

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: P270314

Luminaire Tested: **NAV-AF-01-D-UNV-T4FT-7027-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270314
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24256)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-01-D-UNV-T4FT-7027-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 2700K, 615mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE IV FORWARD THROW OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3524.5 lumens
Efficiency: N/A
Efficacy: 103.7 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B1 - U0 - G1

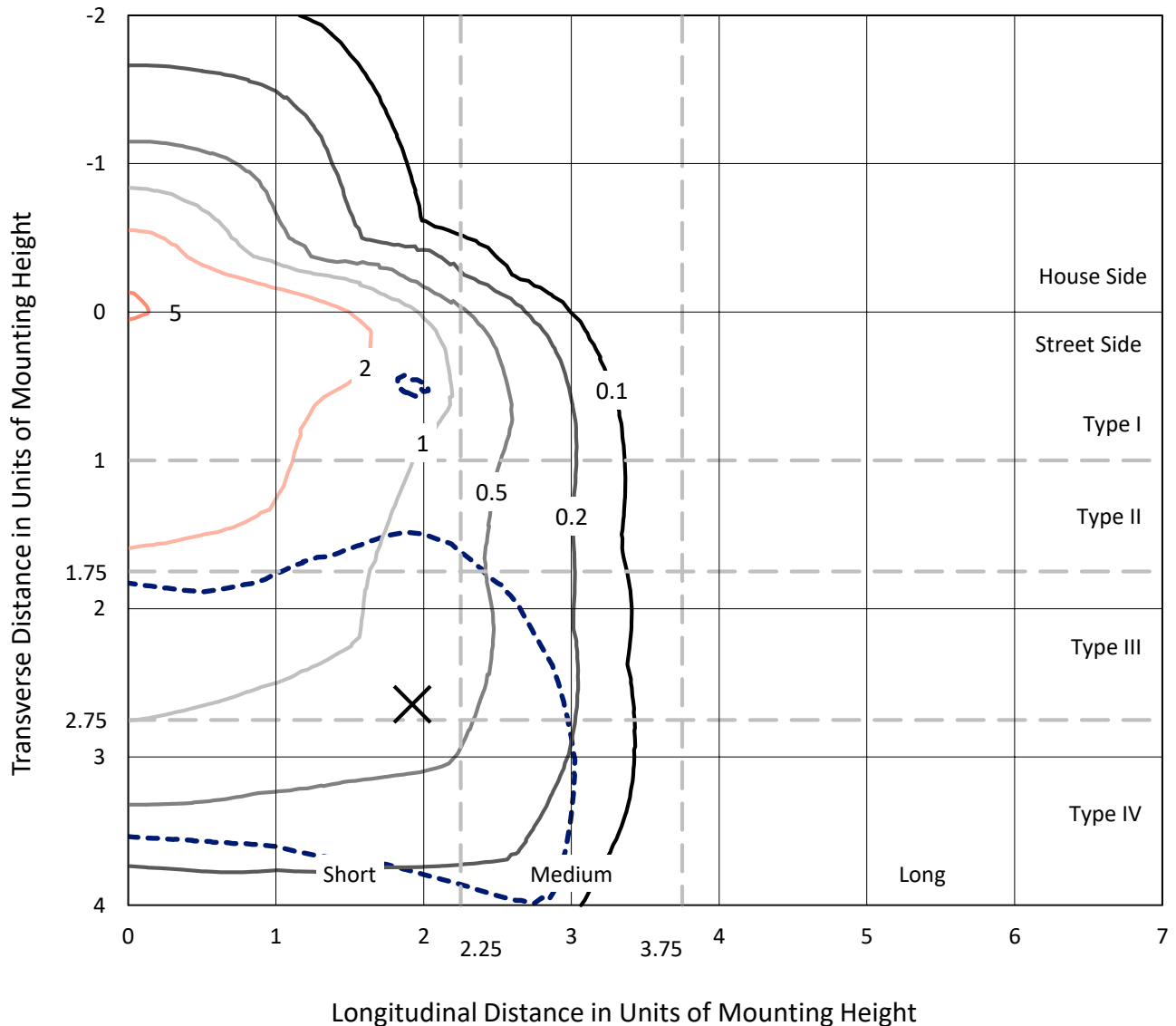
Input Watts (W): 34
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

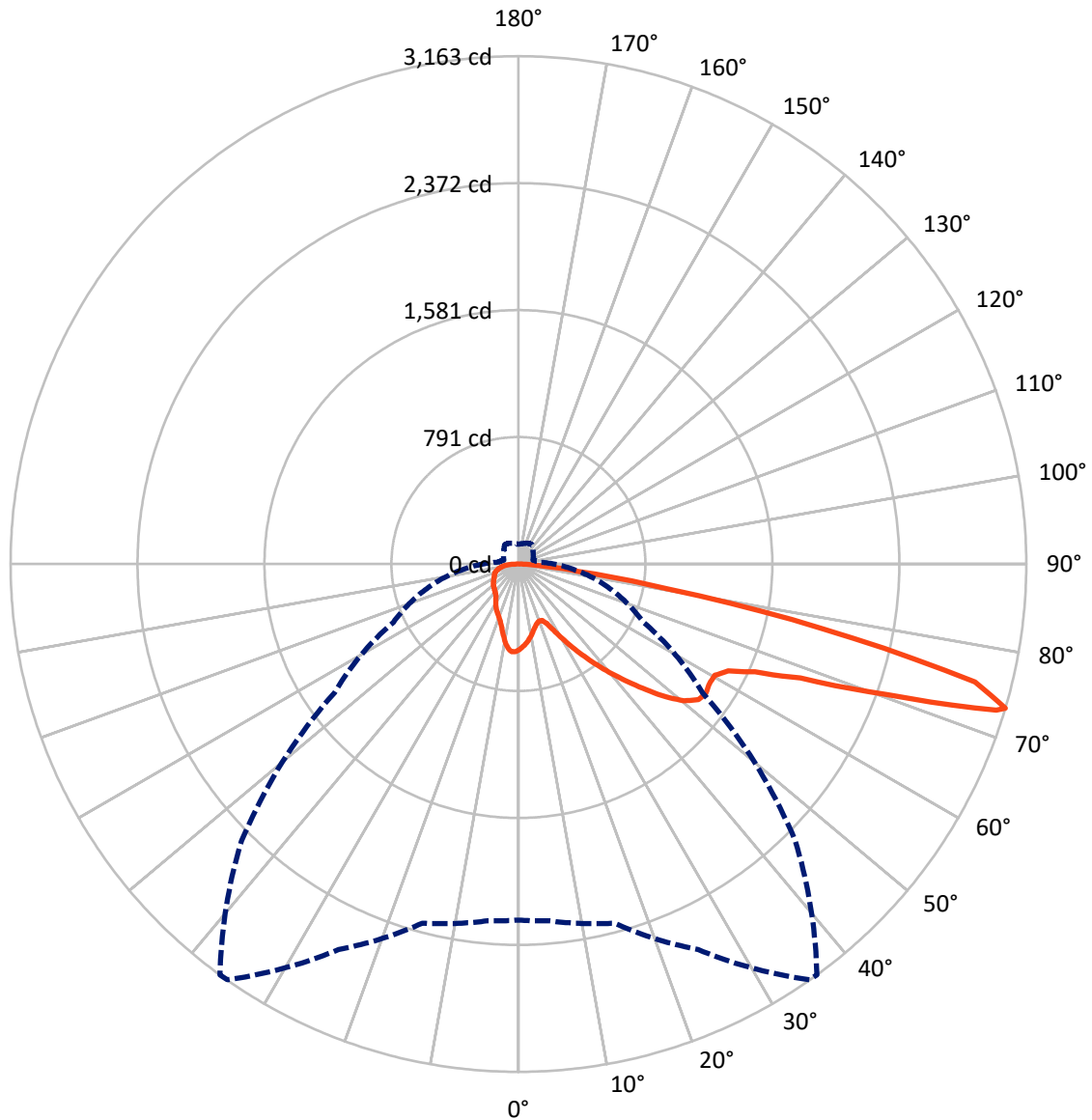
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5.3 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 36-Deg Lateral - - - Horizontal Cone Through 73-Deg Vertical

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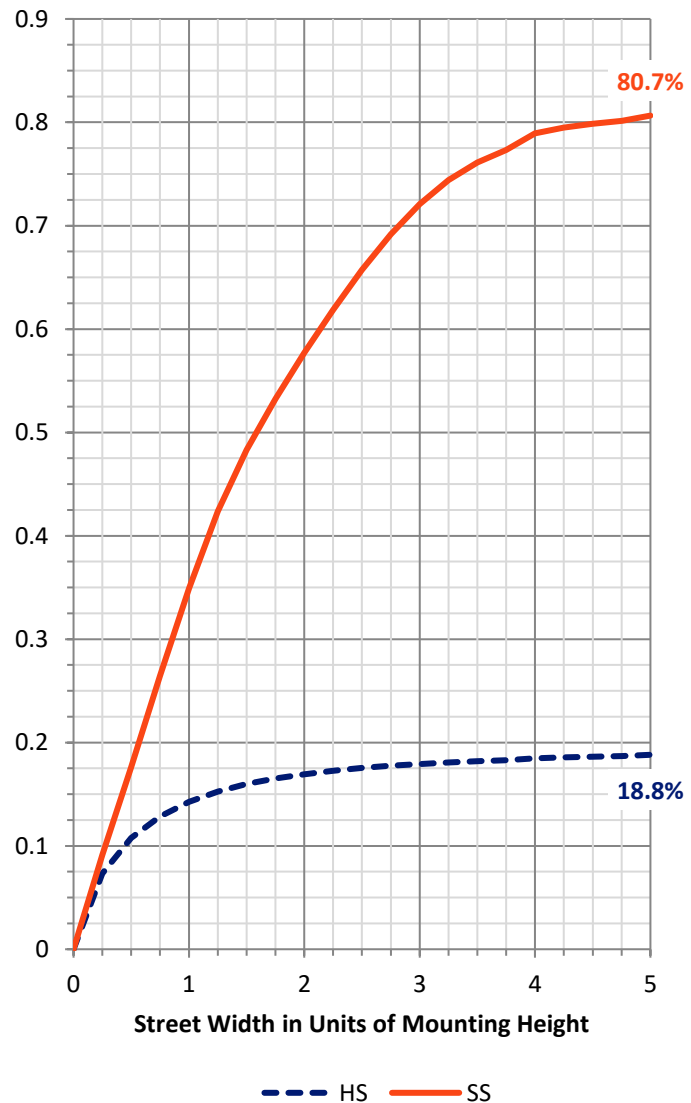
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	679.6	0.0	679.6
	% Fixture	19.3	0.0	19.3
Street Side	Lumens	2844.9	0.0	2844.9
	% Fixture	80.7	0.0	80.7
Total	Lumens	3524.5	0.0	3524.5
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	48.5	1.4
10°-20°	121.8	3.5
20°-30°	195.3	5.5
30°-40°	323.0	9.2
40°-50°	499.7	14.2
50°-60°	669.0	19.0
60°-70°	873.9	24.8
70°-80°	713.9	20.3
80°-90°	79.5	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°	3524.5	100.0
0°-180°	3524.5	100.0



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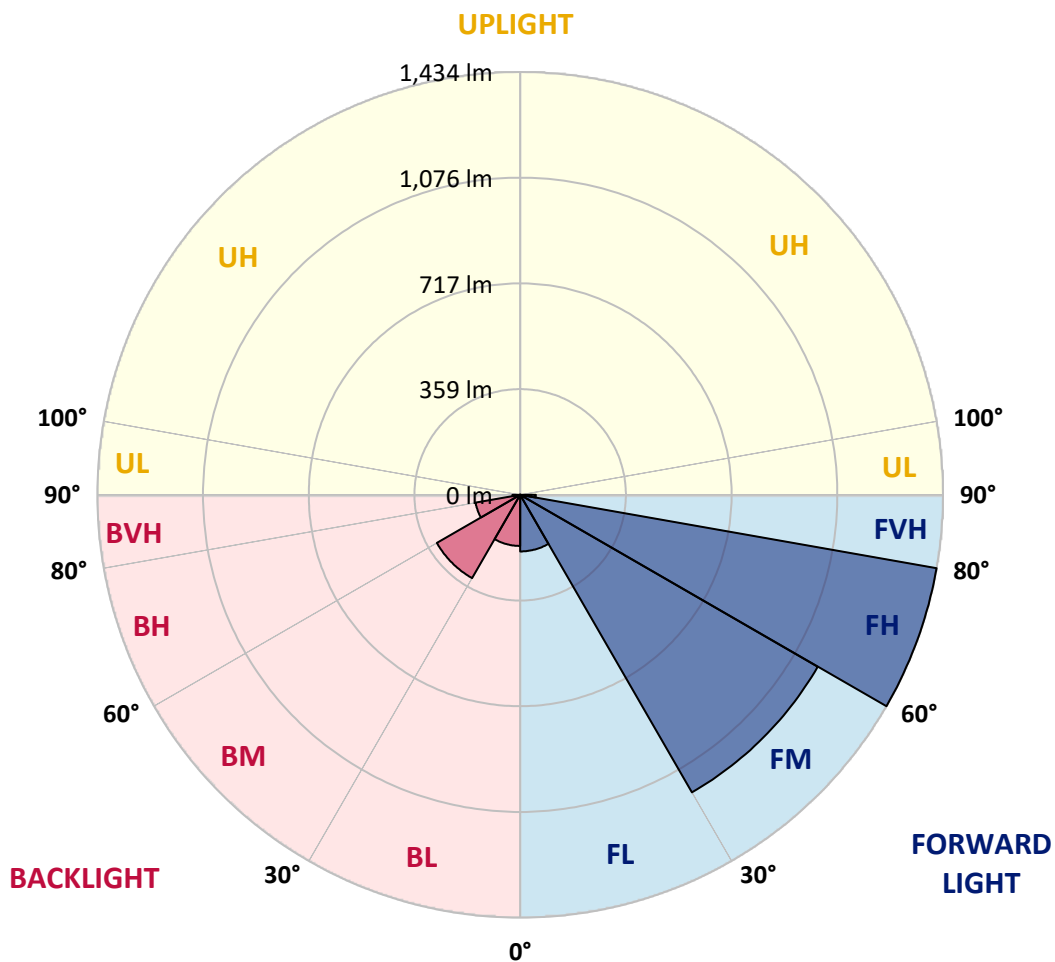
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	192.0	5.4			
FM (30°-60°)	1165.3	33.1			
FH (60°-80°)	1434.2	40.7			G1/1800
FVH (80°-90°)	53.3	1.5			G1/100
BL (0°-30°)	173.5	4.9	B1/500		
BM (30°-60°)	326.4	9.3	B1/1000		
BH (60°-80°)	153.6	4.4	B1/500		G1/500
BVH (80°-90°)	26.2	0.7			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G1

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	533.9	533.9	533.9	533.9	533.9	533.9	533.9	533.9	533.9	533.9	533.9
2.5°	513.6	514.8	515.1	516.6	516.6	516.3	517.1	519.8	521.0	524.3	526.9
5°	488.1	489.8	490.5	493.1	496.5	496.8	499.2	504.3	509.2	516.2	521.9
7.5°	459.8	461.5	463.3	468.9	473.9	474.2	478.9	487.3	493.8	502.3	512.8
10°	432.2	432.7	434.4	441.5	448.1	448.8	455.5	465.0	473.6	485.4	497.3
12.5°	409.5	411.0	410.4	415.8	421.5	421.9	430.8	442.8	455.5	468.9	483.0
15°	401.7	401.5	396.8	396.6	399.0	399.4	408.2	422.2	436.4	453.0	471.2
17.5°	407.1	405.3	393.0	385.5	383.8	384.2	390.8	406.0	421.2	440.3	462.0
20°	436.7	429.7	400.9	382.5	377.3	377.3	381.2	393.5	410.3	432.4	459.8
22.5°	506.7	496.0	434.4	401.7	383.5	381.8	378.8	388.2	406.9	433.5	468.9
25°	594.9	589.8	496.0	453.0	415.6	409.7	390.6	393.8	413.8	445.6	494.0
27.5°	676.8	667.8	576.8	527.6	474.8	465.9	425.0	411.3	430.4	468.0	530.3
30°	724.5	718.4	660.0	613.0	550.0	538.5	480.1	445.9	459.9	504.9	581.8
32.5°	776.3	772.8	743.3	700.5	631.5	618.3	551.3	502.1	505.1	554.1	643.8
35°	826.8	831.6	814.7	783.3	719.3	707.0	647.0	575.5	560.9	609.1	710.1
37.5°	887.3	888.3	877.9	857.4	811.4	801.5	752.1	653.8	621.6	667.8	774.1
40°	1007.9	990.2	949.0	932.9	905.6	899.4	842.9	725.8	678.1	727.9	834.6
42.5°	1138.5	1110.9	1046.4	1020.0	1009.1	1003.2	918.5	773.7	731.0	788.3	894.0
45°	1243.8	1221.3	1158.2	1125.4	1126.8	1117.4	984.6	816.5	788.3	848.7	960.2
47.5°	1347.4	1310.0	1239.2	1234.5	1250.3	1236.3	1047.9	859.1	848.0	914.6	1026.6
50°	1354.1	1320.1	1291.5	1329.0	1355.9	1338.7	1105.2	915.3	910.1	994.2	1112.0
52.5°	1272.4	1267.5	1311.2	1374.4	1419.1	1403.6	1151.9	972.8	973.5	1094.0	1216.1
55°	1242.6	1236.3	1288.8	1366.7	1426.9	1417.7	1186.8	1037.7	1043.8	1214.9	1328.0
57.5°	1292.8	1277.1	1287.5	1351.9	1408.5	1403.2	1223.1	1109.9	1120.7	1354.1	1431.2
60°	1448.3	1416.4	1361.7	1373.9	1409.3	1406.0	1275.1	1190.3	1208.6	1499.2	1496.5
62.5°	1681.4	1645.2	1533.9	1480.1	1472.3	1466.4	1360.8	1289.0	1298.1	1604.1	1458.5
65°	1937.3	1898.3	1766.0	1677.9	1631.9	1618.8	1499.2	1408.2	1350.5	1603.8	1310.3
67.5°	2224.4	2183.2	2051.2	1967.3	1917.3	1895.2	1723.8	1504.4	1333.5	1468.1	1048.4
70°	2518.4	2479.2	2418.6	2448.1	2470.0	2436.2	2077.7	1536.5	1211.3	1151.0	704.0
72.5°	2362.4	2359.2	2405.0	2683.1	3106.2	3112.8	2431.1	1445.9	935.9	684.1	375.3
73°	2217.3	2230.6	2315.7	2648.5	3160.5	3162.8	2438.0	1399.1	859.1	589.4	329.7
75°	1148.8	1238.4	1554.1	2147.5	2926.6	2937.1	2149.0	1059.2	512.2	327.4	222.2
77.5°	307.7	303.6	500.7	1046.3	1951.2	1937.3	1358.0	512.8	245.4	205.4	155.9
80°	105.6	106.8	170.4	382.7	910.7	943.2	589.4	223.7	161.4	143.1	110.4
82.5°	53.8	55.5	89.1	162.9	380.9	372.8	189.7	131.7	108.2	86.9	61.9
85°	28.7	29.6	49.0	84.4	139.7	141.4	66.7	70.2	68.7	49.2	30.5
87.5°	14.2	14.6	23.5	37.2	51.7	49.9	23.3	30.5	33.9	27.8	16.8
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°	533.9	533.9	533.9	533.9	533.9	533.9	533.9	533.9	533.9	533.9	533.9
2.5°	530.3	530.3	533.1	538.2	541.7	545.0	547.2	550.9	552.8	552.6	552.5
5°	526.6	528.9	534.8	540.8	544.8	547.4	547.4	549.0	549.0	548.4	547.4
7.5°	518.4	522.3	530.7	536.1	537.2	534.3	528.6	524.0	518.4	515.4	514.4
10°	505.1	510.1	520.8	523.4	517.6	507.3	493.1	481.0	470.3	465.3	463.7
12.5°	492.2	498.6	508.8	504.9	491.2	470.9	449.2	432.7	420.5	415.8	414.3
15°	481.4	489.2	497.1	485.3	461.1	433.2	409.1	393.6	384.5	380.9	380.1
17.5°	474.2	483.5	486.2	464.0	430.4	399.0	377.7	367.6	363.6	362.0	361.7
20°	474.8	485.1	478.5	443.5	400.9	369.3	355.2	352.2	352.2	352.2	352.0
22.5°	487.1	496.0	475.5	424.1	372.3	344.2	338.1	340.5	342.4	342.4	342.2
25°	512.7	517.6	477.7	405.6	345.8	322.4	322.8	327.4	329.0	329.0	328.5
27.5°	551.6	547.4	481.8	385.0	319.5	302.8	306.0	310.2	311.3	310.6	310.4
30°	600.3	584.3	485.1	360.8	295.0	284.5	287.1	289.6	288.6	287.1	286.9
32.5°	655.0	621.6	483.0	333.7	273.3	265.4	266.9	268.2	266.9	263.2	263.2
35°	709.2	655.5	472.1	304.0	255.9	247.0	246.8	251.0	250.7	246.3	246.6
37.5°	756.7	682.2	450.8	276.9	241.1	233.6	234.5	237.2	238.5	232.4	231.8
40°	798.1	700.5	420.8	254.0	229.2	229.7	227.4	223.0	221.4	218.7	218.4
42.5°	837.1	713.3	389.0	234.6	223.3	228.3	220.2	210.1	205.8	208.2	209.8
45°	875.4	727.5	358.3	218.7	215.7	224.3	213.0	201.8	196.9	197.9	199.6
47.5°	922.2	747.5	321.4	201.8	204.1	217.0	208.4	196.4	189.1	184.5	183.2
50°	983.7	776.3	273.4	183.4	191.7	208.9	204.6	188.6	180.5	171.5	169.3
52.5°	1060.8	803.8	225.0	168.6	181.5	201.9	198.3	181.8	171.9	161.2	159.4
55°	1137.6	807.4	183.4	155.9	170.1	192.5	190.8	176.4	162.6	153.8	152.1
57.5°	1191.3	771.5	155.3	145.0	159.2	181.0	183.9	170.0	154.8	148.0	147.0
60°	1192.2	685.2	138.3	137.9	150.9	170.9	176.6	162.4	149.7	145.3	144.4
62.5°	1097.5	552.2	127.4	132.6	144.8	162.6	171.2	158.1	148.7	147.0	146.1
65°	920.0	408.0	118.7	127.6	139.2	155.6	166.8	156.8	148.2	147.6	147.0
67.5°	679.2	279.7	111.3	121.5	132.9	148.5	162.6	154.8	145.5	148.2	147.3
70°	427.2	186.8	104.4	114.3	124.8	140.1	156.9	151.2	142.2	140.7	137.7
72.5°	241.1	135.0	96.1	105.0	113.9	129.1	149.4	145.0	134.6	128.3	125.5
73°	217.8	127.9	94.1	102.8	111.5	127.0	147.6	143.3	132.3	125.5	122.7
75°	159.4	104.7	84.9	93.7	101.1	116.7	139.1	134.3	122.4	114.3	112.4
77.5°	115.5	80.6	73.0	80.8	87.6	102.3	126.3	120.9	109.2	104.8	103.0
80°	83.4	61.2	60.5	68.1	73.9	88.9	112.6	107.1	95.8	109.1	106.1
82.5°	49.8	39.2	44.3	52.8	58.8	74.6	97.8	91.4	80.6	81.6	69.3
85°	23.7	22.2	27.6	34.8	38.9	51.1	81.6	76.4	64.5	52.8	51.7
87.5°	10.5	10.2	13.2	15.5	20.8	30.7	55.8	49.4	46.8	27.9	22.0
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)