

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: P197088

Luminaire Tested: **NAV-AF-06-D-UNV-SL3-8030-1200-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197088
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24263)
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-SL3-8030-1200-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 80 CRI, 3000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III
SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 27373 lumens
Efficiency: N/A
Efficacy: 71.7 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): 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

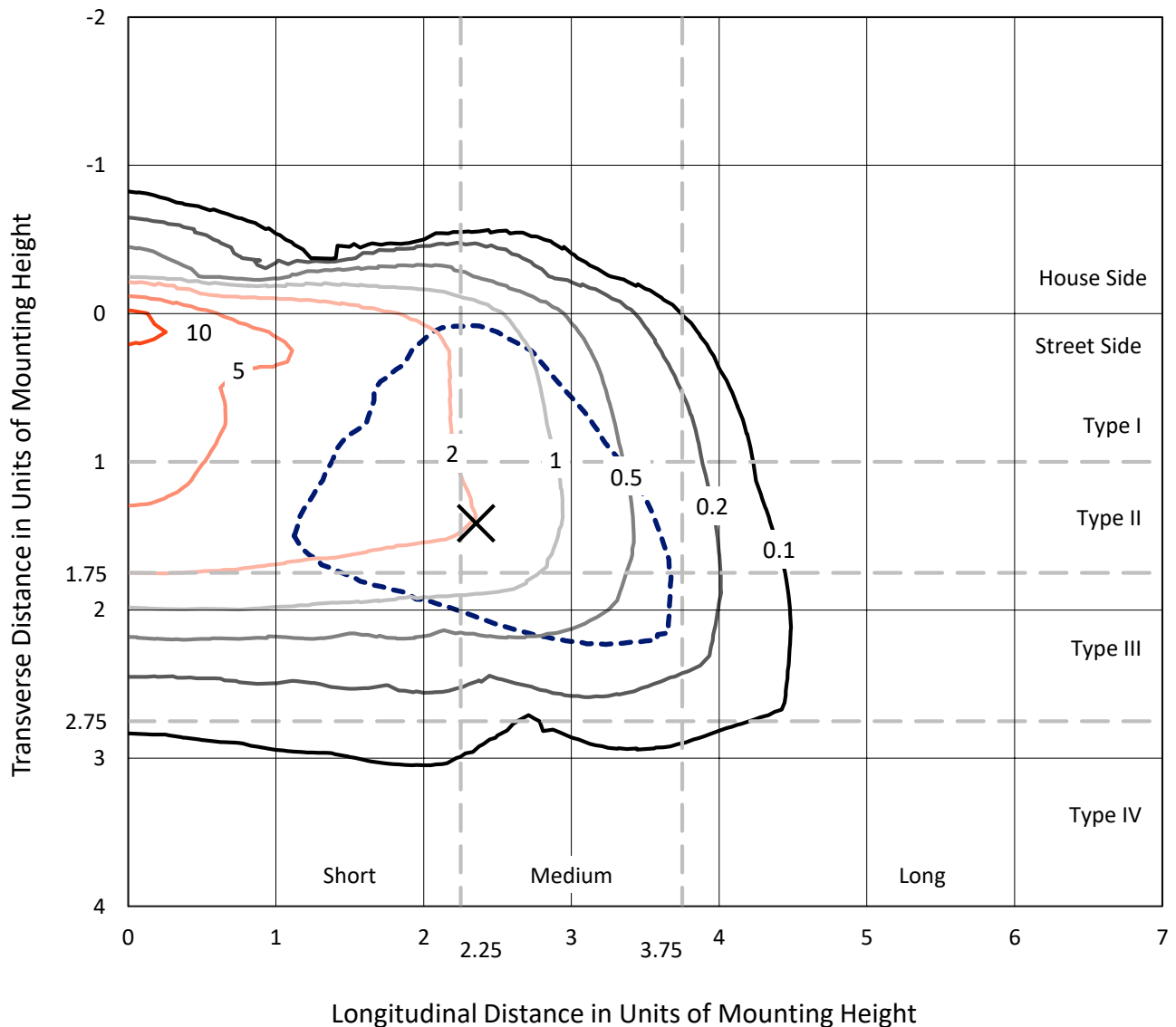


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

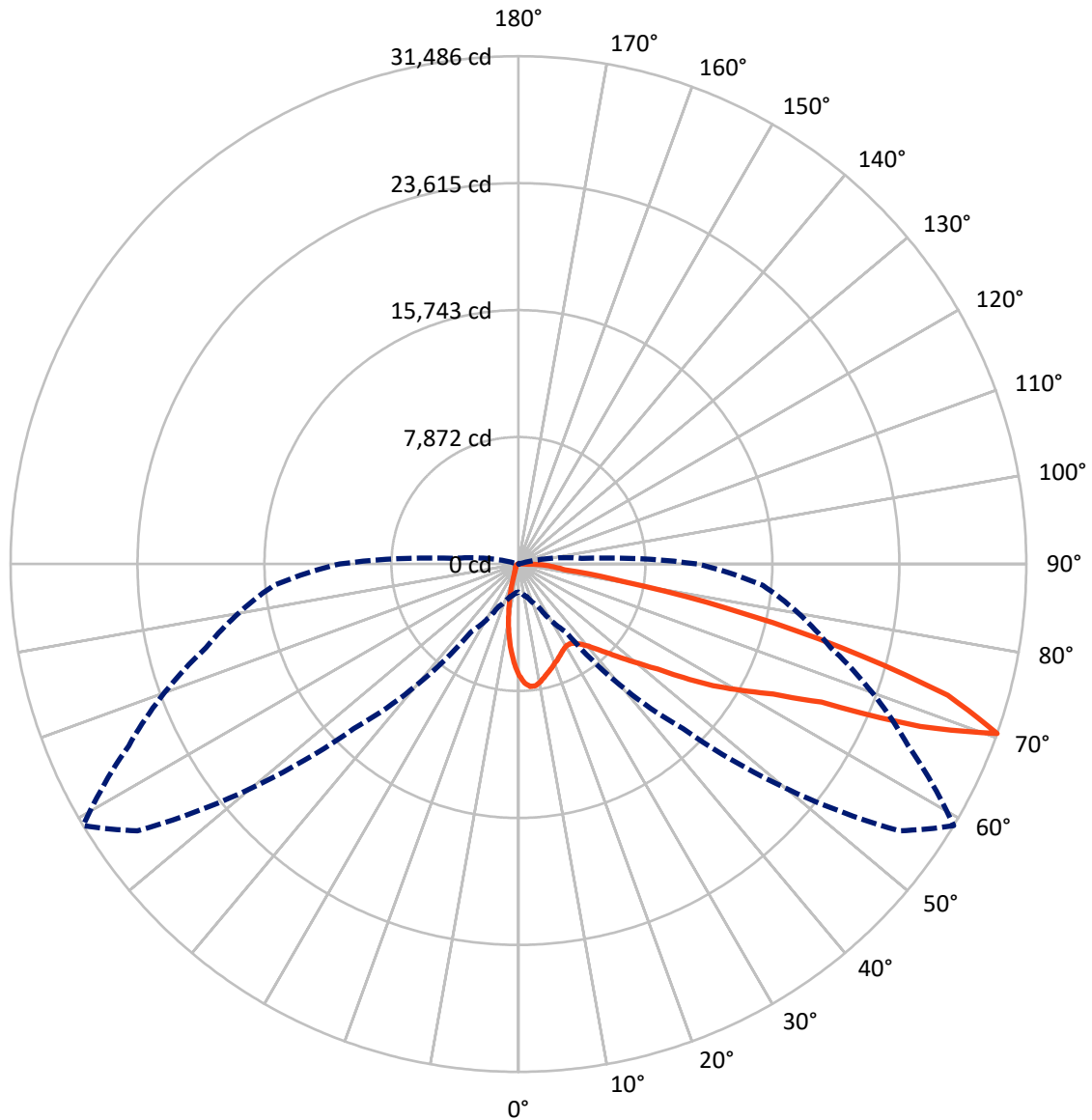


Based on 25 foot mounting height. Maximum calculated value = 11.8 fc
 Type III - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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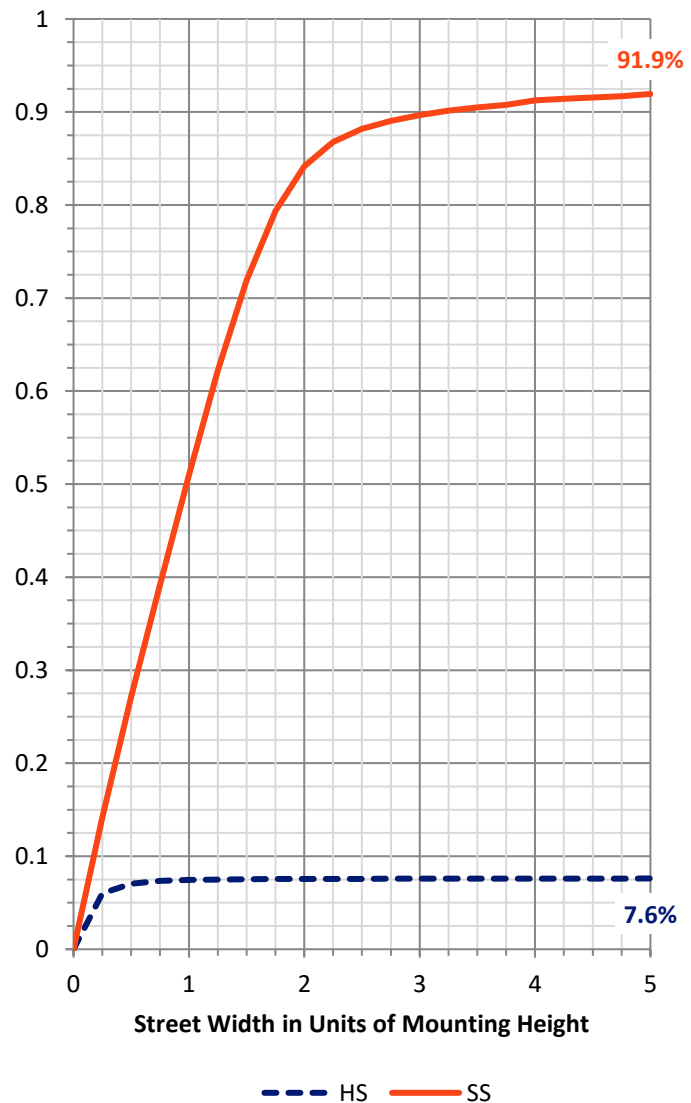
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2104.2	0.0	2104.2
	% Fixture	7.7	0.0	7.7
Street Side	Lumens	25268.7	0.0	25268.7
	% Fixture	92.3	0.0	92.3
Total	Lumens	27373.0	0.0	27373.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	569.2	2.1
10°-20°	1193.8	4.4
20°-30°	1616.0	5.9
30°-40°	2332.1	8.5
40°-50°	3873.2	14.1
50°-60°	5924.4	21.6
60°-70°	7368.6	26.9
70°-80°	4073.3	14.9
80°-90°	422.4	1.5
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°	27373.0	100.0
0°-180°	27373.0	100.0



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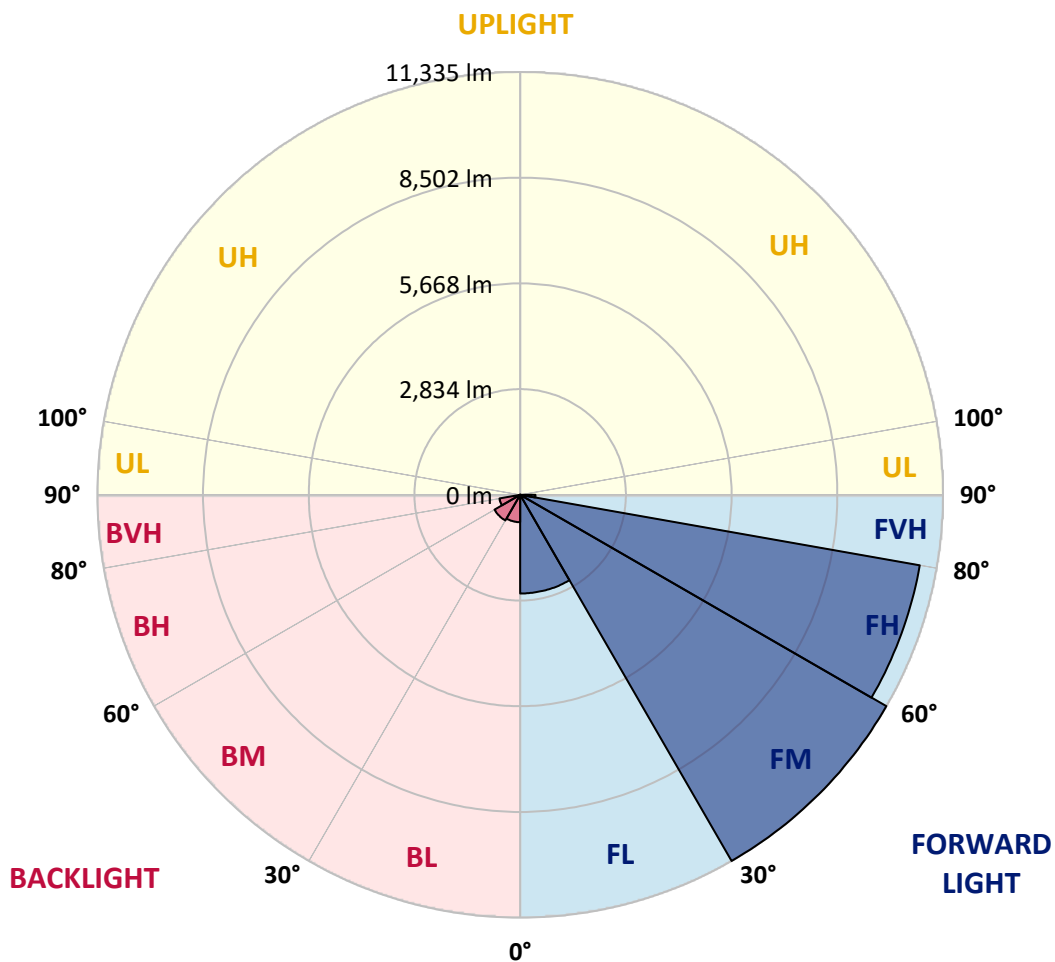
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2645.7	9.7			
FM	(30°-60°)	11335.5	41.4			
FH	(60°-80°)	10877.5	39.7			G4/12000
FVH	(80°-90°)	410.2	1.5			G3/500
BL	(0°-30°)	733.3	2.7	B2/1000		
BM	(30°-60°)	794.3	2.9	B1/1000		
BH	(60°-80°)	564.5	2.1	B2/1000		G2/1000
BVH	(80°-90°)	12.2	0.0			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°	59°	65°	75°	85°
0°	6921.6	6921.6	6921.6	6921.6	6921.6	6921.6	6921.6	6921.6	6921.6	6921.6	6921.6
2.5°	7824.0	7811.6	7760.0	7749.7	7691.9	7576.2	7442.0	7388.3	7278.9	7105.4	6913.4
5°	7954.1	7960.3	7964.4	7941.7	7933.5	7838.5	7689.8	7625.8	7479.2	7194.2	6843.2
7.5°	7466.8	7483.3	7534.9	7557.6	7656.8	7693.9	7663.0	7621.7	7506.0	7169.4	6675.9
10°	6952.6	6983.6	7039.3	7076.5	7198.3	7297.5	7423.4	7433.7	7409.0	7086.8	6488.0
12.5°	6510.7	6539.6	6601.6	6675.9	6799.8	6927.8	7115.8	7181.8	7264.4	7033.2	6353.8
15°	6130.8	6139.0	6198.9	6291.8	6455.0	6630.5	6853.5	6950.6	7111.6	7012.5	6250.5
17.5°	5798.3	5800.4	5839.6	5924.3	6122.5	6353.8	6614.0	6742.0	6946.4	6983.6	6159.7
20°	5579.4	5577.4	5579.4	5624.9	5800.4	6075.0	6391.0	6525.2	6787.4	6948.5	6066.8
22.5°	5505.1	5494.8	5447.3	5430.8	5542.3	5783.9	6161.8	6337.3	6644.9	6938.2	5998.6
25°	5596.0	5589.8	5488.6	5393.6	5403.9	5554.7	5928.4	6143.2	6533.4	6975.3	5982.1
27.5°	5889.2	5876.8	5721.9	5536.1	5418.4	5445.2	5755.0	5980.0	6444.6	7066.2	6004.8
30°	6273.3	6275.3	6110.1	5885.1	5608.4	5455.5	5662.0	5874.7	6384.8	7202.5	6054.4
32.5°	6700.7	6698.6	6580.9	6320.8	5967.6	5645.5	5703.3	5883.0	6393.0	7402.8	6149.4
35°	7142.6	7119.9	7080.6	6851.4	6438.5	5978.0	5891.2	6023.4	6479.8	7667.1	6310.4
37.5°	7652.6	7644.4	7683.6	7442.0	7020.8	6467.4	6221.6	6310.4	6698.6	8057.4	6570.6
40°	8464.1	8418.7	8437.3	8109.0	7677.4	7126.1	6684.2	6706.9	7047.6	8573.6	6981.5
42.5°	10010.8	9827.0	9482.2	8866.8	8400.1	7857.1	7289.2	7250.0	7541.1	9199.3	7522.5
45°	11858.9	11648.3	10778.9	9703.1	9122.9	8641.7	8036.7	7931.4	8148.2	9944.7	8220.5
47.5°	13401.4	13174.3	12022.0	10576.6	9858.0	9451.2	8864.7	8740.9	8875.1	10809.9	9058.8
50°	13928.0	13802.0	12790.2	11303.4	10599.3	10359.8	9903.4	9696.9	9730.0	11743.3	10037.6
52.5°	13686.4	13643.0	12965.7	11801.1	11284.8	11363.3	11041.2	10824.4	10787.2	12763.3	11119.7
55°	13176.3	13155.7	12825.3	12077.8	11889.9	12282.2	12637.4	12449.5	12098.4	13847.4	12013.8
57.5°	12447.4	12525.9	12763.3	12610.5	12633.2	13252.7	14120.0	14217.0	13692.6	14710.6	12676.6
60°	10500.2	10710.8	11799.0	13182.5	14241.8	14867.5	15707.9	15889.6	15043.0	15301.1	13442.7
62.5°	7762.1	8063.6	9614.3	12156.2	15127.7	17938.1	17820.3	17739.8	16331.5	16092.0	14836.5
65°	4559.4	4912.5	6223.7	9498.7	13791.7	19912.1	21764.4	20649.3	18295.3	17735.7	17056.3
67.5°	2271.4	2273.5	2866.1	5013.7	10192.5	18534.8	27521.4	26877.1	22470.6	20157.9	17931.9
70°	1746.9	1794.4	2120.7	2913.6	5154.1	14435.9	28840.9	31486.1	26666.5	20050.5	15214.4
72.5°	1480.6	1511.5	1887.3	2535.7	3853.2	7925.2	24967.1	27831.1	25446.1	16940.7	11214.6
75°	1065.5	1090.3	1670.5	2300.3	3547.6	3931.6	17126.5	20641.0	19092.3	11916.7	6172.1
77.5°	264.3	262.2	582.3	1866.7	3173.8	3275.0	9827.0	13236.2	10954.5	4879.4	1585.9
80°	117.7	113.6	132.2	392.3	2952.9	3091.2	4321.9	6684.2	4202.1	790.9	485.3
82.5°	82.6	78.5	82.6	144.5	987.0	2868.2	2612.1	2897.1	1538.4	270.5	206.5
85°	26.8	24.8	45.4	121.8	276.7	1654.0	2548.1	2164.0	1144.0	115.6	138.4
87.5°	4.1	4.1	16.5	66.1	80.5	551.3	1495.0	1499.1	514.2	68.1	61.9
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°	6921.6	6921.6	6921.6	6921.6	6921.6	6921.6	6921.6	6921.6	6921.6	6921.6	6921.6
2.5°	6816.3	6694.5	6523.1	6351.7	6196.9	6037.9	5909.8	5849.9	5823.1	5785.9	5705.4
5°	6659.4	6438.5	6062.6	5693.0	5348.2	5017.8	4734.9	4573.8	4400.4	4392.1	4307.4
7.5°	6407.5	6093.6	5501.0	4926.9	4400.4	3896.5	3462.9	3182.1	2990.0	2870.3	2787.7
10°	6126.6	5724.0	4939.3	4131.9	3415.4	2742.2	2184.7	1821.3	1600.3	1488.8	1424.8
12.5°	5903.6	5397.7	4385.9	3370.0	2471.7	1699.4	1181.1	916.8	799.1	753.7	733.1
15°	5711.6	5098.3	3867.6	2688.5	1649.9	976.7	683.5	596.8	578.2	578.2	576.1
17.5°	5517.5	4809.2	3363.8	2019.5	1038.7	640.1	538.9	526.6	528.6	534.8	534.8
20°	5333.7	4534.6	2878.5	1439.3	681.4	512.1	489.4	485.3	491.5	499.7	497.6
22.5°	5185.0	4293.0	2424.2	989.1	524.5	464.6	450.2	444.0	448.1	454.3	452.2
25°	5079.7	4086.5	2007.1	689.7	456.3	423.3	406.8	398.5	394.4	398.5	396.5
27.5°	5015.7	3913.0	1614.8	518.3	408.9	382.0	361.4	344.8	334.5	334.5	330.4
30°	4974.4	3749.9	1265.8	429.5	369.6	340.7	311.8	289.1	272.6	268.4	266.4
32.5°	4972.4	3609.5	945.7	379.9	332.5	299.4	264.3	235.4	216.8	212.7	210.6
35°	5024.0	3495.9	695.9	342.8	299.4	260.2	220.9	190.0	173.5	173.5	171.4
37.5°	5158.2	3429.8	526.6	313.9	272.6	227.1	185.8	156.9	142.5	146.6	146.6
40°	5408.1	3417.5	429.5	291.2	249.9	198.2	150.7	128.0	121.8	128.0	128.0
42.5°	5790.1	3483.5	382.0	274.6	229.2	169.3	126.0	109.4	107.4	113.6	113.6
45°	6287.7	3613.6	355.2	260.2	206.5	140.4	105.3	95.0	92.9	101.2	101.2
47.5°	6890.7	3789.1	330.4	243.7	183.8	115.6	88.8	80.5	80.5	88.8	90.9
50°	7605.1	4026.6	305.6	227.1	165.2	97.1	74.3	68.1	70.2	78.5	80.5
52.5°	8427.0	4317.8	282.9	212.7	144.5	78.5	61.9	57.8	59.9	68.1	70.2
55°	9135.3	4571.8	256.1	198.2	117.7	64.0	51.6	49.6	51.6	61.9	61.9
57.5°	9752.7	4815.4	231.3	175.5	92.9	51.6	41.3	41.3	45.4	55.8	57.8
60°	10572.4	5199.5	210.6	148.7	70.2	39.2	33.0	35.1	41.3	49.6	51.6
62.5°	12024.1	5852.0	183.8	123.9	51.6	31.0	26.8	28.9	37.2	47.5	49.6
65°	13841.2	6469.4	152.8	103.2	39.2	22.7	20.6	26.8	37.2	47.5	49.6
67.5°	13655.4	5626.9	119.8	82.6	28.9	18.6	16.5	24.8	35.1	47.5	49.6
70°	11074.2	3944.0	88.8	55.8	22.7	16.5	16.5	24.8	35.1	45.4	47.5
72.5°	7681.5	2195.0	68.1	37.2	20.6	16.5	14.5	22.7	33.0	45.4	47.5
75°	3654.9	673.2	53.7	26.8	18.6	14.5	12.4	22.7	33.0	45.4	47.5
77.5°	702.1	171.4	43.4	22.7	16.5	14.5	12.4	20.6	33.0	43.4	45.4
80°	237.5	76.4	35.1	20.6	16.5	14.5	12.4	20.6	31.0	41.3	43.4
82.5°	130.1	43.4	31.0	18.6	16.5	12.4	10.3	18.6	28.9	41.3	43.4
85°	101.2	31.0	24.8	18.6	16.5	12.4	10.3	18.6	28.9	39.2	41.3
87.5°	51.6	22.7	20.6	18.6	16.5	12.4	10.3	16.5	26.8	37.2	41.3
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)