

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: P270467

Luminaire Tested: **NAV-AF-03-D-UNV-T3-7027-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270467
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-03-D-UNV-T3-7027-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 2700K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12718 lumens
Efficiency: N/A
Efficacy: 102.6 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type III - Short - Semi-Cutoff
BUG Rating: B2 - U0 - G2

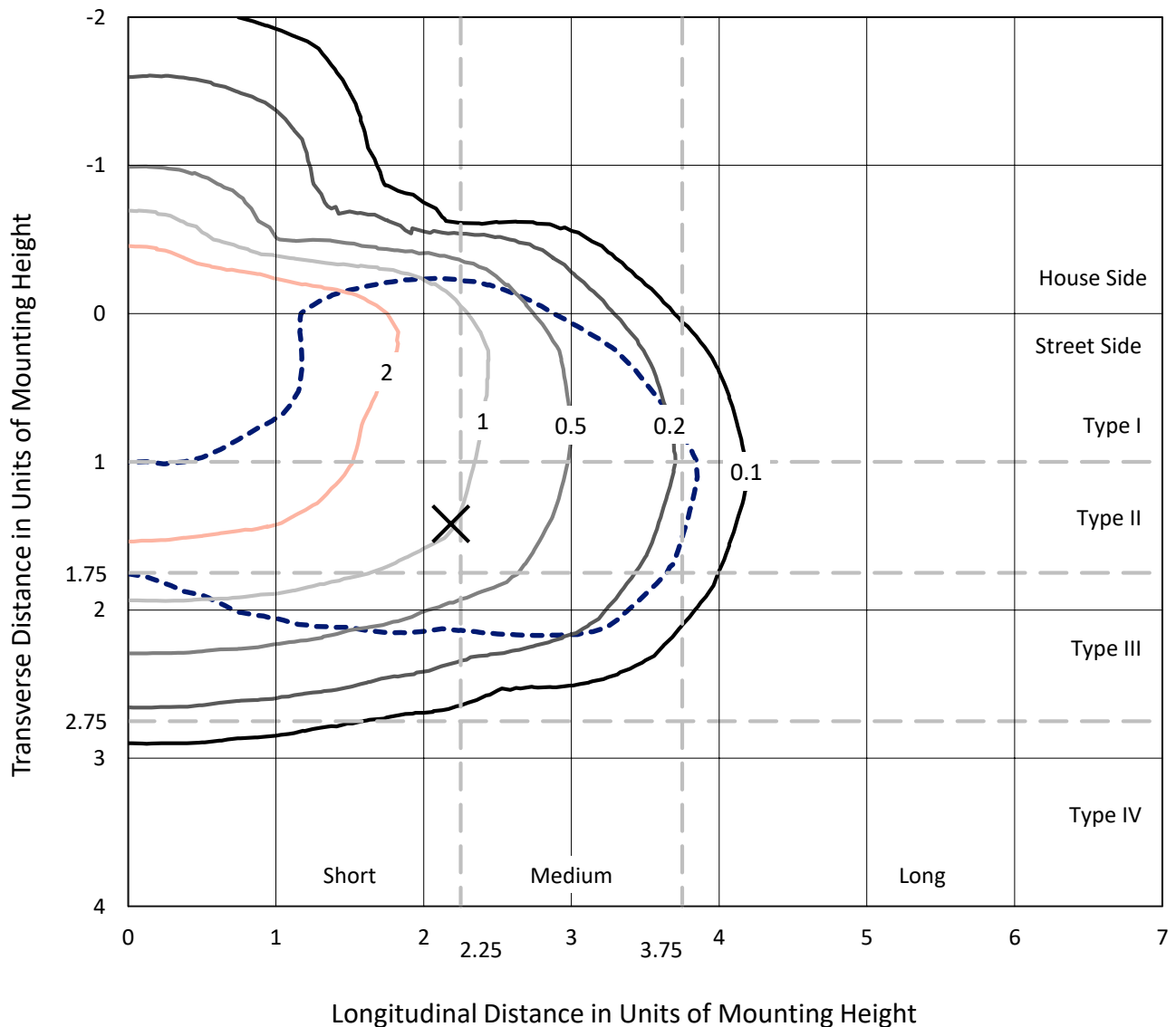
Input Watts (W): 124
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

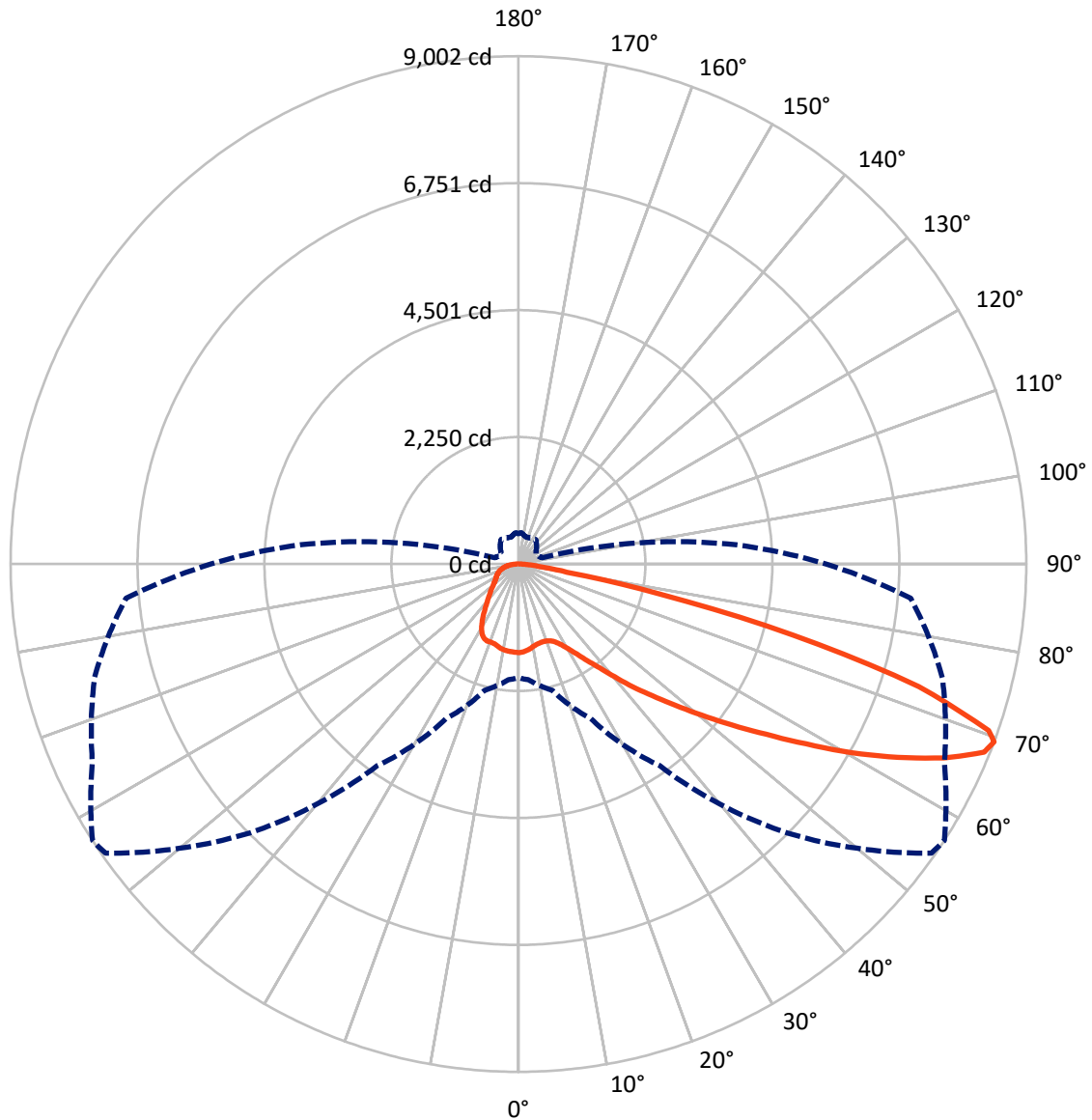
✕ Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 4 fc
 Type III - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



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

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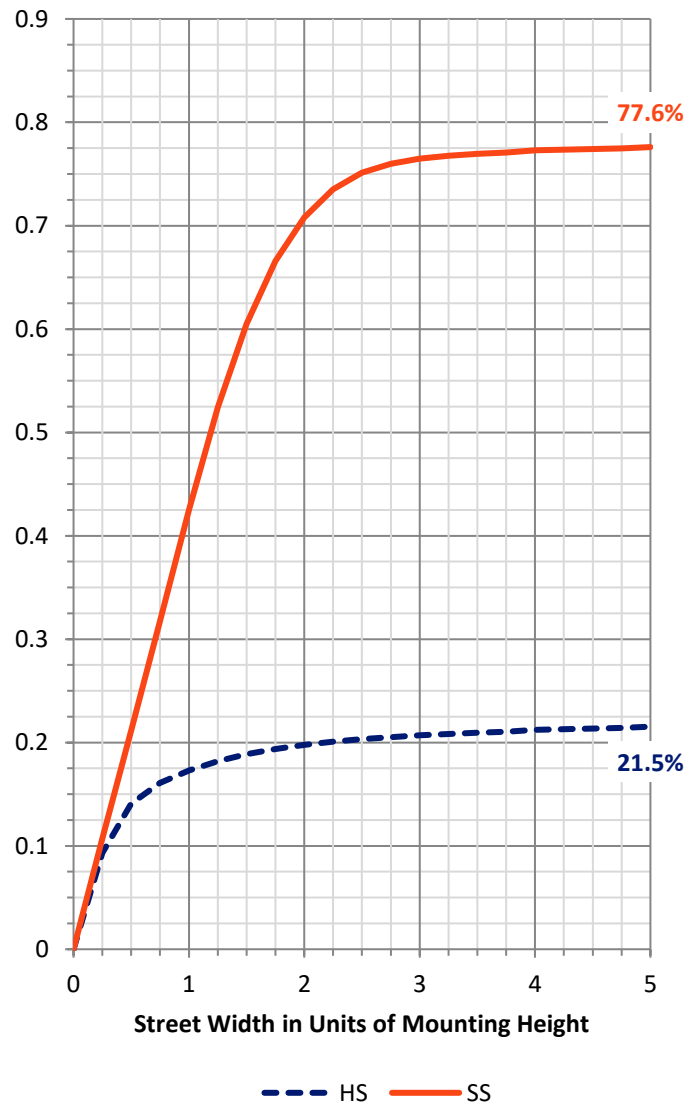
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2806.4	0.0	2806.4
	% Fixture	22.1	0.0	22.1
Street Side	Lumens	9911.6	0.0	9911.6
	% Fixture	77.9	0.0	77.9
Total	Lumens	12718.0	0.0	12718.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	147.1	1.2
10°-20°	418.3	3.3
20°-30°	695.8	5.5
30°-40°	1136.3	8.9
40°-50°	1917.8	15.1
50°-60°	2983.2	23.5
60°-70°	3553.6	27.9
70°-80°	1655.5	13.0
80°-90°	210.5	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°	12718.0	100.0
0°-180°	12718.0	100.0



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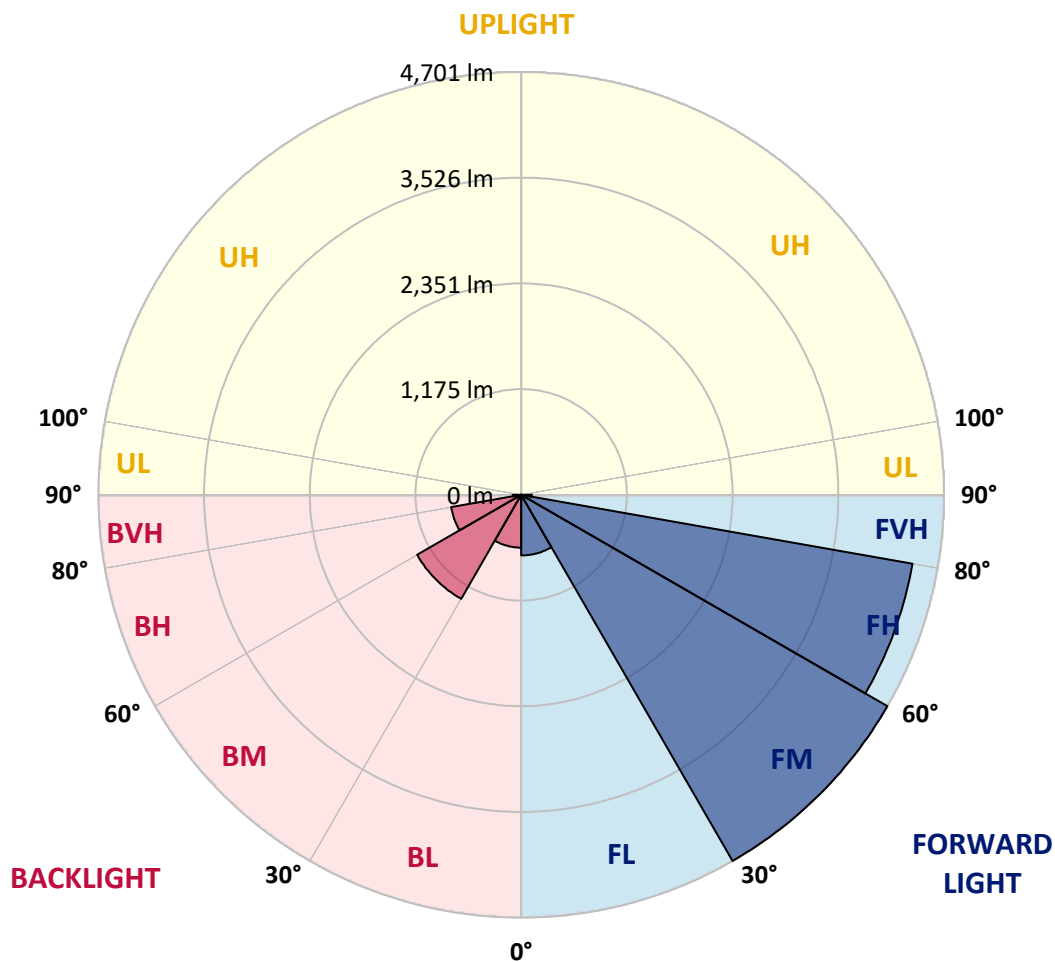
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	673.5	5.3			
FM	(30°-60°)	4701.5	37.0			
FH	(60°-80°)	4418.3	34.7			G2/5000
FVH	(80°-90°)	118.4	0.9			G2/225
BL	(0°-30°)	587.7	4.6	B2/1000		
BM	(30°-60°)	1335.7	10.5	B2/2500		
BH	(60°-80°)	790.8	6.2	B2/1000		G2/1000
BVH	(80°-90°)	92.2	0.7			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G2

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	57°	65°	75°	85°
0°	1571.5	1571.5	1571.5	1571.5	1571.5	1571.5	1571.5	1571.5	1571.5	1571.5	1571.5
2.5°	1562.5	1562.5	1566.6	1566.6	1566.6	1564.9	1560.0	1561.7	1558.4	1556.0	1551.9
5°	1530.7	1532.4	1537.2	1538.8	1541.3	1542.1	1542.1	1541.3	1542.1	1542.1	1539.7
7.5°	1486.8	1488.4	1494.2	1497.4	1504.8	1511.2	1514.5	1514.5	1518.6	1521.8	1522.5
10°	1459.8	1459.8	1463.2	1463.2	1468.9	1472.1	1482.7	1481.8	1493.3	1503.9	1508.8
12.5°	1456.6	1456.6	1455.1	1449.3	1446.0	1445.3	1455.9	1457.4	1474.6	1493.3	1502.2
15°	1467.2	1467.2	1462.4	1450.9	1438.7	1433.1	1443.5	1446.9	1465.6	1487.6	1501.3
17.5°	1501.3	1500.6	1490.0	1467.2	1446.0	1437.1	1440.3	1443.5	1460.7	1485.9	1503.0
20°	1577.2	1577.2	1554.3	1512.8	1476.2	1455.1	1450.1	1452.6	1464.7	1488.4	1510.4
22.5°	1709.8	1712.3	1671.6	1603.1	1540.6	1495.7	1476.2	1478.6	1484.3	1507.1	1531.5
25°	1905.2	1898.7	1840.9	1744.1	1646.4	1569.8	1530.0	1532.4	1532.4	1553.4	1578.9
27.5°	2112.1	2113.7	2030.7	1926.4	1797.8	1683.9	1620.4	1619.5	1618.7	1639.0	1665.8
30°	2345.7	2346.6	2250.6	2130.1	1982.6	1836.9	1741.6	1740.7	1733.5	1758.7	1793.7
32.5°	2601.4	2600.7	2489.1	2353.1	2189.3	2024.2	1900.4	1899.6	1893.8	1928.0	1970.4
35°	2884.7	2884.7	2774.1	2606.3	2429.6	2245.7	2102.4	2101.4	2104.8	2151.1	2191.1
37.5°	3226.0	3233.3	3099.7	2896.1	2703.2	2507.0	2340.1	2335.1	2310.7	2389.0	2454.9
40°	3581.7	3602.2	3463.7	3226.0	3017.4	2814.7	2630.7	2627.5	2606.3	2689.3	2796.1
42.5°	3966.8	4013.3	3859.4	3616.8	3389.6	3170.6	2985.7	2976.8	2895.3	3024.9	3191.7
45°	4471.7	4501.8	4278.6	4058.9	3844.7	3594.7	3374.9	3327.0	3245.4	3411.6	3628.2
47.5°	4815.3	4800.6	4661.3	4514.1	4376.5	4137.1	3799.1	3738.0	3638.8	3858.6	4097.1
50°	5028.6	5039.2	4961.0	4953.8	4946.3	4779.4	4277.9	4204.5	4089.9	4350.3	4628.8
52.5°	5169.4	5121.4	5135.3	5301.3	5502.5	5422.7	4819.3	4737.9	4619.9	4880.4	5194.7
55°	5110.8	5047.3	5175.1	5502.5	5975.5	5993.4	5413.7	5329.9	5228.9	5443.9	5875.4
57.5°	4868.3	4900.0	5101.8	5557.1	6298.7	6504.7	6096.8	6011.4	5812.8	6031.0	6521.9
60°	4527.1	4591.3	4900.0	5470.7	6525.1	6902.9	6846.7	6789.7	6447.8	6602.5	7201.0
62.5°	4160.6	4224.2	4603.5	5323.4	6423.3	7255.5	7582.9	7547.7	7148.8	7152.9	7631.6
65°	3619.2	3645.2	4032.9	4921.2	6140.9	7573.8	8319.7	8288.8	7818.8	7622.7	7752.2
67.5°	2733.4	2765.9	3084.2	3884.6	5281.0	7401.2	8908.3	8903.5	8221.9	7796.8	7465.5
69°	2018.4	2058.3	2318.0	3015.9	4366.7	6743.3	8936.0	9001.9	8331.2	7779.1	6981.1
70°	1477.1	1522.5	1762.7	2393.9	3637.1	6017.0	8699.0	8840.8	8289.5	7665.9	6603.4
72.5°	627.7	643.2	761.4	1080.5	1844.9	3628.2	7125.1	7423.2	7486.7	6868.7	5158.8
75°	393.3	398.2	444.7	554.4	820.7	1500.6	4614.1	5020.4	5589.7	5329.0	3454.0
77.5°	296.4	300.5	327.3	381.9	509.7	560.3	2140.7	2552.5	3201.5	3134.7	1718.7
80°	227.2	229.5	247.6	277.7	359.1	350.9	694.5	872.9	1336.0	1178.9	608.2
82.5°	178.4	179.1	194.7	200.3	250.7	236.2	348.5	388.3	539.8	448.7	297.2
85°	157.9	160.3	175.9	146.6	160.3	142.6	191.3	207.6	286.6	270.3	112.4
87.5°	80.6	84.7	147.4	125.5	80.6	67.6	83.8	90.4	116.4	126.2	54.5
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°	1571.5	1571.5	1571.5	1571.5	1571.5	1571.5	1571.5	1571.5	1571.5	1571.5	1571.5
2.5°	1552.7	1553.4	1556.0	1560.0	1566.6	1574.6	1584.5	1594.2	1599.9	1604.1	1602.3
5°	1539.7	1540.6	1545.4	1552.7	1560.8	1573.0	1589.3	1601.6	1610.5	1616.2	1615.4
7.5°	1523.3	1525.9	1535.7	1543.7	1555.1	1564.9	1578.0	1589.3	1598.4	1604.1	1603.1
10°	1511.2	1513.6	1525.9	1536.5	1546.3	1547.8	1545.4	1542.1	1541.3	1545.4	1543.7
12.5°	1505.5	1510.4	1521.8	1529.1	1525.1	1509.5	1491.6	1484.3	1481.8	1490.0	1490.8
15°	1507.1	1511.2	1521.0	1516.1	1494.2	1468.0	1458.3	1464.0	1468.9	1473.7	1474.6
17.5°	1511.2	1513.6	1516.1	1498.2	1467.2	1450.1	1446.9	1441.2	1426.5	1418.3	1417.5
20°	1518.6	1521.8	1517.6	1489.2	1461.5	1438.7	1399.6	1364.6	1331.3	1313.3	1306.0
22.5°	1543.7	1546.3	1533.9	1506.3	1464.0	1389.9	1310.8	1250.6	1199.3	1171.7	1161.1
25°	1593.5	1597.5	1580.4	1545.4	1434.7	1305.1	1193.7	1112.2	1048.0	1014.5	1005.6
27.5°	1680.5	1684.6	1665.8	1574.6	1366.2	1192.1	1056.9	976.3	920.9	892.3	888.3
30°	1810.9	1816.6	1799.5	1573.9	1261.9	1048.0	923.3	876.0	844.3	824.9	823.9
32.5°	1991.5	2012.7	1942.8	1546.3	1133.4	902.2	822.4	806.0	790.6	777.6	777.6
35°	2221.1	2270.8	2084.3	1488.4	991.6	802.8	766.2	750.8	731.2	717.3	715.7
37.5°	2495.6	2572.9	2185.3	1385.7	869.6	754.8	731.9	706.7	675.9	648.9	642.4
40°	2872.6	2890.4	2235.1	1218.9	778.4	728.7	700.1	668.5	629.4	599.3	596.0
42.5°	3251.1	3192.5	2225.2	1039.8	726.3	705.1	667.7	632.6	597.6	572.4	572.4
45°	3682.0	3456.4	2151.1	859.8	679.1	678.2	637.5	604.1	577.3	558.6	554.4
47.5°	4093.8	3693.3	2023.3	727.1	630.3	651.5	618.0	591.2	566.7	548.8	545.5
50°	4593.8	3967.6	1887.3	634.3	583.0	627.7	609.9	596.0	572.4	541.5	538.3
52.5°	5090.4	4288.5	1782.2	564.2	541.5	609.1	614.7	616.3	594.4	534.1	530.1
55°	5623.7	4631.2	1671.6	509.7	507.3	600.1	626.1	624.5	613.9	535.7	529.2
57.5°	6131.0	4975.7	1506.3	471.4	480.5	591.2	628.5	602.6	583.8	544.0	533.4
60°	6551.2	5260.7	1263.6	444.7	457.5	573.2	612.3	573.2	541.5	542.2	532.4
62.5°	6755.6	5340.5	966.4	413.6	438.8	544.0	588.7	551.2	521.9	545.5	539.8
65°	6600.0	5113.3	688.8	385.2	416.1	509.7	574.8	532.4	512.2	561.8	555.3
67.5°	6041.6	4494.5	499.9	360.0	394.0	474.7	548.8	515.4	502.4	574.0	559.4
69°	5448.0	3880.6	433.2	345.2	378.6	456.0	531.6	506.5	495.1	556.9	535.7
70°	4954.5	3407.5	399.7	336.2	365.6	445.4	518.6	500.7	487.7	536.6	511.3
72.5°	3552.4	2202.5	336.2	309.3	331.4	421.8	490.1	479.5	460.0	484.5	468.1
75°	2146.3	1149.7	285.8	281.7	295.5	389.1	456.8	443.8	424.2	426.6	418.5
77.5°	986.0	530.9	239.4	249.2	258.2	348.5	416.1	401.5	383.4	377.0	377.7
80°	432.4	310.3	200.3	212.4	217.4	313.5	372.1	355.8	336.2	371.3	344.4
82.5°	233.6	179.9	156.3	164.5	178.4	272.7	323.2	302.1	283.3	329.8	266.3
85°	94.4	91.9	105.8	113.9	123.7	196.2	270.3	248.3	225.6	201.8	197.1
87.5°	40.8	43.9	52.1	55.3	65.9	122.1	181.5	158.8	159.5	136.8	134.3
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)