

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: P196785

Luminaire Tested: **NAV-AF-03-D-UNV-T3-7030-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196785
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-T3-7030-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 3000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14157.8 lumens
Efficiency: N/A
Efficacy: 114.2 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

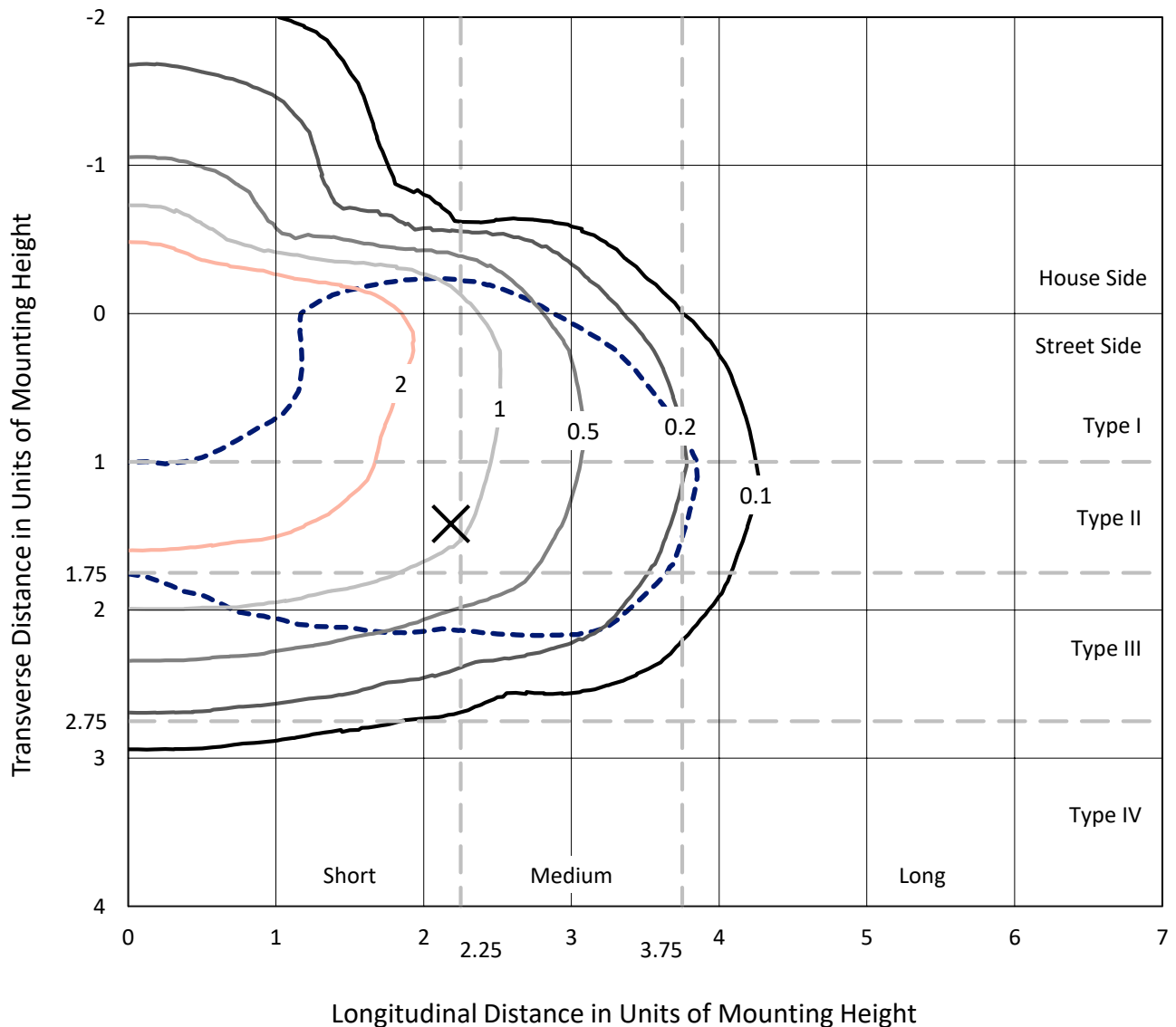
Input Watts (W): 124
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

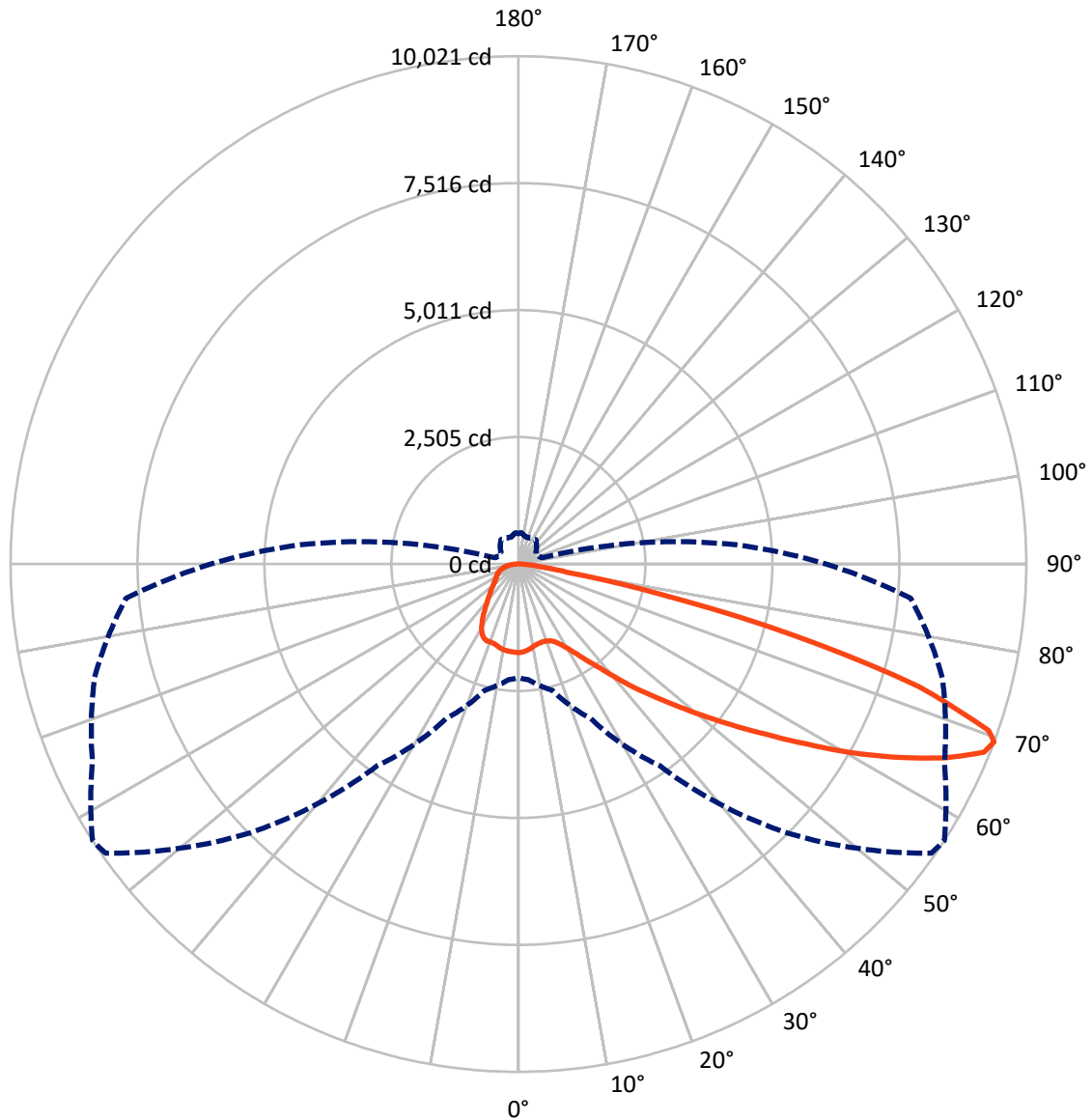
✕ Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 4.5 fc
 Type III - Short - Semi-Cutoff

REPORT NUMBER: P196785
CATALOG NUMBER: NAV-AF-03-D-UNV-T3-7030-800

Luminous Intensity Polar Plot



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

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CATALOG NUMBER: NAV-AF-03-D-UNV-T3-7030-800

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3124.1	0.0	3124.1
	% Fixture	22.1	0.0	22.1
Street Side	Lumens	11033.7	0.0	11033.7
	% Fixture	77.9	0.0	77.9
Total	Lumens	14157.8	0.0	14157.8
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	163.8	1.2
10°-20°	465.6	3.3
20°-30°	774.6	5.5
30°-40°	1264.9	8.9
40°-50°	2134.9	15.1
50°-60°	3320.9	23.5
60°-70°	3955.9	27.9
70°-80°	1842.9	13.0
80°-90°	234.4	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°	14157.8	100.0
0°-180°	14157.8	100.0



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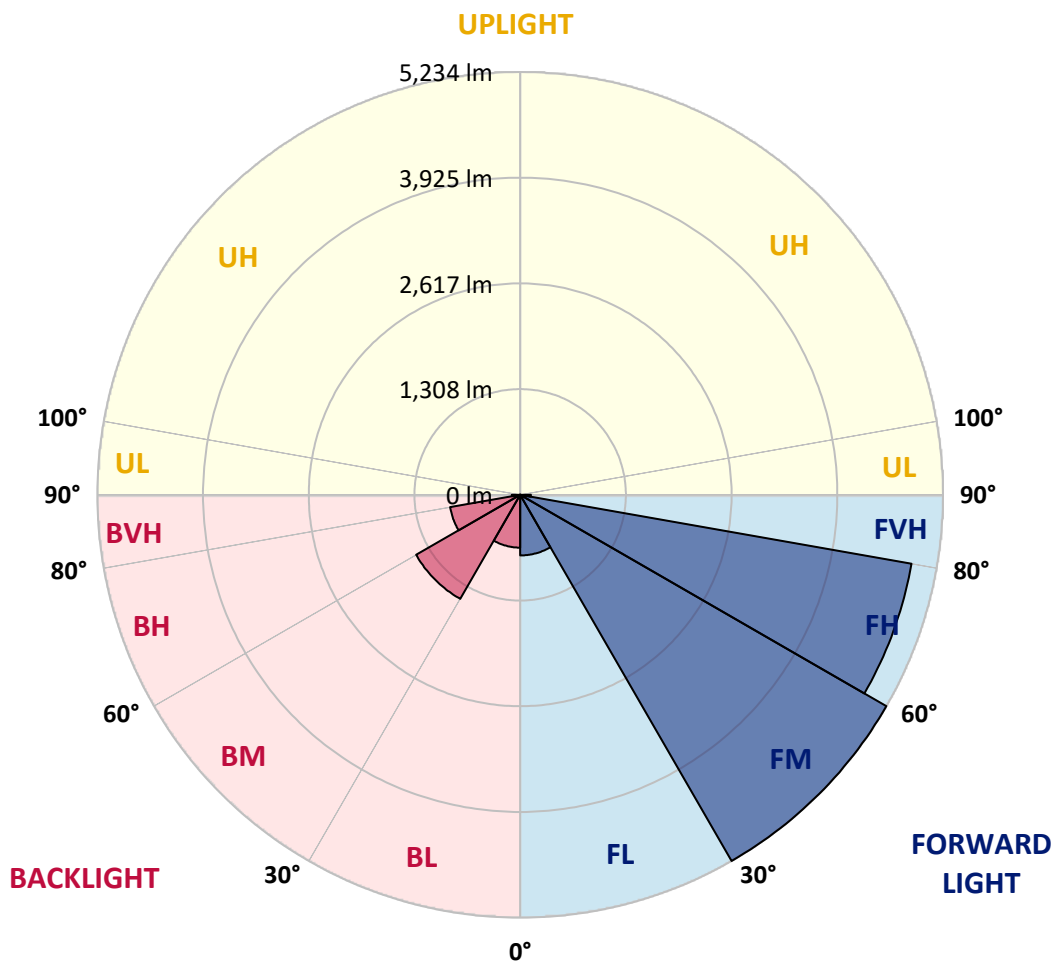
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	749.8	5.3			
FM	(30°-60°)	5233.7	37.0			
FH	(60°-80°)	4918.4	34.7			G2/5000
FVH	(80°-90°)	131.8	0.9			G2/225
BL	(0°-30°)	654.3	4.6	B2/1000		
BM	(30°-60°)	1486.9	10.5	B2/2500		
BH	(60°-80°)	880.3	6.2	B2/1000		G2/1000
BVH	(80°-90°)	102.6	0.7			G2/225
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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 CATALOG NUMBER: NAV-AF-03-D-UNV-T3-7030-800

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	57°	65°	75°	85°
0°	1749.4	1749.4	1749.4	1749.4	1749.4	1749.4	1749.4	1749.4	1749.4	1749.4	1749.4
2.5°	1739.4	1739.4	1743.9	1743.9	1743.9	1742.1	1736.6	1738.5	1734.8	1732.1	1727.6
5°	1704.0	1705.9	1711.2	1713.0	1715.8	1716.7	1716.7	1715.8	1716.7	1716.7	1714.0
7.5°	1655.1	1656.9	1663.3	1666.9	1675.1	1682.3	1685.9	1685.9	1690.5	1694.1	1694.9
10°	1625.1	1625.1	1628.8	1628.8	1635.2	1638.8	1650.6	1649.6	1662.3	1674.1	1679.6
12.5°	1621.5	1621.5	1619.8	1613.4	1609.7	1608.9	1620.7	1622.4	1641.5	1662.3	1672.3
15°	1633.3	1633.3	1627.9	1615.2	1601.6	1595.3	1606.9	1610.7	1631.5	1656.0	1671.3
17.5°	1671.3	1670.5	1658.7	1633.3	1609.7	1599.8	1603.4	1606.9	1626.1	1654.1	1673.2
20°	1755.7	1755.7	1730.3	1684.1	1643.3	1619.8	1614.3	1617.0	1630.5	1656.9	1681.4
22.5°	1903.4	1906.1	1860.8	1784.6	1715.0	1665.0	1643.3	1646.0	1652.3	1677.7	1704.9
25°	2120.9	2113.7	2049.3	1941.5	1832.8	1747.5	1703.2	1705.9	1705.9	1729.3	1757.6
27.5°	2351.2	2353.0	2260.6	2144.5	2001.3	1874.5	1803.8	1802.8	1801.9	1824.5	1854.4
30°	2611.3	2612.2	2505.4	2371.2	2207.0	2044.8	1938.8	1937.8	1929.7	1957.8	1996.8
32.5°	2895.9	2895.1	2770.9	2619.5	2437.2	2253.3	2115.5	2114.6	2108.2	2146.3	2193.5
35°	3211.3	3211.3	3088.1	2901.4	2704.7	2499.9	2340.4	2339.3	2343.1	2394.6	2439.1
37.5°	3591.2	3599.3	3450.6	3224.0	3009.2	2790.8	2605.0	2599.5	2572.3	2659.4	2732.8
40°	3987.2	4010.0	3855.8	3591.2	3359.0	3133.4	2928.5	2925.0	2901.4	2993.8	3112.6
42.5°	4415.9	4467.6	4296.3	4026.2	3773.3	3529.5	3323.7	3313.8	3223.1	3367.3	3553.0
45°	4977.9	5011.4	4763.0	4518.4	4280.0	4001.7	3757.0	3703.6	3612.8	3797.8	4038.9
47.5°	5360.4	5344.1	5189.0	5025.1	4871.9	4605.4	4229.2	4161.2	4050.7	4295.4	4560.9
50°	5597.9	5609.7	5522.6	5514.6	5506.3	5320.5	4762.2	4680.5	4552.9	4842.8	5152.8
52.5°	5754.6	5701.2	5716.7	5901.5	6125.4	6036.6	5364.9	5274.3	5142.9	5432.9	5782.8
55°	5689.4	5618.7	5761.0	6125.4	6652.0	6671.9	6026.6	5933.3	5820.9	6060.2	6540.5
57.5°	5419.4	5454.7	5679.4	6186.2	7011.8	7241.1	6787.0	6691.9	6470.8	6713.7	7260.2
60°	5039.6	5111.1	5454.7	6090.0	7263.8	7684.4	7621.8	7558.4	7177.7	7350.0	8016.2
62.5°	4631.6	4702.4	5124.7	5926.0	7150.5	8076.9	8441.3	8402.2	7958.1	7962.7	8495.6
65°	4028.9	4057.9	4489.4	5478.3	6836.1	8431.2	9261.5	9227.1	8704.0	8485.6	8629.8
67.5°	3042.8	3079.0	3433.4	4324.4	5878.8	8239.1	9916.8	9911.4	9152.7	8679.5	8310.7
69°	2246.9	2291.3	2580.4	3357.3	4861.0	7506.7	9947.6	10021.0	9274.3	8659.7	7771.4
70°	1644.3	1694.9	1962.3	2664.9	4048.8	6698.2	9683.8	9841.6	9227.9	8533.7	7350.9
72.5°	698.8	716.0	847.6	1202.8	2053.8	4038.9	7931.7	8263.6	8334.3	7646.3	5742.8
75°	437.8	443.3	495.0	617.2	913.6	1670.5	5136.5	5588.8	6222.5	5932.3	3845.0
77.5°	330.0	334.5	364.4	425.1	567.4	623.7	2383.0	2841.5	3563.9	3489.6	1913.3
80°	252.9	255.5	275.6	309.1	399.7	390.6	773.1	971.7	1487.3	1312.4	677.1
82.5°	198.6	199.4	216.7	223.0	279.1	262.9	388.0	432.3	600.9	499.5	330.8
85°	175.8	178.5	195.8	163.2	178.5	158.7	213.0	231.1	319.0	300.9	125.1
87.5°	89.7	94.3	164.1	139.7	89.7	75.3	93.3	100.6	129.6	140.5	60.7
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°	1749.4	1749.4	1749.4	1749.4	1749.4	1749.4	1749.4	1749.4	1749.4	1749.4	1749.4
2.5°	1728.5	1729.3	1732.1	1736.6	1743.9	1752.9	1763.9	1774.7	1781.0	1785.7	1783.7
5°	1714.0	1715.0	1720.3	1728.5	1737.5	1751.1	1769.2	1782.9	1792.8	1799.2	1798.3
7.5°	1695.8	1698.6	1709.5	1718.5	1731.2	1742.1	1756.6	1769.2	1779.3	1785.7	1784.6
10°	1682.3	1685.0	1698.6	1710.4	1721.3	1723.0	1720.3	1716.7	1715.8	1720.3	1718.5
12.5°	1675.9	1681.4	1694.1	1702.2	1697.7	1680.4	1660.5	1652.3	1649.6	1658.7	1659.6
15°	1677.7	1682.3	1693.2	1687.7	1663.3	1634.2	1623.4	1629.7	1635.2	1640.5	1641.5
17.5°	1682.3	1685.0	1687.7	1667.8	1633.3	1614.3	1610.7	1604.4	1588.0	1578.9	1578.0
20°	1690.5	1694.1	1689.4	1657.8	1627.0	1601.6	1558.0	1519.1	1482.0	1462.0	1453.8
22.5°	1718.5	1721.3	1707.6	1676.8	1629.7	1547.2	1459.2	1392.2	1335.1	1304.3	1292.5
25°	1773.9	1778.3	1759.3	1720.3	1597.1	1452.9	1328.8	1238.1	1166.6	1129.4	1119.4
27.5°	1870.8	1875.3	1854.4	1752.9	1520.9	1327.0	1176.5	1086.8	1025.2	993.3	988.9
30°	2015.9	2022.2	2003.2	1752.1	1404.8	1166.6	1027.8	975.2	939.9	918.3	917.2
32.5°	2217.0	2240.6	2162.7	1721.3	1261.7	1004.3	915.5	897.3	880.1	865.6	865.6
35°	2472.6	2527.9	2320.3	1656.9	1103.9	893.7	852.9	835.8	814.0	798.5	796.7
37.5°	2778.1	2864.2	2432.7	1542.6	968.0	840.2	814.8	786.7	752.4	722.4	715.1
40°	3197.8	3217.6	2488.1	1356.9	866.5	811.2	779.4	744.2	700.7	667.1	663.5
42.5°	3619.2	3553.9	2477.1	1157.5	808.5	784.9	743.3	704.2	665.3	637.2	637.2
45°	4098.8	3847.7	2394.6	957.1	756.0	755.0	709.7	672.5	642.7	621.8	617.2
47.5°	4557.3	4111.4	2252.4	809.4	701.6	725.2	688.0	658.1	630.9	610.9	607.3
50°	5113.9	4416.8	2101.0	706.1	649.0	698.8	678.9	663.5	637.2	602.8	599.2
52.5°	5666.7	4774.0	1984.0	628.1	602.8	678.0	684.3	686.1	661.7	594.6	590.1
55°	6260.4	5155.5	1860.8	567.4	564.7	668.0	697.0	695.2	683.4	596.4	589.1
57.5°	6825.1	5539.0	1676.8	524.8	534.9	658.1	699.7	670.8	649.9	605.6	593.8
60°	7292.8	5856.2	1406.7	495.0	509.3	638.1	681.6	638.1	602.8	603.6	592.7
62.5°	7520.4	5945.1	1075.8	460.4	488.5	605.6	655.3	613.6	581.0	607.3	600.9
65°	7347.2	5692.2	766.8	428.8	463.2	567.4	639.9	592.7	570.2	625.4	618.2
67.5°	6725.5	5003.3	556.5	400.7	438.6	528.4	610.9	573.7	559.3	639.0	622.7
69°	6064.7	4319.9	482.2	384.3	421.5	507.6	591.8	563.8	551.1	619.9	596.4
70°	5515.4	3793.3	445.0	374.3	407.0	495.8	577.3	557.4	542.9	597.3	569.2
72.5°	3954.6	2451.8	374.3	344.3	368.9	469.5	545.6	533.8	512.1	539.3	521.1
75°	2389.3	1279.9	318.2	313.6	329.0	433.2	508.5	494.0	472.2	474.9	465.9
77.5°	1097.6	591.0	266.5	277.4	287.4	388.0	463.2	446.9	426.8	419.7	420.5
80°	481.3	345.4	223.0	236.5	242.0	349.0	414.2	396.1	374.3	413.3	383.4
82.5°	260.1	200.3	174.0	183.1	198.6	303.6	359.8	336.3	315.4	367.1	296.4
85°	105.1	102.3	117.8	126.8	137.7	218.4	300.9	276.4	251.1	224.7	219.4
87.5°	45.4	48.9	58.0	61.6	73.4	135.9	202.1	176.8	177.6	152.3	149.5
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)