-30°	1143.6	5.9
30°-40°	1573.6	8.1
40°-50°	2549.0	13.2
50°-60°	4000.5	20.7
60°-70°	5333.4	27.6
70°-80°	2966.6	15.3
80°-90°	460.1	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°	19342.0	100.0
0°-180°	19342.0	100.0

Coefficient of Utilization



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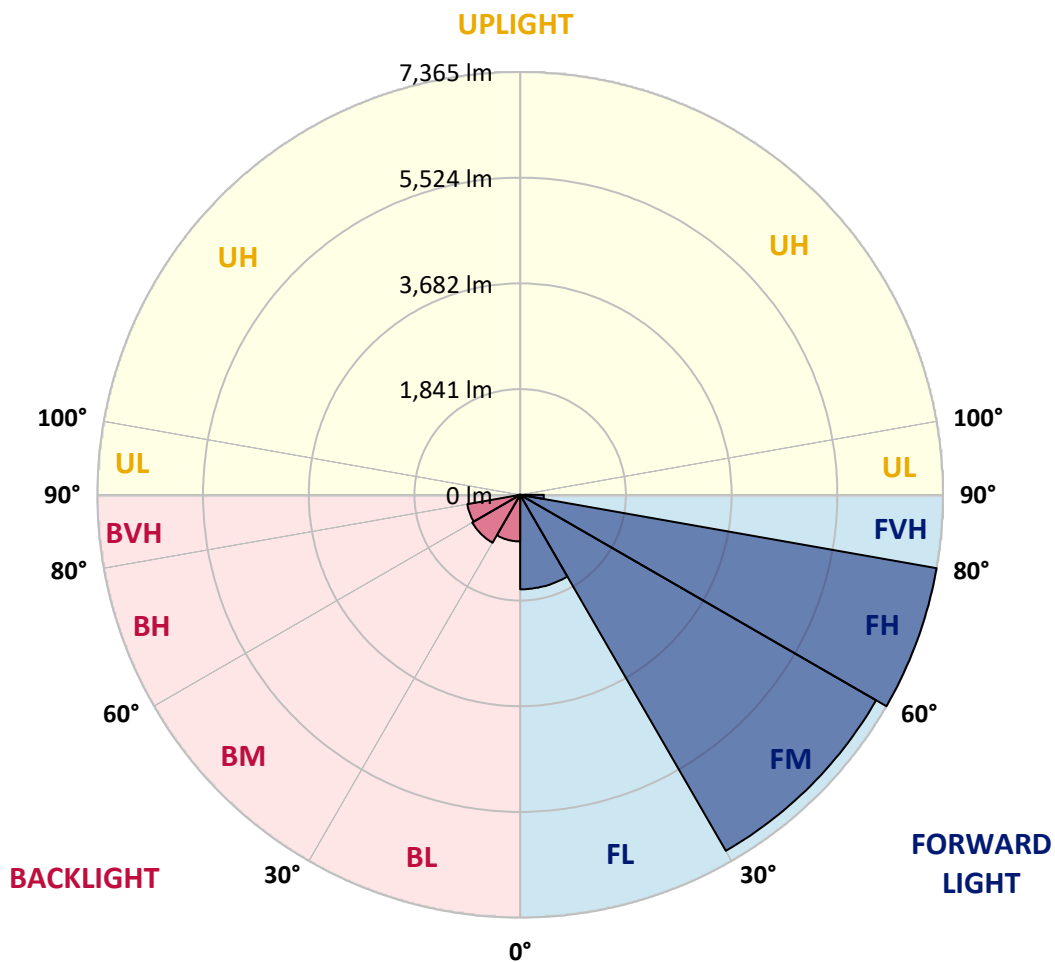
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1645.6	8.5			
FM	(30°-60°)	7159.4	37.0			
FH	(60°-80°)	7364.7	38.1			G3/7500
FVH	(80°-90°)	413.5	2.1			G3/500
BL	(0°-30°)	813.0	4.2	B2/1000		
BM	(30°-60°)	963.8	5.0	B1/1000		
BH	(60°-80°)	935.4	4.8	B2/1000		G2/1000
BVH	(80°-90°)	46.6	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-G3

Type III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	60°	65°	75°	85°
0°	4935.2	4935.2	4935.2	4935.2	4935.2	4935.2	4935.2	4935.2	4935.2	4935.2	4935.2
2.5°	5066.6	5080.3	5080.3	5069.1	5062.9	5027.0	5005.9	4991.0	4964.9	4916.6	4873.2
5°	4885.6	4911.6	4922.8	4927.7	4960.0	4948.8	4950.1	4940.1	4917.8	4865.7	4795.0
7.5°	4553.2	4558.1	4578.0	4611.5	4689.6	4744.2	4788.8	4797.5	4792.5	4754.1	4654.9
10°	4225.7	4234.4	4258.0	4315.0	4389.4	4467.6	4564.3	4604.0	4633.8	4621.4	4496.1
12.5°	3954.1	3955.3	3981.4	4047.1	4130.2	4228.2	4359.7	4421.7	4492.4	4520.9	4380.8
15°	3692.4	3709.8	3734.6	3813.9	3916.9	4040.9	4192.2	4277.8	4370.8	4452.7	4291.5
17.5°	3493.9	3507.6	3522.5	3588.2	3707.3	3862.3	4049.6	4141.4	4264.2	4389.4	4199.7
20°	3384.8	3389.8	3378.6	3410.8	3511.3	3678.7	3895.8	4006.2	4152.5	4328.7	4105.4
22.5°	3362.5	3362.5	3321.5	3315.3	3360.0	3501.4	3737.0	3872.2	4050.8	4286.5	4021.1
25°	3466.7	3459.2	3382.3	3311.6	3295.5	3367.4	3585.7	3751.9	3964.0	4285.3	3957.8
27.5°	3663.9	3653.9	3558.4	3439.4	3336.4	3305.4	3469.1	3639.1	3895.8	4327.4	3925.6
30°	3909.4	3905.7	3809.0	3660.1	3490.2	3330.2	3423.2	3580.8	3849.9	4405.6	3924.3
32.5°	4178.6	4161.2	4101.7	3952.9	3732.1	3467.9	3450.5	3583.2	3837.5	4519.7	3952.9
35°	4465.1	4452.7	4437.8	4287.7	4039.7	3711.0	3570.8	3668.8	3898.3	4678.4	4033.5
37.5°	4829.7	4816.1	4840.9	4677.2	4405.6	4029.8	3774.2	3840.0	4022.3	4909.1	4183.5
40°	5478.4	5438.7	5369.3	5117.5	4832.2	4420.4	4068.2	4078.1	4234.4	5218.0	4424.2
42.5°	6543.8	6416.1	6072.5	5609.9	5282.5	4874.4	4451.5	4404.3	4527.1	5626.0	4773.9
45°	7611.8	7467.9	6887.4	6147.0	5748.8	5361.8	4925.3	4812.4	4891.8	6101.1	5224.2
47.5°	8301.4	8230.7	7575.8	6684.0	6237.5	5892.7	5467.3	5281.2	5338.3	6639.4	5779.8
50°	8503.5	8442.8	7928.0	7104.5	6698.9	6533.9	6138.3	5891.4	5901.4	7268.2	6445.9
52.5°	8352.2	8327.4	7986.3	7364.9	7123.1	7209.9	7067.3	6723.7	6641.8	7957.8	7167.7
55°	8150.0	8158.7	8027.3	7626.6	7554.7	7840.0	8282.8	8006.2	7658.9	8675.9	7919.3
57.5°	7513.8	7520.0	7864.8	8125.2	8378.3	8723.1	9229.1	9112.5	8708.2	9451.1	8761.5
60°	6050.2	6098.6	6866.3	8022.3	9319.6	10463.2	10587.2	10386.3	9824.5	10344.1	9856.7
62.5°	4322.5	4365.9	5255.2	6964.3	9209.3	12432.8	13095.1	12296.4	11338.9	11679.9	11397.2
65°	2271.0	2263.6	2951.9	4812.4	7756.9	12889.2	17046.7	15687.4	13890.2	13516.8	12885.5
67.5°	1268.8	1309.8	1576.4	2427.3	5055.5	11343.8	19570.8	19971.4	17437.4	14974.2	12821.0
69°	1173.3	1187.0	1365.6	1876.6	3295.5	9359.3	19353.7	21265.0	18933.3	14980.4	11995.0
70°	1139.8	1154.7	1317.2	1729.0	2768.4	7668.8	18563.6	21113.7	19296.7	14648.0	11243.4
72.5°	1022.0	1041.9	1199.4	1554.1	2333.0	3952.9	14953.1	18071.2	17479.6	12802.4	8718.1
75°	871.9	905.4	1143.6	1542.9	2210.2	2512.9	9972.1	13463.5	13009.6	9155.9	4946.3
77.5°	360.9	364.6	499.8	1129.9	2319.4	2405.0	5359.4	8528.3	7549.7	4014.9	1489.6
80°	251.8	246.8	249.3	329.9	1871.6	2421.1	2749.8	4337.3	3371.1	1059.2	697.1
82.5°	212.1	209.6	219.5	207.1	633.8	2747.3	2299.5	2261.1	1587.6	570.5	332.4
85°	140.2	136.4	179.8	188.5	301.4	2181.7	2473.2	1777.4	1183.3	305.1	141.4
87.5°	68.2	69.5	102.9	127.8	160.0	690.8	2369.0	1405.3	914.1	132.7	57.1
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°	4935.2	4935.2	4935.2	4935.2	4935.2	4935.2	4935.2	4935.2	4935.2	4935.2	4935.2
2.5°	4855.8	4818.6	4785.1	4742.9	4710.7	4683.4	4646.2	4644.9	4638.7	4647.4	4649.9
5°	4747.9	4685.9	4591.6	4486.2	4411.8	4313.8	4218.3	4186.0	4150.1	4146.3	4157.5
7.5°	4585.4	4488.7	4327.4	4166.2	4004.9	3840.0	3683.7	3604.3	3527.4	3503.9	3515.0
10°	4404.3	4281.5	4034.7	3771.8	3544.8	3299.2	3061.1	2907.3	2767.1	2707.6	2722.5
12.5°	4262.9	4106.6	3759.4	3418.3	3078.4	2726.2	2412.4	2108.5	1879.1	1776.1	1782.3
15°	4141.4	3941.7	3501.4	3047.4	2622.0	2139.5	1704.2	1351.9	1151.0	1076.6	1074.1
17.5°	4009.9	3768.0	3232.2	2702.6	2150.7	1554.1	1141.1	932.7	853.3	828.5	828.5
20°	3869.8	3589.4	2950.7	2326.8	1654.6	1085.3	858.3	777.7	747.9	740.5	739.2
22.5°	3739.5	3414.6	2667.9	1926.2	1196.9	823.6	730.5	699.5	694.6	700.8	700.8
25°	3636.6	3260.8	2381.4	1504.5	870.7	689.6	649.9	646.2	664.8	687.1	690.8
27.5°	3559.7	3123.1	2098.6	1098.9	684.6	600.3	586.7	602.8	646.2	690.8	699.5
30°	3506.3	3005.3	1760.0	790.1	570.5	525.9	532.1	560.6	626.4	694.6	713.2
32.5°	3482.8	2909.8	1418.9	606.5	487.4	462.6	478.8	516.0	584.2	652.4	674.7
35°	3505.1	2840.3	1103.9	503.6	426.7	408.1	426.7	465.1	509.8	543.3	556.9
37.5°	3585.7	2815.5	831.0	446.5	387.0	368.4	383.3	409.3	429.1	441.5	447.8
40°	3755.6	2841.5	651.2	416.7	364.6	343.6	347.3	359.7	373.3	383.3	384.5
42.5°	4026.0	2927.1	579.2	405.6	351.0	323.7	317.5	326.2	341.1	354.7	357.2
45°	4385.7	3069.8	571.8	409.3	344.8	307.6	295.2	303.9	323.7	346.0	349.8
47.5°	4850.8	3295.5	606.5	429.1	348.5	298.9	280.3	289.0	315.0	344.8	349.8
50°	5401.5	3608.0	671.0	458.9	365.9	298.9	274.1	281.5	308.8	342.3	347.3
52.5°	6050.2	4043.4	738.0	488.7	390.7	310.1	276.6	275.3	300.2	331.2	337.4
55°	6765.9	4584.2	802.5	514.7	404.3	325.0	282.8	267.9	287.8	312.6	317.5
57.5°	7608.0	5324.6	915.3	539.5	411.8	336.1	290.2	260.5	271.6	289.0	292.7
60°	8750.4	6412.4	1134.9	581.7	425.4	341.1	291.5	253.0	251.8	264.2	265.4
62.5°	10240.0	7686.2	1344.5	631.3	452.7	342.3	286.5	248.1	235.7	239.4	239.4
65°	11299.2	8155.0	1283.7	673.5	477.5	341.1	281.5	244.3	223.3	217.1	217.1
67.5°	10696.4	7203.7	1090.2	684.6	480.0	327.4	270.4	235.7	212.1	197.2	197.2
69°	9810.8	6314.4	1000.9	664.8	460.2	311.3	258.0	227.0	204.7	187.3	187.3
70°	9089.0	5640.9	946.4	641.2	436.6	297.7	246.8	218.3	197.2	182.3	181.1
72.5°	6785.7	3764.3	808.7	553.2	358.4	251.8	215.8	194.7	177.4	167.4	167.4
75°	3580.8	1886.5	662.3	451.5	276.6	200.9	177.4	163.7	153.8	152.6	151.3
77.5°	1173.3	853.3	476.3	339.8	203.4	156.3	141.4	132.7	131.5	136.4	136.4
80°	633.8	509.8	306.4	229.5	141.4	116.6	109.1	107.9	111.6	119.1	119.1
82.5°	307.6	251.8	182.3	141.4	96.7	85.6	85.6	86.8	91.8	100.5	100.5
85°	132.7	119.1	105.4	79.4	59.5	53.3	60.8	67.0	70.7	76.9	79.4
87.5°	63.3	55.8	48.4	31.0	26.0	27.3	32.2	39.7	47.1	52.1	53.3
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)