

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: P196777

Luminaire Tested: **NAV-AF-01-D-UNV-T3-7030-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196777
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (p24135)
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-T3-7030-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 3000K, 615mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE III OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3894 lumens
Efficiency: N/A
Efficacy: 114.5 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G1

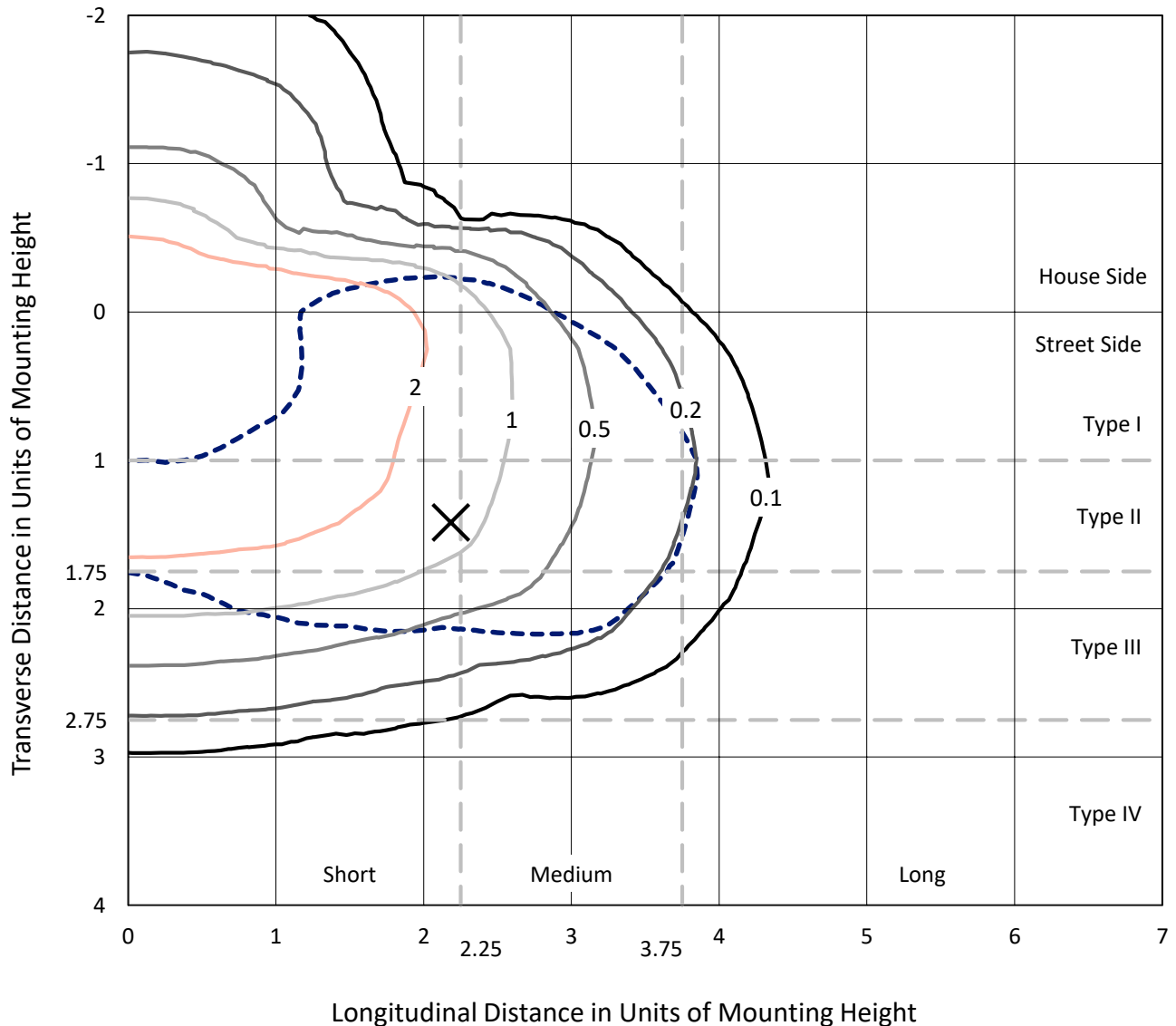
Input Watts (W): 34
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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 CATALOG NUMBER: NAV-AF-01-D-UNV-T3-7030-600

Iso-Footcandle Lines of Horizontal Illumination

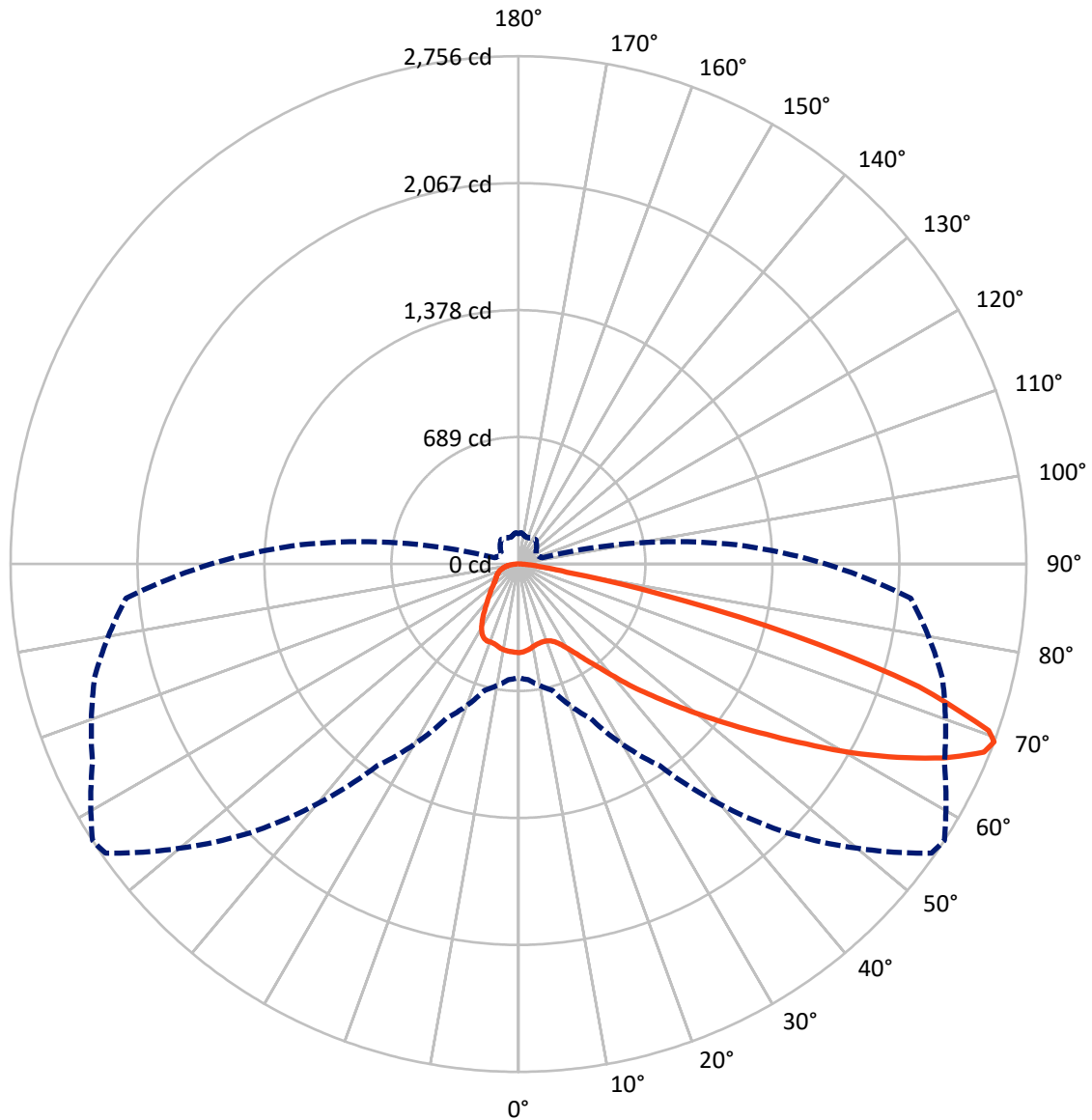
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 4.9 fc
 Type III - Short - Semi-Cutoff

REPORT NUMBER: P196777
CATALOG NUMBER: NAV-AF-01-D-UNV-T3-7030-600

Luminous Intensity Polar Plot



— Vertical Plane Through 57-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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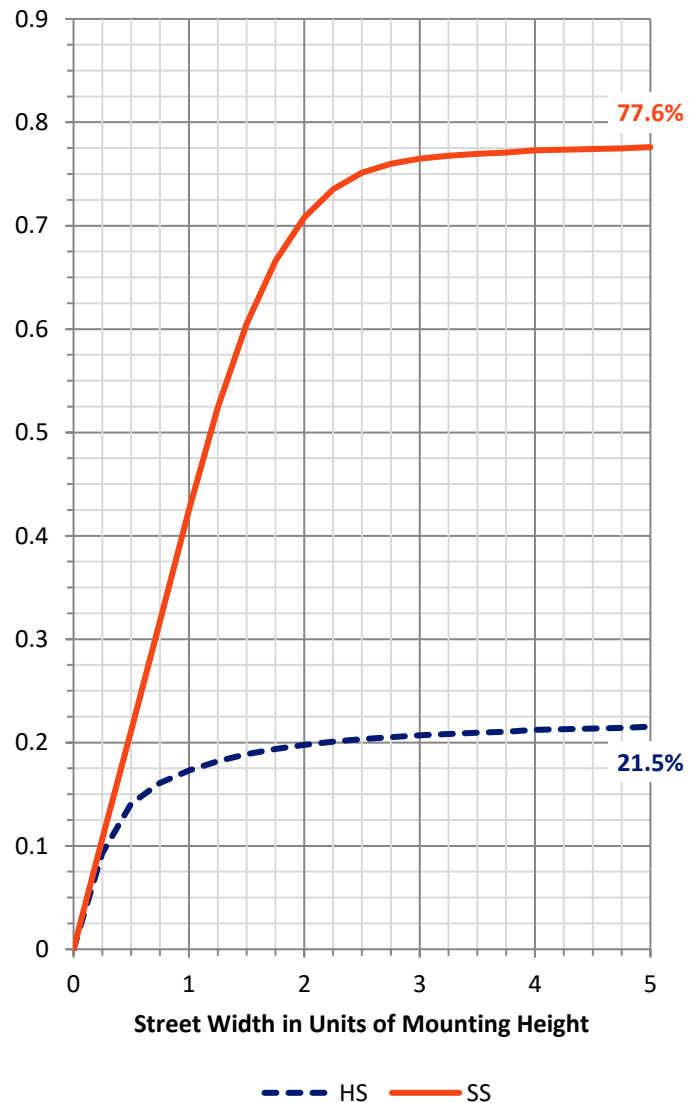
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	859.3	0.0	859.3
	% Fixture	22.1	0.0	22.1
Street Side	Lumens	3034.7	0.0	3034.7
	% Fixture	77.9	0.0	77.9
Total	Lumens	3894.0	0.0	3894.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	45.0	1.2
10°-20°	128.1	3.3
20°-30°	213.1	5.5
30°-40°	347.9	8.9
40°-50°	587.2	15.1
50°-60°	913.4	23.5
60°-70°	1088.0	27.9
70°-80°	506.9	13.0
80°-90°	64.5	1.7
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°	3894.0	100.0
0°-180°	3894.0	100.0



REPORT NUMBER: P196777

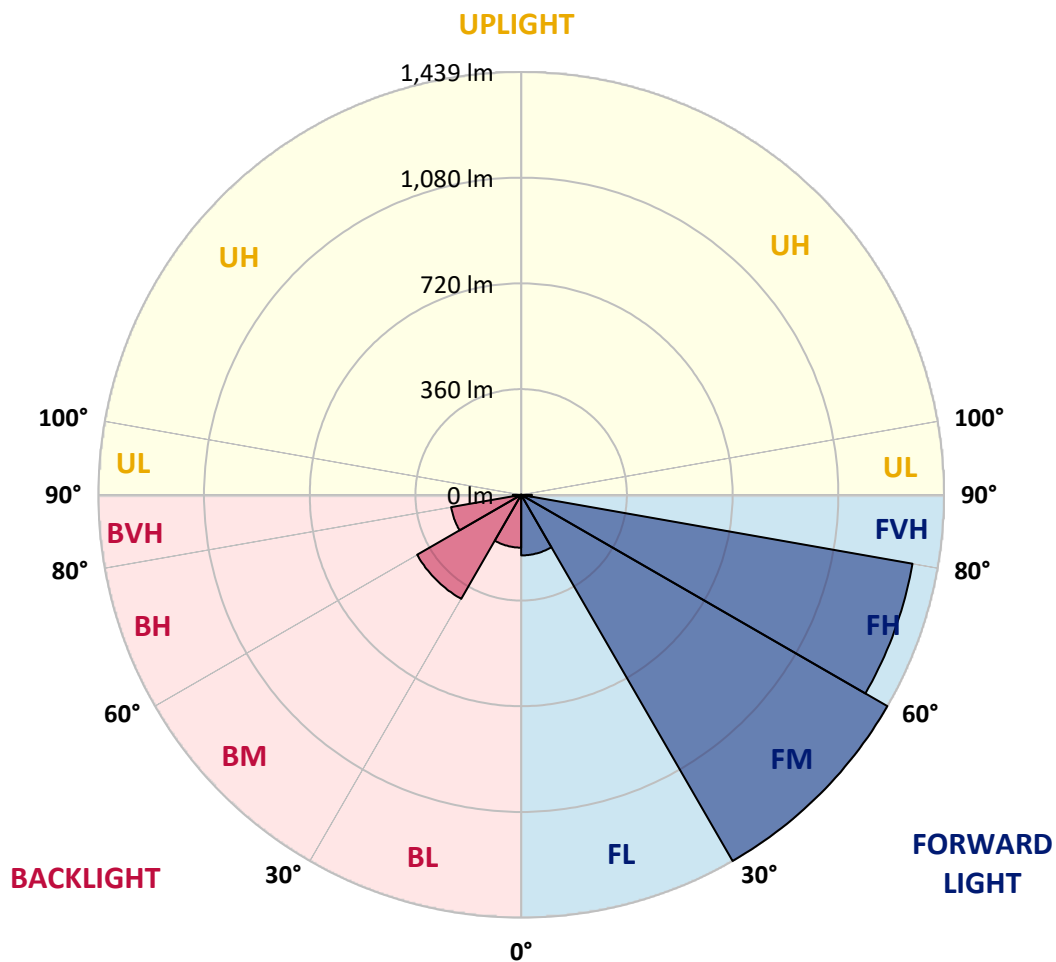
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	206.2	5.3			
FM	(30°-60°)	1439.5	37.0			
FH	(60°-80°)	1352.8	34.7			G1/1800
FVH	(80°-90°)	36.2	0.9			G1/100
BL	(0°-30°)	180.0	4.6	B1/500		
BM	(30°-60°)	409.0	10.5	B1/1000		
BH	(60°-80°)	242.1	6.2	B1/500		G1/500
BVH	(80°-90°)	28.2	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 III Short





REPORT NUMBER: P196777

CATALOG NUMBER: NAV-AF-01-D-UNV-T3-7030-600

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	57°	65°	75°	85°
0°	481.2	481.2	481.2	481.2	481.2	481.2	481.2	481.2	481.2	481.2	481.2
2.5°	478.4	478.4	479.6	479.6	479.6	479.1	477.7	478.1	477.1	476.4	475.2
5°	468.7	469.2	470.7	471.1	471.9	472.2	472.2	471.9	472.2	472.2	471.5
7.5°	455.2	455.7	457.5	458.5	460.7	462.7	463.7	463.7	464.9	465.9	466.2
10°	447.0	447.0	448.0	448.0	449.7	450.7	454.0	453.8	457.2	460.4	461.9
12.5°	446.0	446.0	445.4	443.7	442.7	442.5	445.8	446.3	451.5	457.2	460.0
15°	449.3	449.3	447.8	444.2	440.6	438.7	442.0	443.0	448.7	455.5	459.7
17.5°	459.7	459.4	456.2	449.3	442.7	440.0	441.0	442.0	447.2	454.9	460.2
20°	482.9	482.9	476.0	463.2	452.0	445.4	444.0	444.8	448.5	455.7	462.5
22.5°	523.6	524.2	511.8	490.9	471.7	457.9	452.0	452.8	454.5	461.4	468.9
25°	583.3	581.4	563.7	533.9	504.1	480.6	468.4	469.2	469.2	475.6	483.4
27.5°	646.7	647.2	621.8	589.8	550.4	515.6	496.1	495.8	495.6	501.8	510.0
30°	718.3	718.5	689.1	652.2	607.1	562.4	533.3	532.9	530.8	538.4	549.2
32.5°	796.5	796.3	762.1	720.4	670.3	619.7	581.8	581.6	579.8	590.3	603.3
35°	883.3	883.3	849.4	798.0	743.9	687.6	643.6	643.4	644.4	658.7	670.9
37.5°	987.7	990.0	949.0	886.7	827.6	767.5	716.5	715.0	707.5	731.4	751.6
40°	1096.6	1102.9	1060.5	987.7	923.9	861.8	805.5	804.4	798.0	823.4	856.0
42.5°	1214.5	1228.7	1181.6	1107.4	1037.9	970.8	914.2	911.4	886.5	926.1	977.3
45°	1369.1	1378.3	1310.0	1242.8	1177.2	1100.7	1033.4	1018.7	993.7	1044.5	1110.8
47.5°	1474.4	1469.9	1427.3	1382.1	1339.9	1266.7	1163.2	1144.5	1114.1	1181.4	1254.4
50°	1539.7	1542.8	1518.9	1516.7	1514.5	1463.4	1309.8	1287.4	1252.2	1332.0	1417.2
52.5°	1582.7	1568.1	1572.4	1623.1	1684.8	1660.3	1475.5	1450.6	1414.5	1494.2	1590.5
55°	1564.8	1545.4	1584.5	1684.8	1829.5	1835.1	1657.6	1631.9	1600.9	1666.7	1799.0
57.5°	1490.6	1500.2	1562.1	1701.5	1928.5	1991.6	1866.7	1840.6	1779.8	1846.6	1996.8
60°	1386.1	1405.7	1500.2	1675.1	1997.8	2113.5	2096.3	2078.8	1974.2	2021.6	2204.8
62.5°	1273.9	1293.3	1409.6	1629.9	1966.6	2221.5	2321.6	2311.0	2188.8	2190.1	2336.6
65°	1108.1	1116.1	1234.7	1506.8	1880.3	2318.9	2547.3	2537.9	2394.0	2333.9	2373.5
67.5°	836.9	846.9	944.3	1189.4	1616.9	2266.1	2727.5	2726.0	2517.5	2387.4	2285.8
69°	618.0	630.2	709.7	923.4	1337.0	2064.7	2736.1	2756.2	2550.7	2381.8	2137.4
70°	452.3	466.2	539.7	732.9	1113.6	1842.3	2663.5	2706.9	2538.1	2347.1	2021.9
72.5°	192.2	197.0	233.0	330.8	564.9	1110.8	2181.6	2272.8	2292.3	2103.0	1579.6
75°	120.4	122.0	136.1	169.8	251.3	459.4	1412.7	1537.2	1711.4	1631.7	1057.5
77.5°	90.8	92.0	100.2	116.9	156.0	171.5	655.4	781.5	980.3	959.9	526.3
80°	69.6	70.3	75.8	85.0	110.0	107.4	212.6	267.2	409.0	361.0	186.2
82.5°	54.6	54.8	59.5	61.3	76.8	72.3	106.7	118.9	165.3	137.3	91.0
85°	48.4	49.0	53.9	44.9	49.0	43.6	58.6	63.6	87.7	82.8	34.4
87.5°	24.7	25.9	45.2	38.4	24.7	20.6	25.6	27.7	35.6	38.7	16.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P196777

CATALOG NUMBER: NAV-AF-01-D-UNV-T3-7030-600

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	481.2	481.2	481.2	481.2	481.2	481.2	481.2	481.2	481.2	481.2	481.2
2.5°	475.4	475.6	476.4	477.7	479.6	482.2	485.1	488.2	489.9	491.1	490.6
5°	471.5	471.7	473.2	475.4	477.9	481.7	486.6	490.3	493.1	494.8	494.6
7.5°	466.4	467.2	470.2	472.6	476.2	479.1	483.2	486.6	489.4	491.1	490.9
10°	462.7	463.5	467.2	470.5	473.4	473.9	473.2	472.2	471.9	473.2	472.6
12.5°	461.0	462.5	465.9	468.1	467.0	462.1	456.7	454.5	453.8	456.2	456.4
15°	461.4	462.7	465.7	464.3	457.5	449.5	446.6	448.2	449.7	451.2	451.5
17.5°	462.7	463.5	464.3	458.7	449.3	444.0	443.0	441.3	436.8	434.3	434.0
20°	464.9	465.9	464.7	455.9	447.5	440.6	428.6	417.8	407.6	402.1	399.9
22.5°	472.6	473.4	469.7	461.2	448.2	425.6	401.4	383.0	367.2	358.7	355.5
25°	487.9	489.2	483.9	473.2	439.2	399.7	365.5	340.6	320.9	310.7	307.9
27.5°	514.5	515.8	510.0	482.2	418.4	364.9	323.6	299.0	282.0	273.2	271.9
30°	554.4	556.1	551.0	482.0	386.4	320.9	282.7	268.2	258.5	252.5	252.3
32.5°	609.7	616.2	594.8	473.4	347.0	276.2	251.9	246.8	242.1	238.0	238.0
35°	680.0	695.3	638.2	455.7	303.6	245.9	234.6	229.9	223.9	219.6	219.2
37.5°	764.0	787.8	669.1	424.3	266.3	231.1	224.1	216.5	206.9	198.8	196.6
40°	879.5	885.0	684.3	373.2	238.3	223.1	214.3	204.7	192.8	183.4	182.5
42.5°	995.5	977.6	681.3	318.4	222.4	215.9	204.5	193.7	183.0	175.3	175.3
45°	1127.3	1058.2	658.7	263.2	207.9	207.7	195.2	184.9	176.8	171.0	169.8
47.5°	1253.4	1130.9	619.5	222.7	193.0	199.4	189.2	181.1	173.5	168.0	167.0
50°	1406.5	1214.9	577.9	194.2	178.5	192.2	186.8	182.5	175.3	165.7	164.8
52.5°	1558.6	1313.1	545.8	172.7	165.7	186.5	188.3	188.7	182.0	163.6	162.2
55°	1721.9	1417.9	511.8	156.0	155.2	183.8	191.7	191.2	187.9	164.0	162.0
57.5°	1877.2	1523.4	461.2	144.3	147.1	181.1	192.4	184.4	178.7	166.5	163.4
60°	2005.9	1610.7	386.9	136.1	140.1	175.5	187.5	175.5	165.7	166.1	163.1
62.5°	2068.4	1635.2	295.9	126.6	134.4	166.5	180.3	168.8	159.8	167.0	165.3
65°	2020.7	1565.5	210.9	117.9	127.4	156.0	176.0	163.1	156.8	172.0	170.0
67.5°	1849.8	1376.1	153.1	110.3	120.6	145.4	168.0	157.8	153.8	175.8	171.3
69°	1668.1	1188.2	132.6	105.7	116.0	139.7	162.8	155.0	151.6	170.6	164.0
70°	1516.9	1043.3	122.4	102.9	111.9	136.3	158.8	153.3	149.3	164.3	156.6
72.5°	1087.6	674.3	102.9	94.7	101.5	129.2	150.1	146.9	140.8	148.4	143.3
75°	657.2	352.1	87.5	86.2	90.4	119.2	139.9	135.9	129.9	130.7	128.2
77.5°	301.9	162.6	73.3	76.3	79.0	106.7	127.4	122.9	117.5	115.4	115.7
80°	132.4	94.9	61.3	65.1	66.5	95.9	113.9	108.9	102.9	113.6	105.4
82.5°	71.6	55.0	47.8	50.4	54.6	83.5	99.0	92.6	86.8	100.9	81.5
85°	29.0	28.2	32.4	34.9	37.9	60.1	82.8	76.1	69.1	61.8	60.3
87.5°	12.4	13.4	16.0	16.9	20.2	37.3	55.6	48.6	48.8	41.8	41.1
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)