

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: P196680

Luminaire Tested: **NAV-AF-06-D-UNV-SL4-7030-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196680
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24284)
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-SL4-7030-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 3000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV
SPILL LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 36459.8 lumens
Efficiency: N/A
Efficacy: 95.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B3 - U0 - G5

Input Watts (W): 382
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

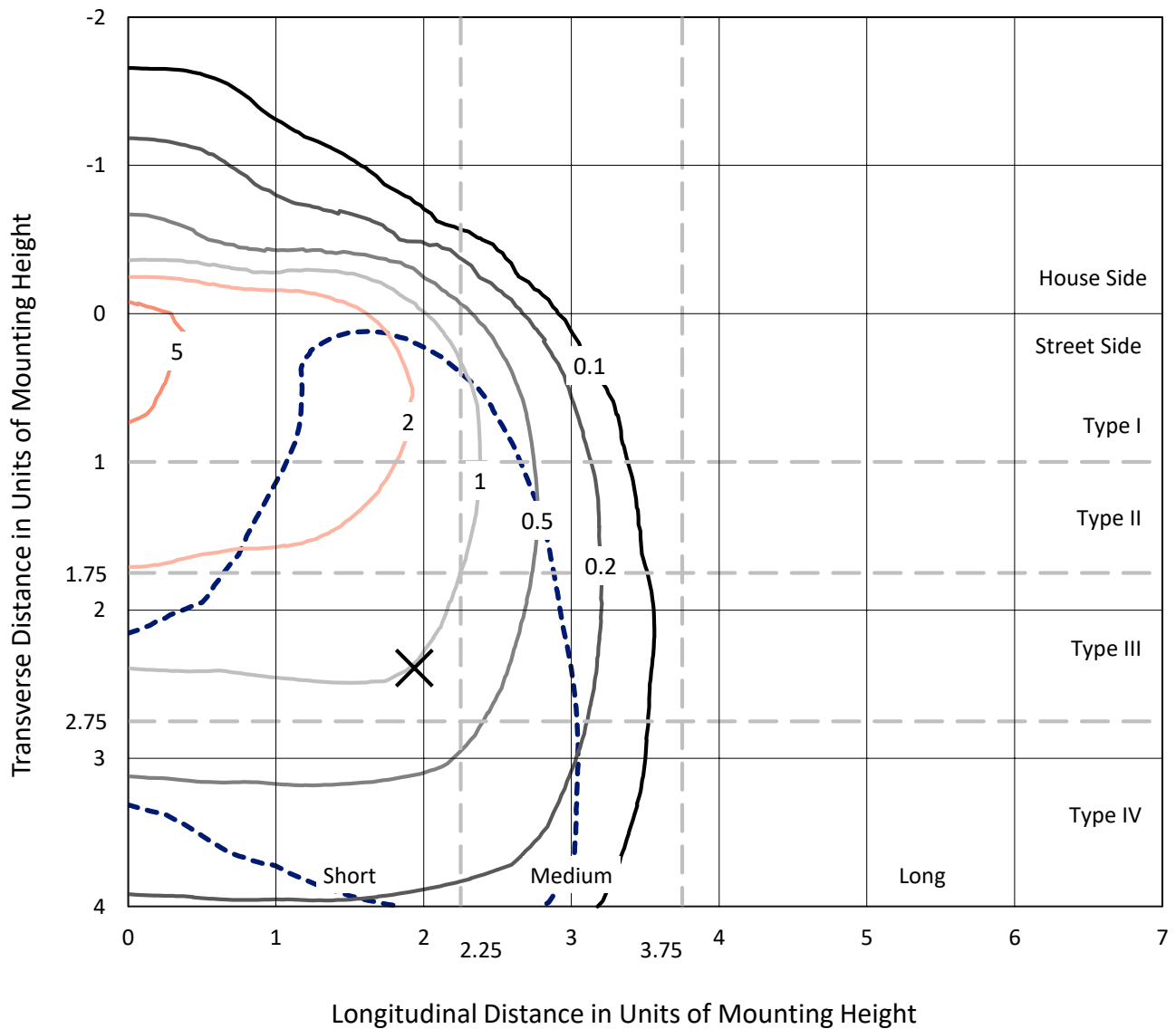


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Iso-Footcandle Lines of Horizontal Illumination

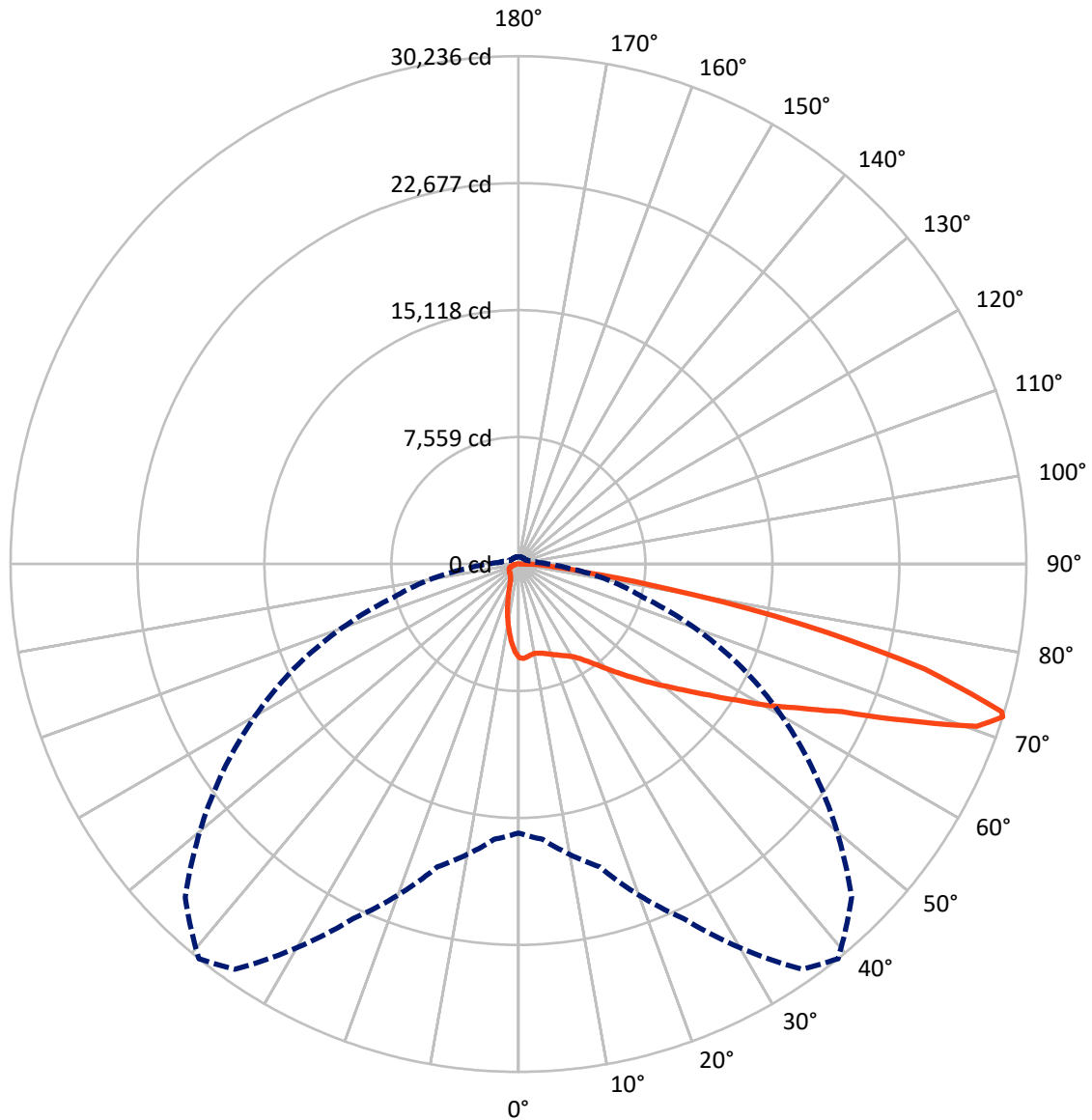
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 6.2 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 39-Deg Lateral - - - Horizontal Cone Through 72-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4180.6	0.0	4180.6
	% Fixture	11.5	0.0	11.5
Street Side	Lumens	32279.2	0.0	32279.2
	% Fixture	88.5	0.0	88.5
Total	Lumens	36459.8	0.0	36459.8
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	478.5	1.3
10°-20°	1202.4	3.3
20°-30°	1873.7	5.1
30°-40°	2885.0	7.9
40°-50°	4703.2	12.9
50°-60°	7308.2	20.0
60°-70°	9781.8	26.8
70°-80°	7034.5	19.3
80°-90°	1192.5	3.3
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°	36459.8	100.0
0°-180°	36459.8	100.0

Coefficient of Utilization



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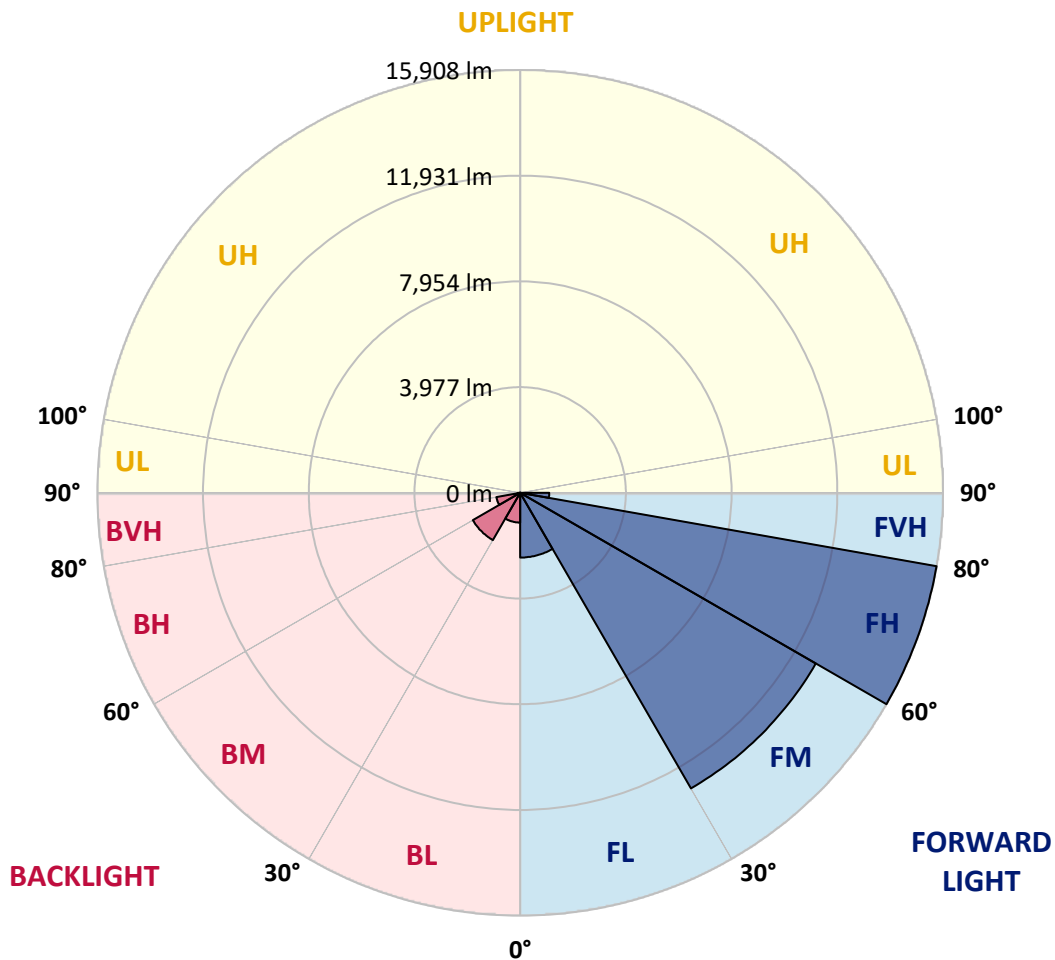
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2435.4	6.7			
FM	(30°-60°)	12841.9	35.2			
FH	(60°-80°)	15908.0	43.6			G5
FVH	(80°-90°)	1093.9	3.0			G5
BL	(0°-30°)	1119.1	3.1	B3/2500		
BM	(30°-60°)	2054.6	5.6	B2/2500		
BH	(60°-80°)	908.3	2.5	B2/1000		G2/1000
BVH	(80°-90°)	98.6	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-G5

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	39°	45°	55°	65°	75°	85°
0°	5568.1	5568.1	5568.1	5568.1	5568.1	5568.1	5568.1	5568.1	5568.1	5568.1	5568.1
2.5°	5688.0	5690.4	5683.1	5661.0	5641.5	5631.7	5614.7	5585.3	5546.0	5519.1	5497.1
5°	5634.2	5641.5	5636.5	5599.9	5565.6	5546.0	5519.1	5477.5	5426.2	5404.1	5352.7
7.5°	5592.6	5597.5	5582.7	5541.2	5475.1	5450.6	5401.7	5347.8	5301.3	5269.5	5208.3
10°	5563.2	5568.1	5555.9	5514.2	5440.8	5411.4	5352.7	5293.9	5232.8	5193.6	5125.1
12.5°	5521.5	5531.4	5531.4	5511.8	5462.9	5443.3	5384.6	5320.8	5264.5	5222.9	5137.3
15°	5514.2	5526.5	5548.5	5546.0	5531.4	5516.7	5470.2	5406.5	5357.6	5308.6	5203.4
17.5°	5575.4	5602.4	5646.4	5661.0	5651.3	5619.4	5565.6	5506.8	5453.0	5406.5	5276.7
20°	5729.5	5744.3	5810.4	5839.7	5790.7	5744.3	5673.3	5597.5	5548.5	5511.8	5345.4
22.5°	5962.2	5981.7	6035.6	6038.0	5935.2	5878.9	5788.3	5695.3	5648.8	5634.2	5438.4
25°	6334.1	6329.3	6343.9	6282.7	6096.7	6030.7	5920.5	5812.8	5781.0	5810.4	5575.4
27.5°	6779.5	6767.3	6720.9	6561.8	6280.3	6194.7	6062.5	5966.9	5966.9	6035.6	5761.5
30°	7293.6	7281.4	7129.6	6862.8	6498.0	6400.2	6260.7	6160.4	6211.7	6343.9	6013.5
32.5°	7836.9	7792.8	7579.9	7222.6	6808.9	6701.3	6566.7	6463.9	6561.8	6786.9	6375.8
35°	8348.4	8323.9	8062.0	7638.7	7210.3	7119.8	7026.8	6899.5	7056.2	7406.1	6887.2
37.5°	8877.1	8857.5	8536.9	8086.5	7699.8	7638.7	7560.3	7472.2	7724.3	8184.5	7579.9
40°	9467.0	9427.8	9023.9	8573.6	8270.2	8240.8	8199.2	8174.7	8580.9	9266.3	8456.1
42.5°	10135.1	10059.3	9537.9	9109.6	8891.7	8916.2	8894.2	8992.1	9613.8	10514.4	9498.8
45°	10898.7	10747.0	10049.4	9679.9	9579.6	9677.4	9724.0	9973.6	10835.1	11956.0	10663.8
47.5°	11613.3	11417.6	10609.9	10299.1	10355.4	10524.3	10656.4	11097.0	12173.8	13380.6	11853.2
50°	12271.8	12051.6	11209.6	10940.3	11214.5	11454.3	11728.4	12350.1	13598.3	14846.5	12944.8
52.5°	12758.9	12599.8	11809.2	11640.4	12200.8	12518.9	12957.0	13742.7	15037.5	16244.1	13919.0
55°	13135.7	13050.0	12394.2	12443.1	13316.8	13772.1	14303.2	15206.3	16559.8	17497.3	14702.2
57.5°	13571.4	13507.7	13062.3	13412.3	14702.2	15274.9	15901.4	16904.9	18008.7	18601.1	15316.5
60°	14031.5	14031.5	13806.3	14579.8	16435.0	17090.9	17715.1	18495.7	19452.7	19594.7	15566.1
62.5°	14379.1	14469.6	14550.4	15823.2	18079.6	18894.8	19580.1	20329.0	20948.2	20084.2	14978.7
65°	14883.3	15076.5	15531.9	17259.8	20116.0	21183.1	22108.3	22737.3	22159.6	19695.1	13062.3
67.5°	15749.7	16036.1	17005.2	19398.9	23234.1	24832.3	25730.5	24643.9	21922.4	17245.2	10005.4
70°	16530.4	16934.3	18591.2	22113.2	27287.2	28946.6	28532.9	24200.9	19092.9	12641.3	6155.4
72°	16011.5	16452.1	18664.6	23295.2	29453.2	30236.4	28055.7	21447.5	14753.5	7714.6	3034.9
72.5°	15671.4	16129.1	18427.2	23266.0	29512.0	30072.5	27392.5	20353.5	13392.8	6750.2	2454.8
75°	13091.7	13483.2	15845.1	20620.2	26007.2	24979.2	21376.5	13172.4	6155.4	2180.7	1262.9
77.5°	8549.1	8847.7	10925.6	14286.0	18216.8	17228.0	13010.9	6167.6	2308.0	1324.1	949.7
80°	4295.4	4508.2	5847.1	7511.3	9831.5	9046.0	6006.2	2983.6	1544.4	957.0	746.5
82.5°	2988.3	3184.3	4026.1	3835.2	4109.3	3977.1	2824.5	2489.2	1155.2	604.5	391.5
85°	2506.2	2709.4	3331.1	2733.8	2237.0	2038.8	2024.1	2352.1	763.6	298.6	330.4
87.5°	2185.6	2494.0	2748.5	1997.2	1534.5	1353.5	1490.6	2156.2	242.3	164.0	100.3
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°	5568.1	5568.1	5568.1	5568.1	5568.1	5568.1	5568.1	5568.1	5568.1	5568.1	5568.1
2.5°	5460.3	5453.0	5416.3	5360.0	5318.4	5291.5	5240.1	5237.7	5242.6	5198.4	5215.6
5°	5306.1	5276.7	5181.4	5051.6	4946.3	4846.0	4736.0	4699.2	4667.3	4601.4	4608.7
7.5°	5144.7	5093.2	4926.8	4713.9	4510.8	4324.7	4141.2	4050.6	3982.1	3896.4	3896.4
10°	5049.2	4968.4	4713.9	4403.0	4080.0	3808.3	3534.2	3370.2	3250.3	3140.1	3132.8
12.5°	5044.3	4921.9	4567.0	4138.7	3695.7	3314.0	2939.4	2687.3	2508.7	2379.0	2366.8
15°	5083.5	4912.2	4444.6	3891.5	3333.5	2836.7	2374.1	2053.4	1825.8	1681.4	1666.7
17.5°	5117.7	4899.9	4312.5	3632.1	2981.0	2376.5	1862.6	1529.7	1314.3	1196.8	1184.6
20°	5149.5	4873.0	4143.6	3358.0	2591.9	1945.8	1456.3	1187.0	1045.1	979.0	971.7
22.5°	5196.1	4848.5	3967.4	3049.5	2210.1	1583.5	1201.8	1008.4	932.5	900.8	895.8
25°	5271.9	4851.0	3796.1	2733.8	1860.1	1319.2	1040.1	920.3	878.7	856.6	856.6
27.5°	5382.1	4880.3	3627.2	2413.2	1563.9	1138.1	944.8	873.7	846.9	829.8	824.8
30°	5543.6	4934.1	3448.6	2109.8	1329.0	1013.3	888.5	844.3	822.4	807.7	805.2
32.5°	5778.5	5029.6	3260.1	1833.2	1150.3	925.2	846.9	819.9	802.7	790.5	788.1
35°	6128.6	5198.4	3076.5	1598.3	1023.1	861.5	812.6	790.5	780.7	775.8	773.4
37.5°	6642.5	5470.2	2902.7	1414.7	939.8	819.9	778.3	766.0	761.2	761.2	761.2
40°	7288.6	5827.5	2746.1	1284.9	893.3	788.1	753.8	744.0	744.0	746.5	746.5
42.5°	8074.3	6275.5	2611.6	1196.8	866.4	766.0	736.7	731.8	729.3	729.3	731.8
45°	8987.2	6804.0	2528.3	1128.3	846.9	753.8	724.5	721.9	712.3	707.4	707.4
47.5°	9905.0	7369.4	2523.4	1089.1	822.4	739.1	712.3	712.3	692.6	682.9	685.3
50°	10761.7	7876.1	2577.2	1079.4	807.7	717.1	700.1	702.4	675.6	663.3	660.8
52.5°	11451.9	8262.7	2643.3	1091.6	807.7	697.5	678.0	690.2	660.8	646.2	643.6
55°	11985.4	8531.9	2667.8	1118.5	817.5	680.3	658.4	678.0	655.9	636.3	636.3
57.5°	12367.3	8617.6	2562.5	1130.8	832.1	678.0	638.8	675.6	663.3	638.8	638.8
60°	12227.7	8120.8	2171.0	1084.3	829.8	673.0	624.1	680.3	687.8	660.8	660.8
62.5°	11138.6	6794.3	1742.5	979.0	788.1	655.9	606.9	675.6	704.8	695.1	690.2
65°	9068.0	4983.1	1351.0	854.2	717.1	619.2	570.3	631.4	665.7	675.6	678.0
67.5°	6390.5	3154.9	1050.0	726.9	629.0	565.4	528.7	558.0	570.3	575.1	585.0
70°	3494.9	1708.4	834.6	611.9	538.4	511.6	484.6	487.1	482.2	477.3	482.2
72°	1754.8	1116.1	704.8	531.1	477.3	460.1	447.9	440.6	440.6	433.2	435.6
72.5°	1510.1	1037.8	680.3	511.6	462.6	447.9	438.1	430.8	428.3	423.4	425.9
75°	1006.0	822.4	567.8	428.3	394.1	384.3	389.2	381.9	384.3	379.3	381.9
77.5°	812.6	707.4	482.2	362.2	337.7	323.1	332.9	335.3	340.3	335.3	332.9
80°	680.3	602.1	403.8	298.6	281.5	269.3	274.1	291.2	293.7	279.0	276.5
82.5°	440.6	484.6	318.2	232.5	215.3	210.5	222.7	239.9	244.7	225.2	220.2
85°	369.7	389.2	230.1	159.1	141.9	137.0	161.4	178.6	190.8	171.3	166.4
87.5°	102.8	190.8	112.5	75.8	63.6	63.6	78.3	93.0	110.2	112.5	112.5
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)