

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: P196801

Luminaire Tested: **NAV-AF-01-D-UNV-T3R-7030-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196801
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24250)
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-T3R-7030-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 3000K, 615mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE III ROADWAY OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3959.6 lumens
Efficiency: N/A
Efficacy: 116.5 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Medium - Full Cutoff
BUG Rating: B1 - U0 - G1

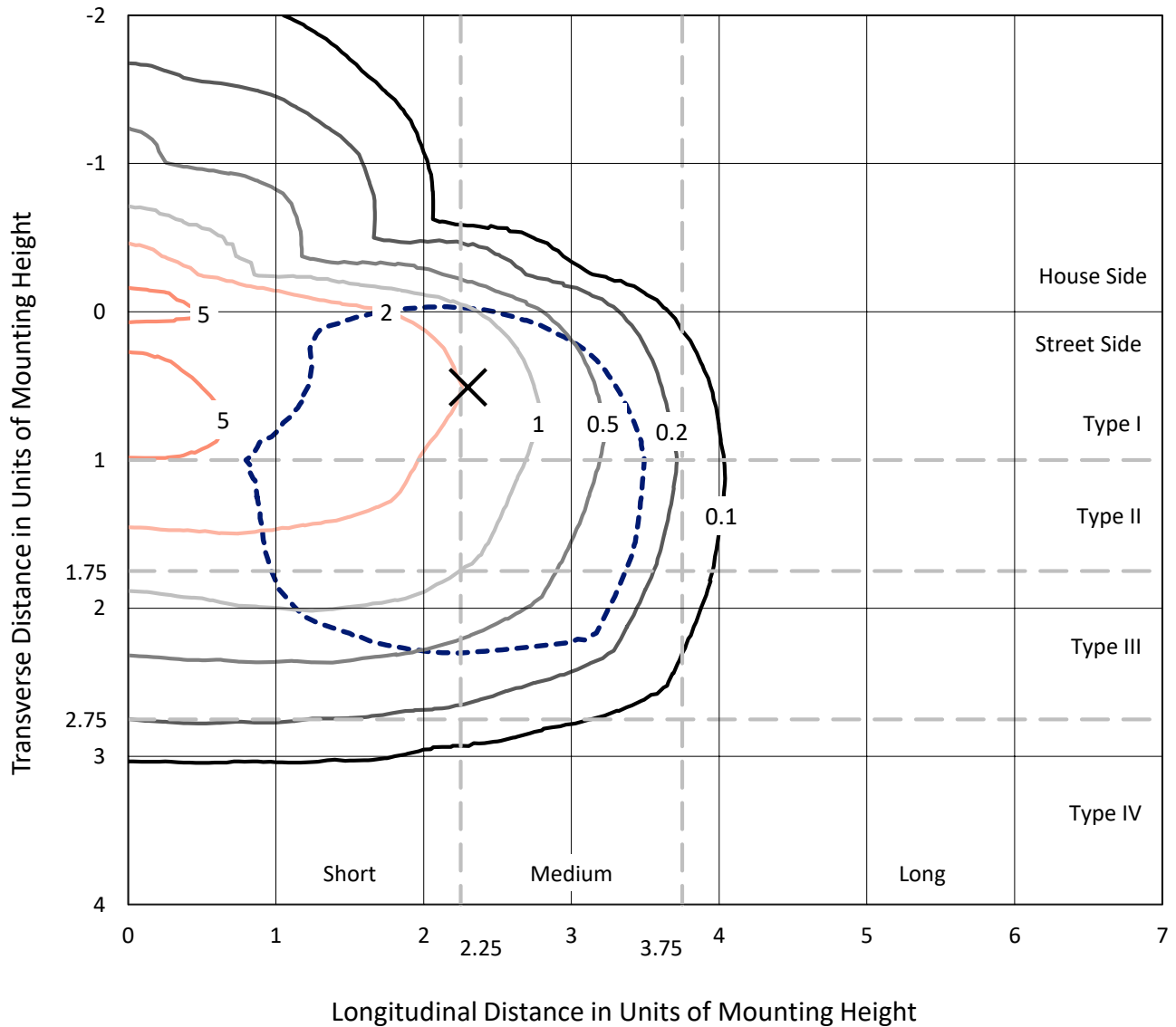
Input Watts (W): 34
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

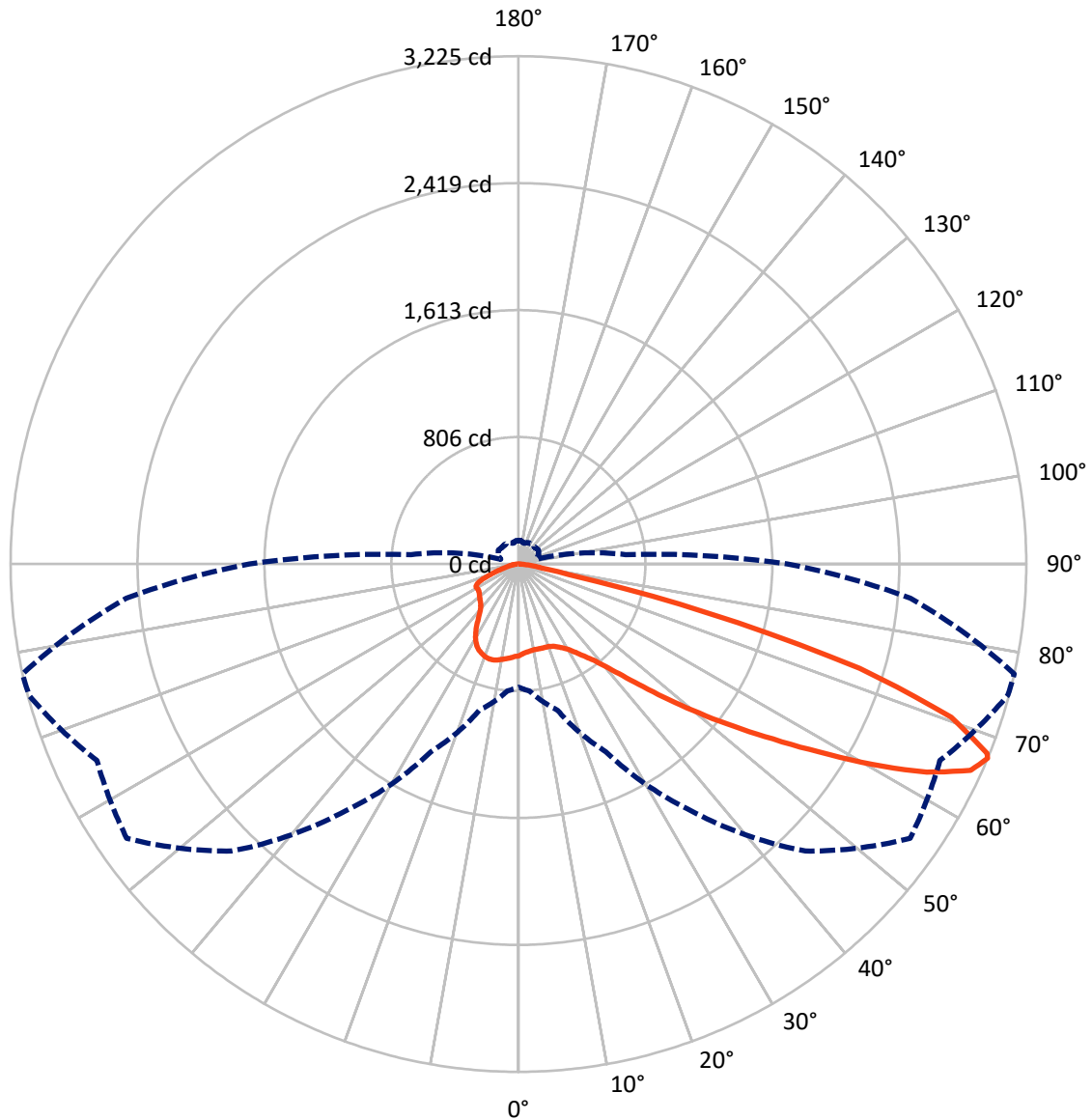
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 7 fc
 Type III - Medium - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 77.5-Deg Lateral - - - Horizontal Cone Through 67-Deg Vertical

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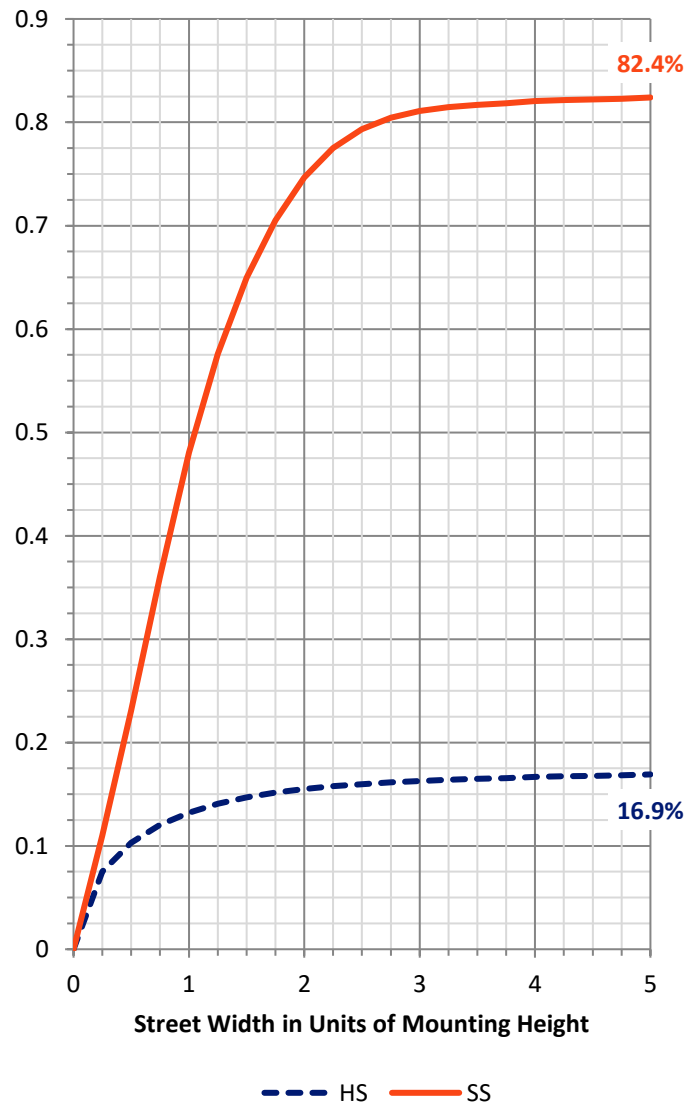
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	680.4	0.0	680.4
	% Fixture	17.2	0.0	17.2
Street Side	Lumens	3279.1	0.0	3279.1
	% Fixture	82.8	0.0	82.8
Total	Lumens	3959.6	0.0	3959.6
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	51.9	1.3
10°-20°	143.7	3.6
20°-30°	244.2	6.2
30°-40°	390.7	9.9
40°-50°	601.5	15.2
50°-60°	834.5	21.1
60°-70°	1113.1	28.1
70°-80°	529.7	13.4
80°-90°	50.1	1.3
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°	3959.6	100.0
0°-180°	3959.6	100.0



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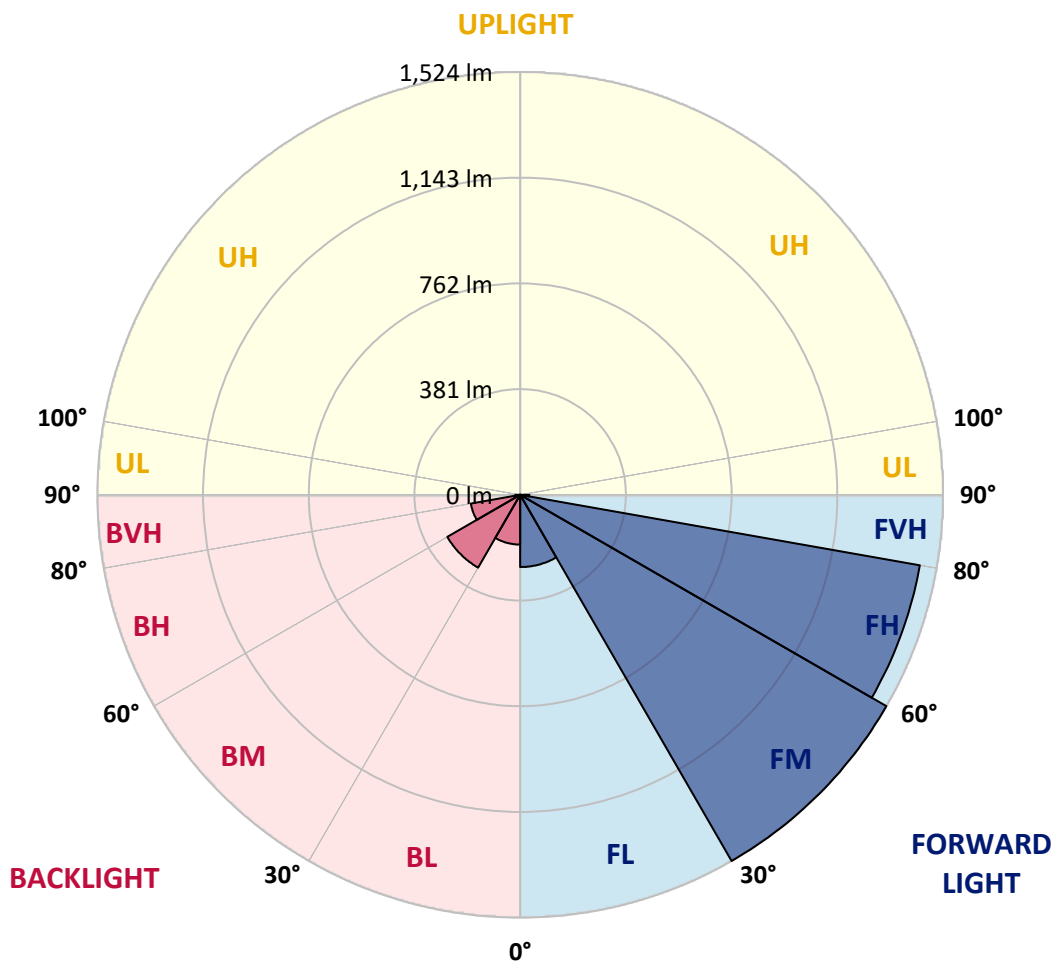
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	260.4	6.6			
FM	(30°-60°)	1523.7	38.5			
FH	(60°-80°)	1462.5	36.9			G1/1800
FVH	(80°-90°)	32.6	0.8			G1/100
BL	(0°-30°)	179.5	4.5	B1/500		
BM	(30°-60°)	303.0	7.7	B1/1000		
BH	(60°-80°)	180.4	4.6	B1/500		G1/500
BVH	(80°-90°)	17.6	0.4			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 Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	77.5°	85°
0°	582.8	582.8	582.8	582.8	582.8	582.8	582.8	582.8	582.8	582.8	582.8
2.5°	522.6	525.0	525.2	532.3	535.5	543.6	552.5	560.2	567.0	569.6	573.9
5°	470.2	470.2	470.9	475.5	484.6	497.5	515.9	536.0	557.0	562.1	575.1
7.5°	442.7	443.3	443.7	448.4	455.5	467.0	485.3	512.8	547.7	556.3	579.1
10°	445.2	444.4	442.1	441.1	443.9	451.4	467.2	495.4	540.0	553.2	586.1
12.5°	483.6	482.2	474.0	462.2	451.6	448.8	459.9	486.5	536.3	553.2	598.2
15°	549.5	550.4	534.5	510.0	482.0	462.8	461.4	483.4	535.1	554.6	612.1
17.5°	635.2	635.6	613.6	578.1	531.3	492.0	471.4	483.4	535.1	556.0	625.6
20°	726.1	722.8	697.7	653.3	592.5	532.3	489.7	486.3	536.5	558.4	638.3
22.5°	804.2	801.1	774.8	728.1	658.7	580.0	514.5	496.1	544.5	567.3	656.2
25°	872.6	874.5	849.1	796.4	724.5	633.9	551.4	518.7	561.5	583.8	678.2
27.5°	955.5	951.8	922.4	872.3	792.2	689.7	597.6	547.1	581.5	603.5	705.2
30°	1051.4	1049.8	1010.1	958.4	866.9	752.1	643.4	577.7	607.7	630.8	738.9
32.5°	1168.0	1167.7	1125.2	1061.7	950.9	822.6	697.5	619.5	645.9	669.1	783.7
35°	1299.8	1299.6	1255.5	1171.8	1047.5	900.7	761.2	670.5	693.1	717.7	837.0
37.5°	1391.4	1389.9	1367.0	1285.7	1154.5	991.4	840.7	738.9	746.7	774.1	901.4
40°	1409.0	1417.8	1437.7	1389.7	1271.2	1092.3	920.5	812.6	819.9	855.2	982.5
42.5°	1389.9	1401.5	1467.3	1480.7	1387.9	1214.4	1020.4	914.6	923.9	967.7	1077.7
45°	1373.3	1383.3	1465.8	1531.2	1503.2	1347.6	1144.9	1039.2	1056.9	1111.1	1186.3
47.5°	1344.9	1354.2	1436.9	1540.2	1569.1	1475.9	1294.9	1189.0	1219.4	1285.2	1310.1
50°	1343.5	1347.6	1397.5	1509.9	1591.8	1573.3	1461.2	1364.2	1410.7	1486.6	1447.1
52.5°	1306.2	1335.3	1380.6	1461.4	1592.4	1630.0	1624.9	1556.4	1628.1	1712.0	1597.5
55°	1078.6	1112.1	1324.3	1437.7	1589.4	1678.8	1774.4	1760.7	1872.8	1961.2	1765.8
57.5°	1007.2	1021.3	1161.9	1444.7	1613.9	1759.3	1923.9	1980.3	2152.9	2249.2	1967.8
60°	987.6	1002.5	1129.3	1448.1	1680.2	1905.8	2126.8	2228.2	2482.0	2584.3	2197.1
62.5°	965.8	985.1	1131.7	1451.4	1796.7	2122.7	2396.0	2497.1	2820.0	2911.2	2412.0
65°	902.2	927.8	1086.5	1431.3	1924.2	2394.9	2751.9	2777.6	3099.2	3157.3	2541.7
67°	781.5	809.6	962.1	1315.3	1912.5	2578.2	3036.6	2953.2	3217.9	3225.0	2499.7
67.5°	743.3	772.5	920.0	1267.1	1878.9	2602.1	3087.0	2977.4	3216.9	3209.2	2460.4
70°	500.5	533.3	651.5	930.3	1507.1	2421.7	3074.8	2902.7	3005.9	2916.1	2113.8
72.5°	248.4	249.4	325.0	509.5	913.2	1737.0	2565.0	2483.3	2436.7	2267.1	1551.2
75°	119.6	122.0	153.5	225.2	385.0	896.8	1749.2	1675.5	1426.6	1235.2	776.3
77.5°	91.3	93.5	119.2	146.6	160.5	292.5	866.4	700.3	413.3	330.2	218.8
80°	70.5	74.7	100.6	112.5	106.2	117.2	272.4	214.3	160.8	147.6	108.3
82.5°	55.0	57.5	85.4	85.4	73.4	78.5	126.7	123.8	99.9	90.0	58.2
85°	38.9	43.8	68.8	63.6	48.2	48.7	75.8	72.6	51.4	41.4	22.7
87.5°	17.4	22.3	48.9	41.6	25.6	19.7	31.0	26.7	20.3	15.7	10.5
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°	582.8	582.8	582.8	582.8	582.8	582.8	582.8	582.8	582.8	582.8	582.8
2.5°	578.8	582.8	588.9	592.5	597.4	599.4	601.4	604.8	607.5	606.7	605.6
5°	584.2	590.8	598.4	600.8	600.8	598.4	596.9	597.2	596.4	596.0	594.5
7.5°	592.0	601.2	606.5	603.9	596.4	586.9	577.9	572.4	567.3	564.1	565.1
10°	603.1	613.1	613.4	602.6	584.4	563.7	545.8	534.3	523.3	518.3	519.8
12.5°	619.0	629.0	620.5	597.2	565.4	532.8	500.0	476.3	454.9	449.8	448.4
15°	636.1	644.0	624.9	585.6	538.0	484.3	429.3	393.8	370.1	365.9	364.4
17.5°	651.0	655.4	622.7	565.1	494.6	410.2	346.1	322.1	317.2	319.7	319.7
20°	664.3	662.7	613.1	533.3	426.3	328.0	290.7	290.5	297.0	303.2	303.7
22.5°	680.9	669.4	597.8	486.1	344.8	273.5	267.2	273.5	281.1	287.8	288.6
25°	700.7	676.8	577.7	418.8	277.3	248.4	251.1	256.5	261.1	266.5	266.8
27.5°	720.6	682.4	548.9	339.7	240.6	232.2	235.2	237.4	238.6	242.0	242.0
30°	743.5	686.8	507.6	272.2	223.7	218.1	216.4	215.3	216.4	221.0	221.2
32.5°	772.5	694.6	451.0	233.5	215.9	208.0	199.2	194.4	197.8	206.1	207.6
35°	805.2	703.8	383.3	218.1	213.2	203.1	187.0	179.4	180.6	188.3	189.4
37.5°	846.3	715.8	316.5	214.3	215.9	202.6	181.4	170.6	165.2	165.4	165.2
40°	898.9	727.8	263.7	215.3	221.7	203.9	178.6	161.8	150.6	151.0	152.0
42.5°	954.1	735.8	230.1	218.3	228.8	205.6	177.6	153.2	143.4	151.8	159.3
45°	1018.4	733.4	212.7	221.0	234.3	206.3	174.0	152.2	144.1	169.2	183.3
47.5°	1092.3	724.0	202.9	222.3	235.7	206.1	171.3	155.3	150.2	193.6	209.8
50°	1172.6	709.0	195.0	220.2	234.9	205.1	174.3	159.3	152.8	199.0	211.4
52.5°	1260.5	695.3	187.0	215.9	231.3	202.1	178.0	157.7	145.9	183.3	192.9
55°	1364.4	692.1	178.0	208.2	225.2	199.0	176.0	152.2	138.3	162.5	168.4
57.5°	1483.4	712.0	166.2	199.0	216.9	192.7	171.3	149.2	135.6	147.8	151.0
60°	1634.4	755.7	153.7	189.2	206.6	183.1	167.1	150.0	136.3	145.7	146.4
62.5°	1752.4	795.2	142.5	177.2	192.9	171.5	162.8	150.8	138.5	148.6	147.4
65°	1795.2	775.8	128.5	159.3	173.5	158.9	156.7	151.3	138.5	150.2	147.6
67°	1707.4	683.5	115.3	141.5	155.1	147.6	150.8	149.2	136.0	150.0	145.5
67.5°	1665.5	651.0	111.9	138.5	150.2	144.1	149.2	148.3	135.4	149.5	144.1
70°	1373.5	467.0	94.5	116.3	125.7	127.1	140.3	141.9	129.5	140.5	130.7
72.5°	977.4	292.3	81.5	90.0	101.6	108.7	128.1	133.4	121.6	122.2	114.0
75°	483.6	156.9	72.6	69.5	79.1	90.5	111.6	121.6	110.2	101.8	99.1
77.5°	163.3	88.8	61.4	56.0	61.4	72.6	92.6	106.2	97.1	86.2	84.4
80°	84.4	64.6	48.0	45.1	48.5	56.3	72.4	88.4	82.9	83.5	68.8
82.5°	52.7	39.5	34.5	34.3	36.7	43.0	53.3	71.7	71.2	60.9	44.2
85°	24.5	22.7	22.1	22.7	23.5	24.5	34.8	51.2	54.1	32.8	29.2
87.5°	10.3	10.1	8.8	9.5	10.5	10.3	13.9	21.8	30.4	20.5	18.8
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)