

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: P196008

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196008
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24283)
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-AFL-1200-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 4000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND AUTOMOTIVE FRONTLINE OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 33929.2 lumens
Efficiency: N/A
Efficacy: 88.8 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type II - Short - Full Cutoff
BUG Rating: B2 - U0 - G3

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

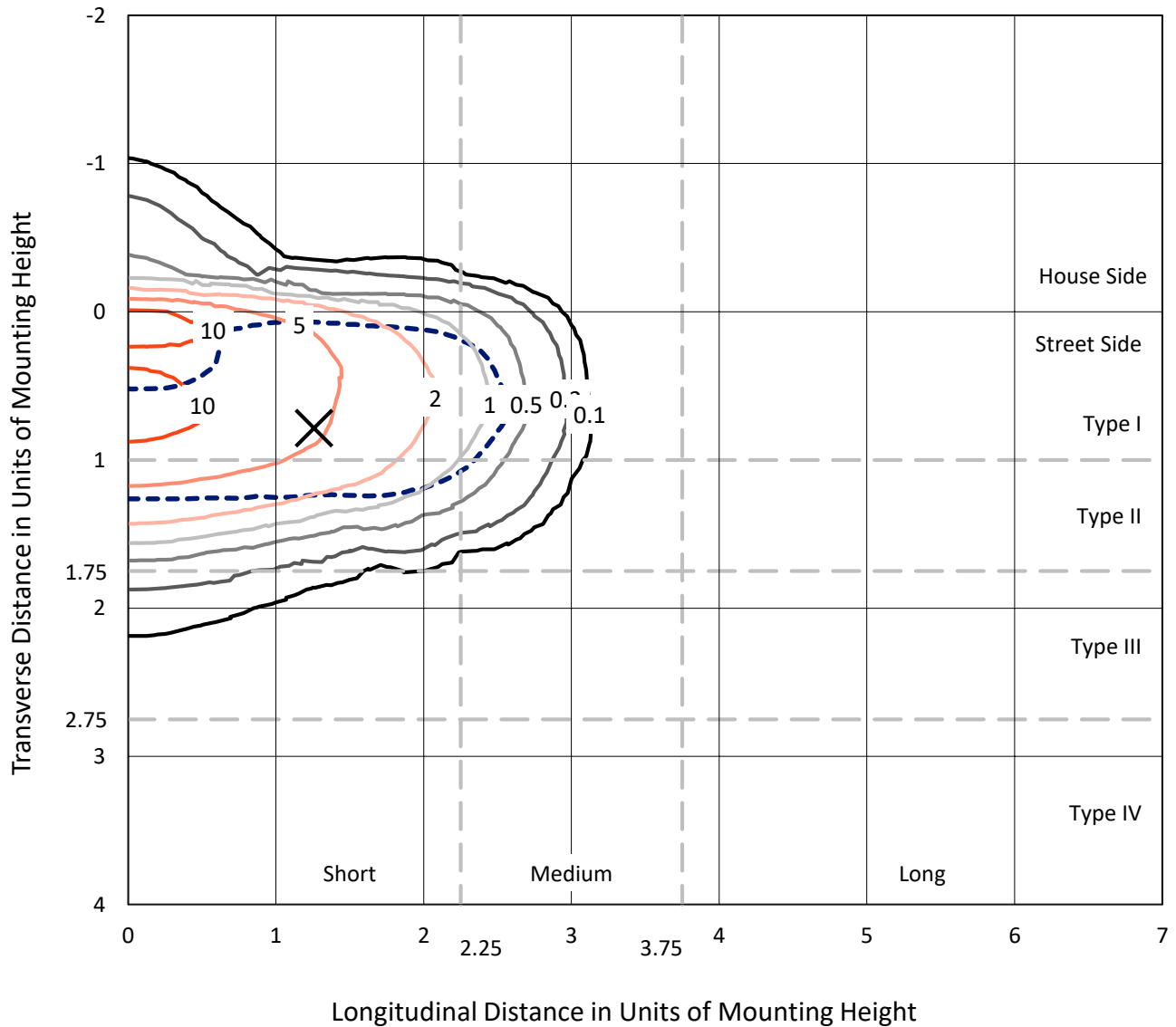


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Iso-Footcandle Lines of Horizontal Illumination

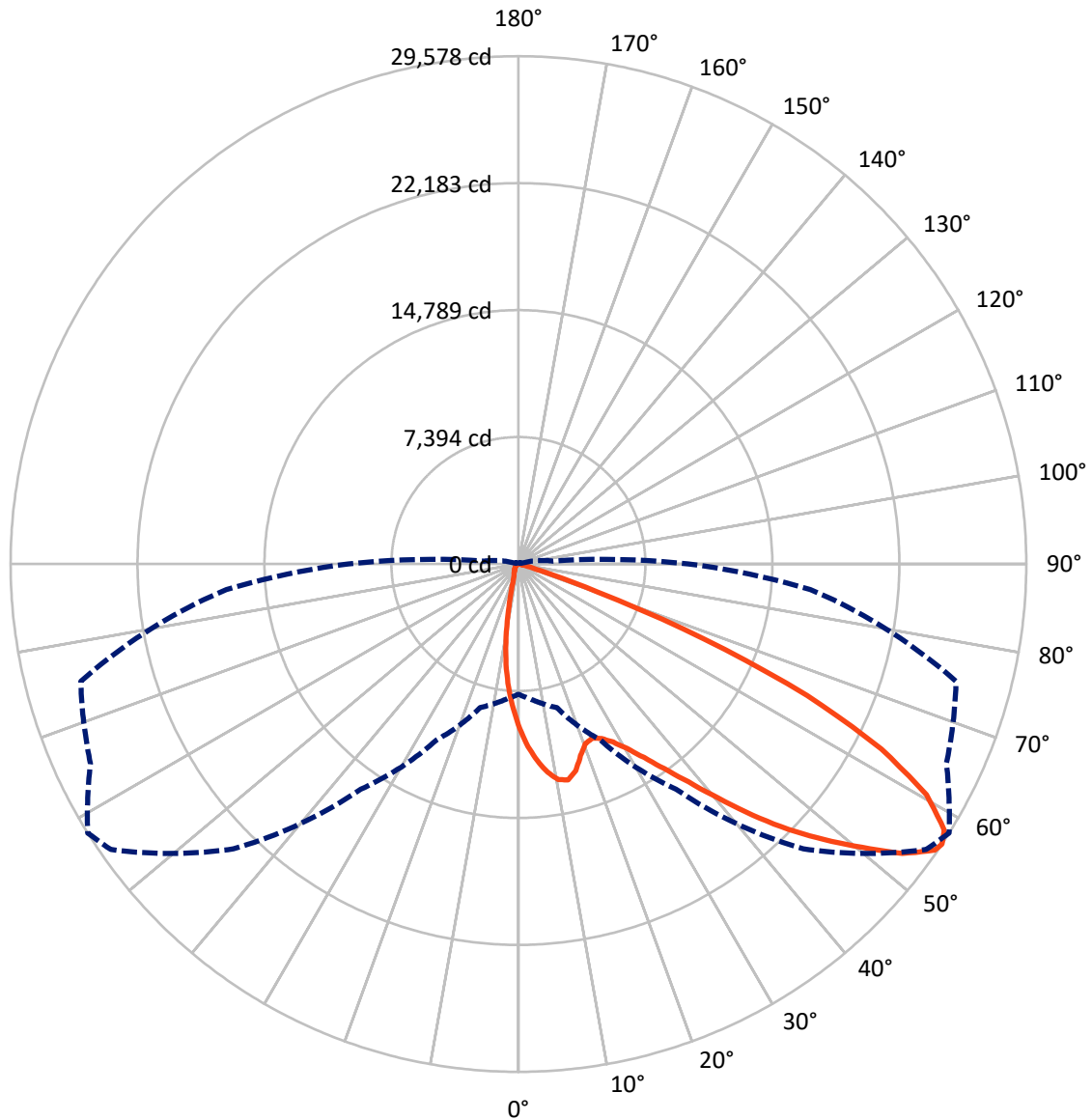
✕ Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 13.3 fc
 Type II - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral - - - Horizontal Cone Through 56-Deg Vertical

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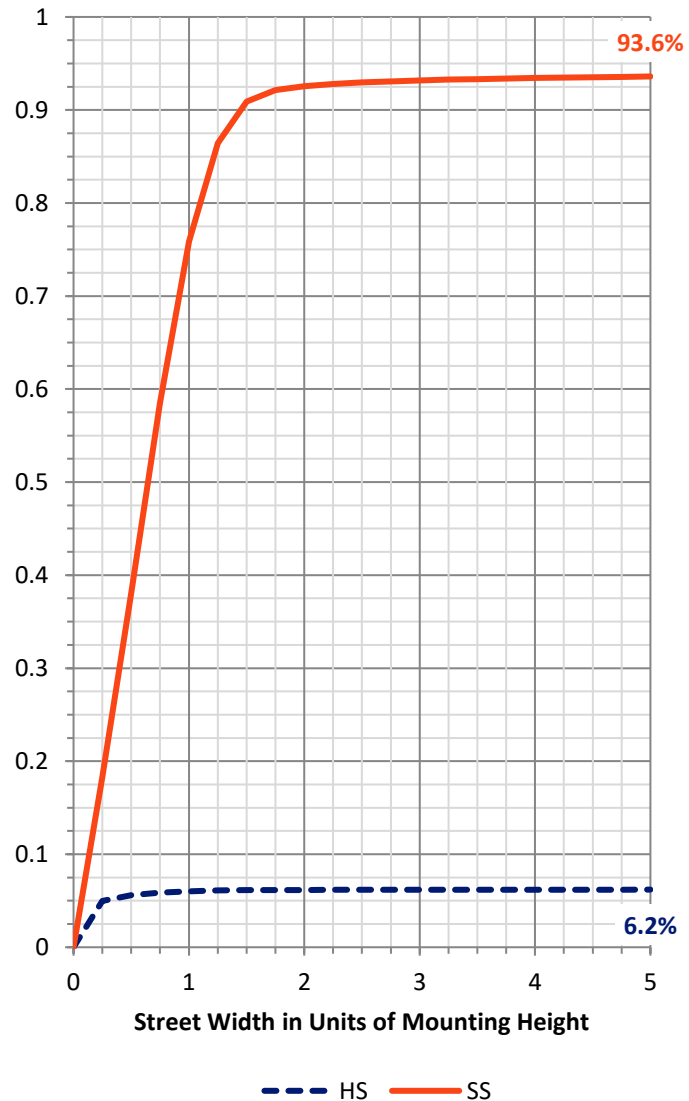
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2117.9	0.0	2117.9
	% Fixture	6.2	0.0	6.2
Street Side	Lumens	31811.4	0.0	31811.4
	% Fixture	93.8	0.0	93.8
Total	Lumens	33929.2	0.0	33929.2
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	819.5	2.4
10°-20°	1906.8	5.6
20°-30°	3208.5	9.5
30°-40°	5494.3	16.2
40°-50°	8290.9	24.4
50°-60°	8618.2	25.4
60°-70°	4838.1	14.3
70°-80°	663.1	2.0
80°-90°	89.8	0.3
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°	33929.2	100.0
0°-180°	33929.2	100.0

Coefficient of Utilization



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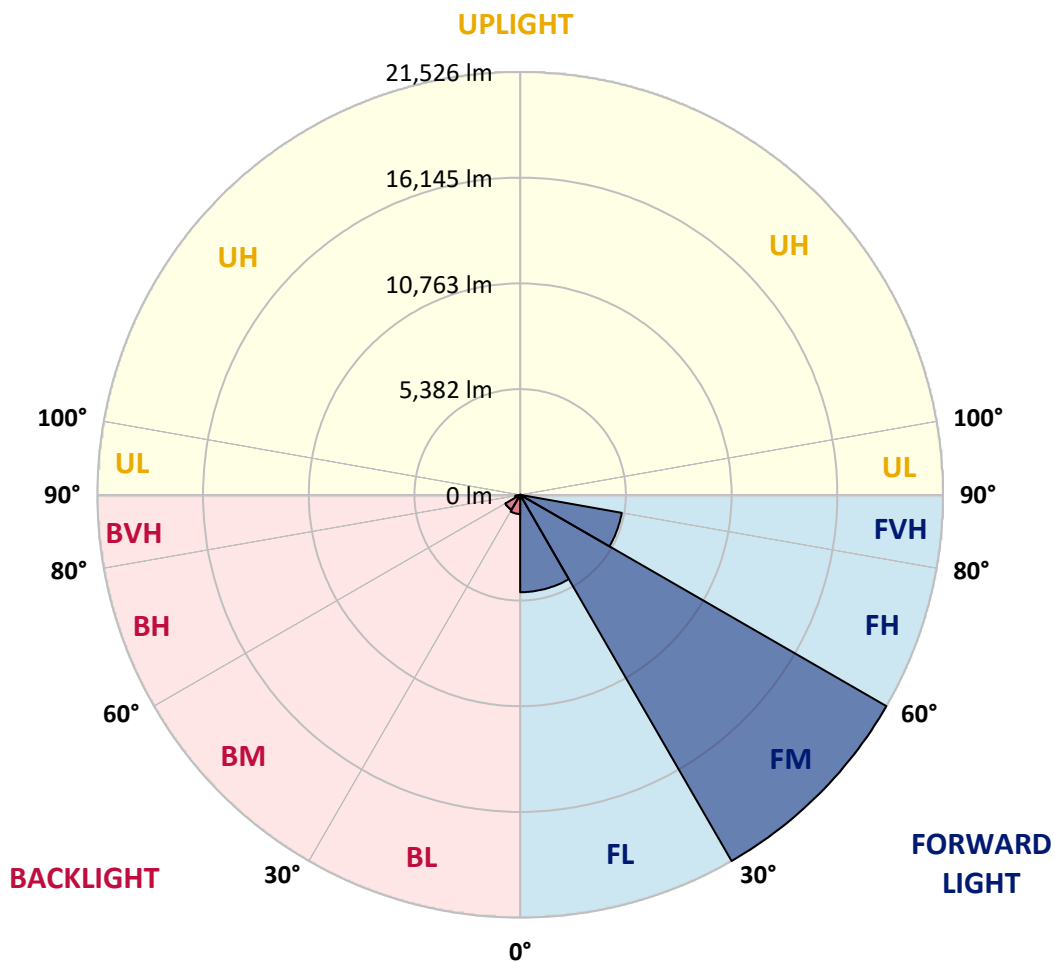
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	4957.8	14.6			
FM	(30°-60°)	21526.1	63.4			
FH	(60°-80°)	5250.0	15.5			G3/7500
FVH	(80°-90°)	77.4	0.2			G1/100
BL	(0°-30°)	977.0	2.9	B2/1000		
BM	(30°-60°)	877.3	2.6	B1/1000		
BH	(60°-80°)	251.2	0.7	B1/500		G1/500
BVH	(80°-90°)	12.4	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-G3

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	9606.4	9606.4	9606.4	9606.4	9606.4	9606.4	9606.4	9606.4	9606.4	9606.4	9606.4
2.5°	11558.2	11488.4	11415.8	11281.2	11157.0	10965.4	10701.4	10636.6	10429.6	10087.8	9769.5
5°	12554.9	12541.9	12492.7	12383.9	12249.4	12016.4	11718.7	11519.3	11198.4	10660.0	10046.5
7.5°	11964.6	12073.4	12252.0	12505.7	12676.5	12653.2	12425.4	12252.0	11933.5	11198.4	10318.3
10°	10085.3	10106.0	10352.0	10885.2	11729.1	12516.0	12813.7	12767.1	12474.6	11669.5	10556.4
12.5°	9422.6	9435.5	9492.5	9663.3	10212.1	11309.7	12658.4	12901.8	12878.4	12119.9	10810.1
15°	9474.4	9482.1	9497.7	9552.0	9707.4	10258.8	11871.4	12490.1	13137.2	12547.1	11058.6
17.5°	9883.3	9878.2	9829.0	9777.3	9826.5	10007.6	11068.9	11721.3	13082.9	12906.9	11263.1
20°	10680.6	10706.5	10540.9	10310.5	10191.5	10199.2	10672.9	11162.1	12777.5	13186.4	11415.8
22.5°	11801.6	11819.7	11547.9	11149.2	10799.7	10623.8	10755.7	11014.6	12425.4	13445.4	11540.1
25°	13139.9	13139.9	12759.4	12192.4	11651.4	11265.7	11151.8	11250.2	12290.8	13737.8	11664.3
27.5°	14584.3	14636.1	14139.1	13396.2	12681.7	12117.4	11760.1	11742.0	12394.4	14105.5	11804.1
30°	16155.7	16202.2	15612.0	14703.4	13856.9	13134.7	12585.9	12466.8	12790.4	14599.9	12008.6
32.5°	17719.1	17758.0	17105.7	16178.9	15192.7	14343.6	13621.3	13432.4	13502.2	15322.1	12309.0
35°	19707.2	19715.0	18889.2	17786.5	16732.9	15736.3	14822.5	14636.1	14558.4	16233.3	12741.3
37.5°	21288.8	21226.7	20703.8	19660.6	18451.7	17411.1	16336.8	16093.5	15907.1	17514.7	13411.7
40°	21661.6	21661.6	21584.0	21270.7	20310.4	19308.6	18268.0	17905.5	17493.9	19023.8	14312.5
42.5°	20690.9	20753.0	21265.6	21946.4	21954.2	21312.2	20294.8	19989.4	19264.5	20742.7	15296.2
45°	18519.0	18537.2	19766.8	21604.7	22852.4	23220.0	22469.3	22047.4	21042.9	22528.9	16197.0
47.5°	17737.3	17794.2	18317.2	20564.1	22919.7	24765.4	24555.7	23975.8	22689.4	24159.6	17038.4
50°	16536.1	16606.1	17245.4	19031.6	22313.9	25756.9	26551.5	25930.3	24188.1	25518.6	17455.1
52.5°	13662.7	13771.5	14674.9	17004.7	20799.7	25798.2	28379.1	28006.3	25723.2	26246.1	17405.9
55°	9401.9	9482.1	10535.7	13274.5	17745.0	24532.4	29166.1	29422.3	27092.5	26409.2	17167.8
56°	7584.7	7884.9	8656.4	11309.7	16005.5	23455.5	28984.8	29577.6	27499.0	26383.2	17064.3
57.5°	5014.2	5071.1	5912.5	8195.6	12852.6	21118.0	28166.8	29246.3	28021.9	26251.3	16989.2
60°	2358.2	2384.1	2687.0	3782.0	6955.7	15389.4	25508.3	27299.7	28213.4	25974.3	16986.6
62.5°	1537.6	1542.8	1579.0	1804.3	2844.9	8382.0	21146.4	23724.8	26626.6	25943.3	16937.4
65°	1265.8	1278.8	1234.8	1263.2	1488.5	3160.7	14915.6	18495.8	22901.6	25213.2	16383.4
67.5°	1115.7	1118.3	1058.8	1025.1	1089.9	1387.5	7514.8	11667.0	17128.9	21423.5	13494.5
70°	1017.3	1014.8	947.5	869.8	872.4	921.6	2448.8	4845.9	9476.9	12720.5	7747.7
72.5°	903.5	908.6	869.8	761.1	724.9	652.3	921.6	1307.2	3225.5	4084.8	2042.4
75°	792.1	781.7	743.0	673.0	605.7	437.5	463.4	556.6	841.3	833.5	440.1
77.5°	600.6	590.2	608.3	574.7	473.7	305.5	253.7	289.9	380.5	354.7	178.6
80°	458.2	453.0	414.2	491.8	432.3	230.4	173.4	178.6	207.0	188.9	88.0
82.5°	331.3	328.8	313.2	302.9	274.4	168.3	132.1	139.7	155.3	132.1	64.8
85°	126.8	126.8	245.9	207.0	188.9	113.9	93.2	101.0	119.1	95.7	44.0
87.5°	20.7	20.7	165.7	137.2	85.4	57.0	59.5	64.8	69.9	57.0	33.7
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°	9606.4	9606.4	9606.4	9606.4	9606.4	9606.4	9606.4	9606.4	9606.4	9606.4	9606.4
2.5°	9580.5	9407.1	9026.5	8659.0	8338.0	7985.9	7807.3	7600.2	7522.6	7367.2	7382.7
5°	9678.9	9316.4	8552.8	7747.7	7010.0	6259.3	5726.1	5223.8	4944.2	4667.3	4667.3
7.5°	9779.8	9225.9	8045.4	6758.9	5516.4	4229.8	3318.7	2588.6	2182.3	1910.4	1902.7
10°	9849.7	9109.4	7468.2	5612.1	3779.4	2179.6	1315.0	1035.4	934.5	890.5	887.9
12.5°	9940.3	8992.9	6810.7	4260.9	2099.4	1035.4	820.6	776.6	758.5	748.1	748.1
15°	10018.0	8827.2	6013.4	2865.6	1102.7	776.6	706.7	691.2	688.5	686.0	688.5
17.5°	10036.1	8591.7	5058.2	1677.4	799.8	678.2	647.1	634.2	634.2	631.7	631.7
20°	9994.6	8281.0	4002.0	1035.4	691.2	623.9	590.2	574.7	572.1	572.1	572.1
22.5°	9909.2	7884.9	2958.8	784.4	629.0	574.7	530.7	515.2	515.2	517.7	520.3
25°	9803.1	7416.4	2032.1	675.7	582.5	522.9	478.9	463.4	468.5	473.7	476.3
27.5°	9668.5	6857.2	1330.6	585.0	520.3	471.2	432.3	422.0	432.3	442.6	447.8
30°	9533.9	6243.8	900.8	507.4	450.4	414.2	390.9	388.3	403.9	427.1	429.7
32.5°	9445.9	5614.8	680.8	455.6	396.1	365.0	354.7	359.8	383.1	409.0	414.2
35°	9438.2	5001.2	579.8	414.2	359.8	331.3	326.1	341.7	367.5	388.3	393.4
37.5°	9559.8	4426.5	525.5	383.1	331.3	302.9	295.1	323.6	346.9	367.5	372.8
40°	9805.7	3911.5	489.3	354.7	308.0	274.4	269.2	292.6	315.8	339.1	346.9
42.5°	10113.8	3430.0	447.8	326.1	282.1	243.4	238.1	256.2	279.6	313.2	318.4
45°	10380.4	2982.1	403.9	295.1	253.7	209.7	207.0	227.8	245.9	277.0	282.1
47.5°	10605.6	2609.3	362.4	261.5	217.5	186.4	183.8	194.2	204.5	232.9	238.1
50°	10486.6	2293.6	321.0	214.8	176.0	160.5	157.9	157.9	170.8	199.4	204.5
52.5°	10194.0	2096.7	282.1	178.6	145.0	137.2	129.4	132.1	145.0	157.9	160.5
55°	9958.4	2003.6	248.5	157.9	121.6	113.9	106.2	103.5	106.2	101.0	95.7
56°	9901.4	1993.2	240.7	152.7	116.5	106.2	95.7	90.6	88.0	77.6	75.1
57.5°	9875.6	1993.2	227.8	142.4	108.7	95.7	82.9	72.5	62.1	54.3	54.3
60°	9854.9	2006.2	212.3	124.3	93.2	77.6	59.5	44.0	36.2	36.2	36.2
62.5°	9810.9	2001.0	194.2	103.5	80.2	59.5	36.2	28.4	25.9	28.4	31.1
65°	9316.4	1858.6	170.8	82.9	62.1	41.4	20.7	20.7	23.3	28.4	31.1
67.5°	7507.0	1408.2	139.7	64.8	44.0	31.1	18.1	18.1	23.3	28.4	31.1
70°	4123.7	743.0	119.1	46.5	33.7	25.9	18.1	15.5	23.3	28.4	31.1
72.5°	1007.0	310.7	108.7	36.2	31.1	23.3	15.5	15.5	23.3	28.4	31.1
75°	248.5	232.9	88.0	28.4	25.9	20.7	15.5	15.5	23.3	28.4	31.1
77.5°	116.5	308.0	59.5	25.9	23.3	18.1	15.5	15.5	23.3	28.4	28.4
80°	69.9	232.9	36.2	23.3	20.7	18.1	15.5	15.5	23.3	28.4	31.1
82.5°	41.4	67.3	25.9	23.3	20.7	15.5	15.5	15.5	23.3	28.4	31.1
85°	36.2	33.7	25.9	23.3	20.7	18.1	15.5	15.5	25.9	31.1	31.1
87.5°	28.4	25.9	23.3	20.7	20.7	18.1	15.5	15.5	23.3	28.4	31.1
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)