

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: P195584

Luminaire Tested: **NAV-AF-02-D-UNV-SL2-7050-800-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195584
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24258)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-02-D-UNV-SL2-7050-800-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 5000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II SPILL
LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8028 lumens
Efficiency: N/A
Efficacy: 94.4 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type II - Medium - Semi-Cutoff
BUG Rating: B1 - U0 - G2

Input Watts (W): 85
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

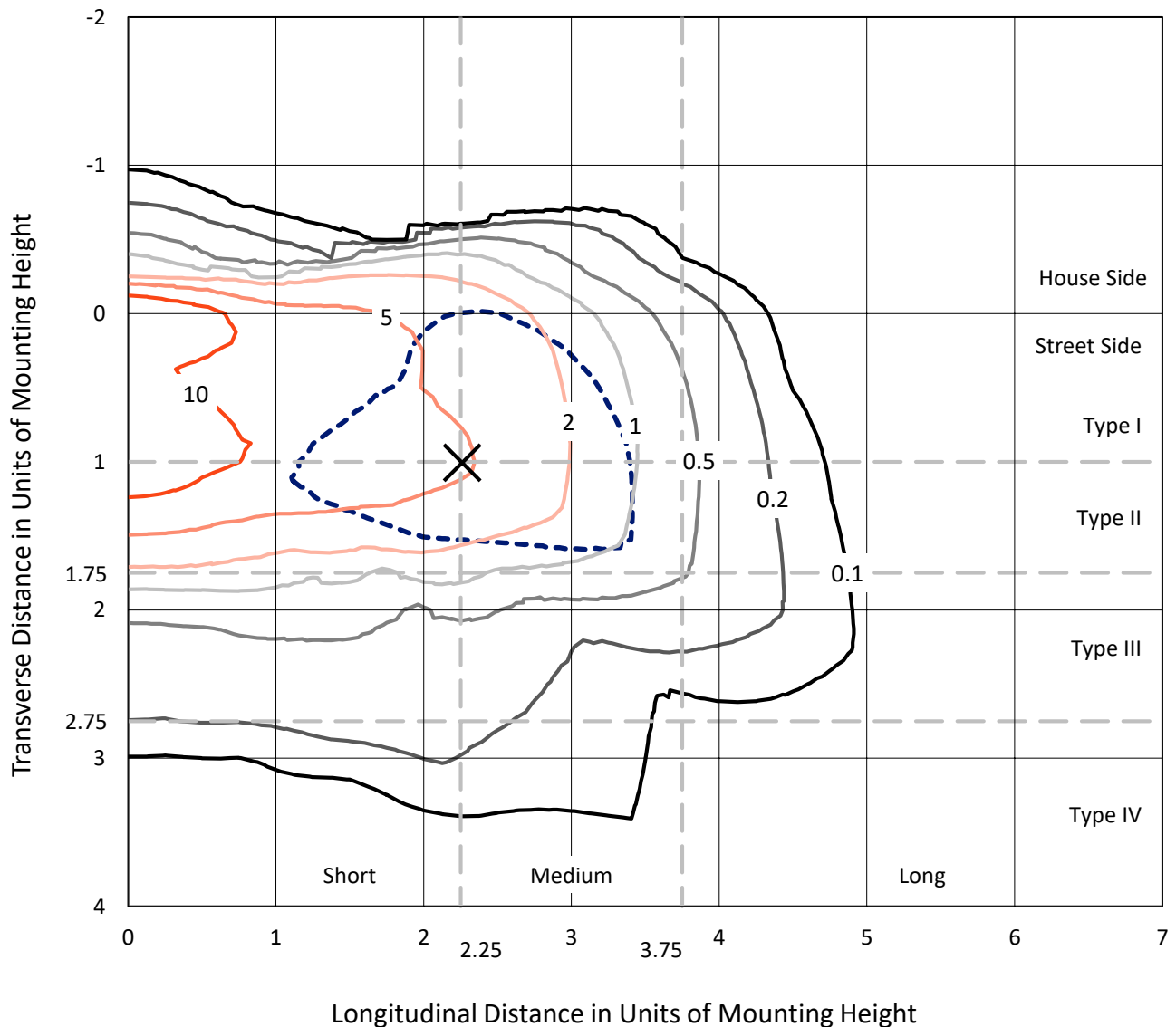


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

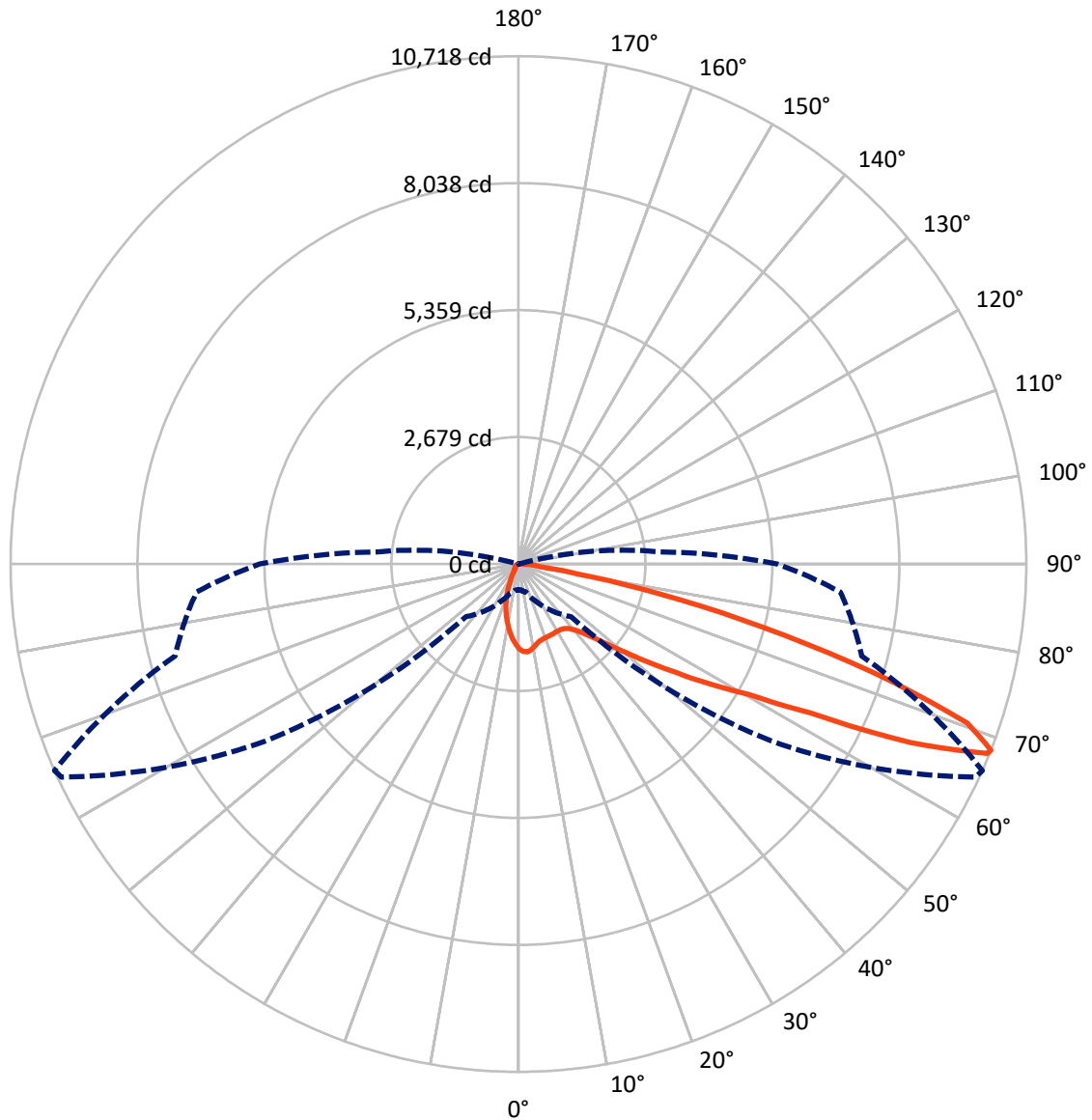


Based on 10 foot mounting height. Maximum calculated value = 17.9 fc
 Type II - Medium - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 66-Deg Lateral - - - Horizontal Cone Through 68-Deg Vertical

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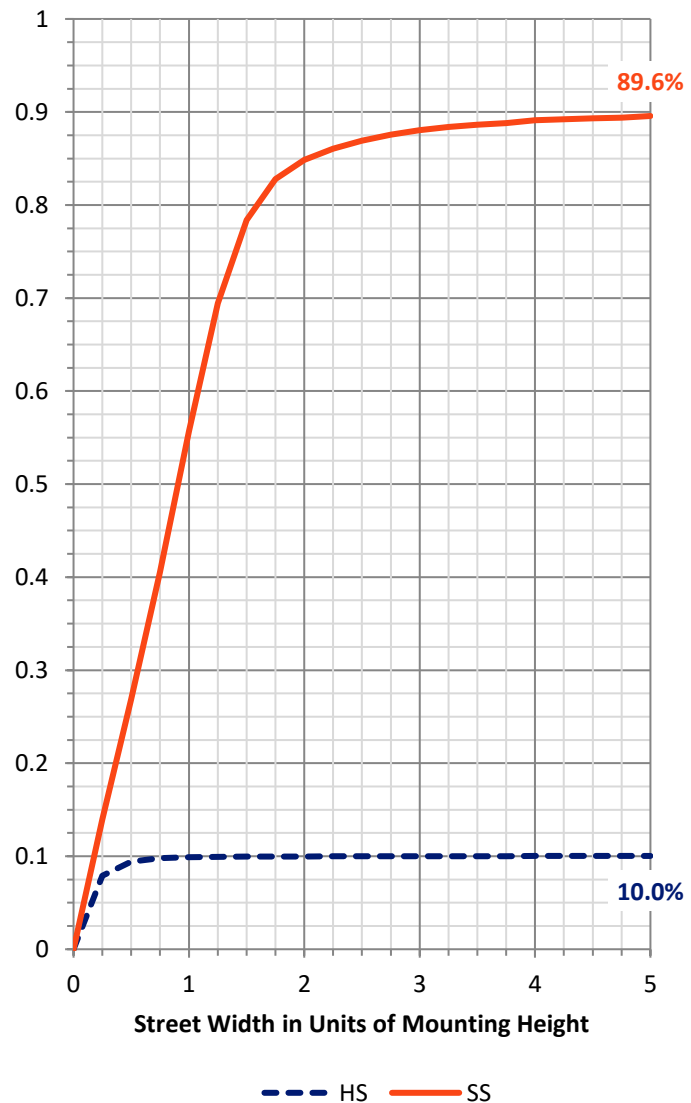
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	813.2	0.0	813.2
	% Fixture	10.1	0.0	10.1
Street Side	Lumens	7214.9	0.0	7214.9
	% Fixture	89.9	0.0	89.9
Total	Lumens	8028.0	0.0	8028.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	146.6	1.8
10°-20°	315.5	3.9
20°-30°	457.2	5.7
30°-40°	699.8	8.7
40°-50°	1197.0	14.9
50°-60°	1872.4	23.3
60°-70°	2156.1	26.9
70°-80°	1078.9	13.4
80°-90°	104.5	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°	8028.0	100.0
0°-180°	8028.0	100.0

Coefficient of Utilization



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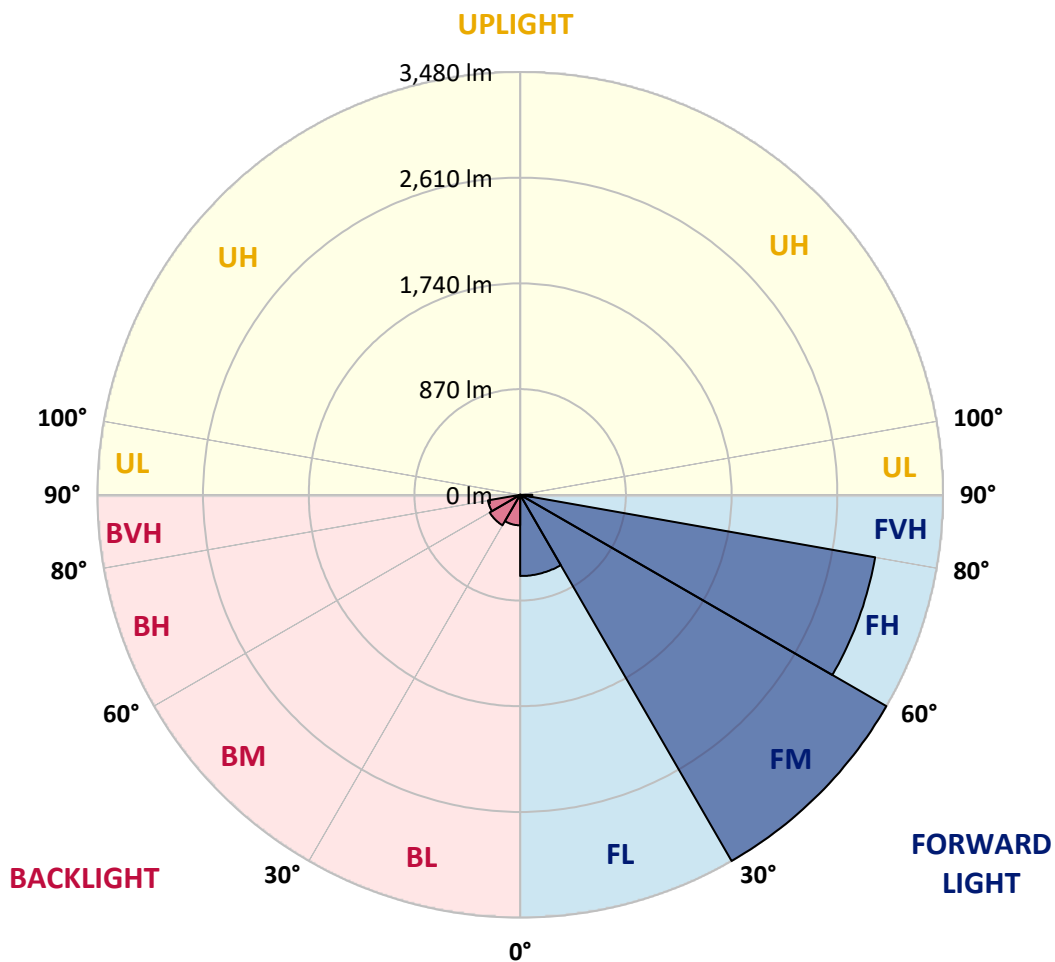
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	668.3	8.3			
FM (30°-60°)	3479.7	43.3			
FH (60°-80°)	2966.3	36.9			G2/5000
FVH (80°-90°)	100.5	1.3			G2/225
BL (0°-30°)	251.0	3.1	B1/500		
BM (30°-60°)	289.6	3.6	B1/1000		
BH (60°-80°)	268.7	3.3	B1/500		G1/500
BVH (80°-90°)	4.0	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G2

Type II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	66°	75°	85°
0°	1788.6	1788.6	1788.6	1788.6	1788.6	1788.6	1788.6	1788.6	1788.6	1788.6	1788.6
2.5°	1881.2	1882.5	1881.8	1883.7	1882.5	1873.0	1862.9	1841.5	1843.4	1815.7	1784.8
5°	1748.9	1759.6	1770.3	1781.0	1806.8	1829.5	1856.6	1862.9	1862.9	1839.0	1793.6
7.5°	1614.0	1614.6	1626.6	1641.1	1675.8	1717.3	1780.4	1837.1	1838.3	1844.7	1794.9
10°	1512.5	1515.7	1523.9	1539.6	1574.3	1615.3	1685.8	1774.7	1781.6	1828.3	1782.3
12.5°	1433.7	1437.5	1446.4	1464.6	1496.1	1538.4	1612.7	1714.2	1723.6	1812.5	1778.5
15°	1373.2	1378.3	1385.2	1403.5	1437.5	1482.3	1563.6	1673.9	1685.2	1806.2	1790.5
17.5°	1348.0	1348.0	1347.4	1360.0	1394.0	1439.4	1524.5	1652.4	1666.9	1811.3	1810.6
20°	1358.8	1356.9	1343.6	1340.5	1361.3	1406.6	1493.6	1638.6	1655.0	1820.7	1835.2
22.5°	1415.5	1411.7	1382.1	1357.5	1351.2	1381.4	1472.8	1629.1	1648.7	1840.2	1868.0
25°	1535.8	1524.5	1483.5	1428.1	1378.3	1375.1	1458.3	1624.1	1644.9	1862.9	1903.9
27.5°	1692.1	1689.0	1623.4	1549.1	1453.3	1395.9	1453.9	1620.3	1641.1	1879.3	1932.9
30°	1886.2	1887.5	1811.9	1714.8	1569.9	1454.5	1467.8	1618.4	1639.8	1880.6	1945.5
32.5°	2086.7	2087.9	2024.9	1920.9	1729.3	1555.4	1506.9	1627.2	1646.8	1875.5	1944.9
35°	2279.5	2281.4	2243.6	2159.8	1942.3	1695.3	1580.6	1657.5	1671.3	1878.7	1943.6
37.5°	2523.4	2531.0	2484.3	2406.2	2209.5	1900.7	1701.0	1718.6	1730.0	1904.5	1953.0
40°	2939.3	2929.3	2795.7	2663.3	2499.4	2150.9	1874.9	1823.9	1827.6	1971.3	1989.0
42.5°	3424.0	3411.4	3182.6	2954.5	2797.5	2452.8	2097.4	1985.2	1984.6	2083.5	2067.1
45°	3841.2	3833.6	3592.9	3288.5	3127.8	2786.2	2371.5	2217.7	2210.2	2277.6	2209.5
47.5°	4137.4	4131.1	3949.0	3643.9	3509.7	3153.0	2713.7	2534.7	2519.0	2531.6	2440.8
50°	4166.4	4159.4	4095.8	3899.8	3955.9	3691.2	3136.6	2950.1	2929.9	2910.4	2790.6
52.5°	3895.4	3894.8	3928.2	3915.6	4268.5	4383.8	3655.3	3463.7	3439.7	3389.9	3270.8
55°	3341.4	3338.3	3464.9	3649.0	4261.5	5098.5	4446.2	4075.0	4043.5	3943.9	3787.6
57.5°	2441.5	2425.1	2689.8	3079.9	3962.2	5411.1	5702.2	4834.4	4782.1	4466.4	4225.6
60°	1348.0	1354.3	1694.7	2156.6	3253.2	5349.3	6858.0	5719.9	5582.5	4917.0	4674.3
62.5°	755.6	771.4	1024.7	1401.6	2074.1	4848.3	7478.2	7243.7	6912.9	5442.6	5241.5
65°	571.6	581.1	708.4	1081.5	1307.7	3388.1	7577.1	9374.5	9089.0	6239.2	6144.6
67.5°	538.2	545.8	608.2	896.8	1191.1	1757.1	6832.2	10635.0	10670.9	7325.7	6844.2
68°	542.0	551.4	613.8	862.8	1189.2	1571.8	6514.6	10641.3	10717.5	7500.9	6820.2
70°	497.9	500.4	649.1	846.4	1152.7	1238.4	4712.8	9912.1	10048.8	7709.5	6191.3
72.5°	190.3	191.0	291.2	732.9	1207.5	1245.3	2374.0	7834.3	7841.2	6709.3	4826.8
75°	98.9	83.2	91.4	229.4	1153.3	1213.8	1191.1	5349.3	5315.9	4537.6	2957.6
77.5°	68.1	58.0	61.1	79.4	479.6	1213.2	860.2	3076.1	3069.2	1930.4	843.9
80°	38.4	33.4	36.6	66.8	168.3	1138.8	801.6	1322.2	1245.9	339.1	136.8
82.5°	19.5	16.4	19.5	56.1	104.6	716.6	779.6	518.7	462.0	80.7	88.9
85°	5.0	5.0	9.5	39.1	64.9	235.1	698.9	374.4	336.5	35.3	63.0
87.5°	1.3	0.6	3.8	14.5	23.3	51.0	387.6	208.6	179.6	18.3	36.6
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°	1788.6	1788.6	1788.6	1788.6	1788.6	1788.6	1788.6	1788.6	1788.6	1788.6	1788.6
2.5°	1772.2	1754.5	1719.9	1680.8	1653.1	1622.8	1605.2	1583.7	1567.4	1552.9	1563.6
5°	1765.9	1731.8	1655.0	1568.6	1496.1	1426.8	1375.1	1326.0	1288.8	1265.5	1274.9
7.5°	1749.5	1699.1	1574.3	1439.4	1320.9	1209.4	1118.6	1037.3	974.3	940.3	951.0
10°	1721.8	1650.5	1482.9	1295.7	1130.0	972.4	837.6	716.6	625.2	582.3	592.4
12.5°	1701.6	1607.7	1388.4	1157.1	939.0	715.3	536.3	397.7	326.5	283.6	287.4
15°	1692.8	1574.3	1300.1	1010.9	730.4	459.4	289.9	209.9	185.3	176.5	177.1
17.5°	1694.0	1547.8	1216.3	859.0	519.9	264.1	177.7	160.1	156.3	154.4	154.4
20°	1697.2	1521.3	1129.4	700.8	332.8	170.2	148.1	142.4	140.5	138.0	138.6
22.5°	1706.6	1501.2	1041.8	542.0	204.8	138.6	131.1	126.0	122.9	119.1	119.7
25°	1721.1	1486.1	955.4	390.1	144.3	121.0	114.1	107.1	101.5	97.1	97.7
27.5°	1730.0	1464.6	863.4	266.0	119.7	105.9	96.4	87.0	80.7	76.9	76.3
30°	1723.6	1430.0	758.8	174.6	105.9	91.4	80.0	69.3	63.0	59.9	59.9
32.5°	1706.6	1385.2	643.5	127.3	93.9	78.8	64.9	55.5	51.0	49.2	49.8
35°	1687.1	1338.6	520.6	107.8	84.4	66.8	52.9	45.4	43.5	42.9	42.9
37.5°	1676.4	1298.3	402.7	97.7	75.6	55.5	43.5	39.1	37.2	37.2	37.2
40°	1688.4	1267.4	298.1	90.1	66.8	46.0	36.6	33.4	32.8	32.8	32.8
42.5°	1739.4	1256.7	218.1	83.8	58.0	38.4	31.5	29.0	28.4	29.0	29.0
45°	1839.0	1280.0	165.1	77.5	49.8	31.5	27.1	25.2	25.2	25.8	25.8
47.5°	2007.9	1339.8	135.5	71.2	41.6	26.5	23.3	22.1	22.1	22.7	22.7
50°	2270.1	1450.8	121.6	64.3	34.7	22.7	19.5	18.9	18.9	19.5	20.2
52.5°	2668.3	1661.9	114.7	57.3	28.4	18.9	16.4	15.8	16.4	17.0	17.0
55°	3111.4	1932.3	106.5	50.4	23.9	15.8	13.2	13.2	13.9	15.1	15.1
57.5°	3524.2	2193.2	98.9	41.6	20.8	12.6	10.7	10.7	12.0	13.2	13.2
60°	3960.3	2449.0	88.9	33.4	17.6	10.1	8.8	8.8	10.7	12.0	12.6
62.5°	4499.1	2746.5	75.6	26.5	13.9	7.6	6.3	8.2	10.1	12.0	12.0
65°	5278.1	3116.4	59.2	20.8	10.7	5.7	5.0	7.6	9.5	11.3	12.0
67.5°	5561.1	3069.2	44.7	17.0	8.2	4.4	4.4	6.9	9.5	11.3	11.3
68°	5457.7	2965.8	42.9	16.4	7.6	4.4	4.4	6.9	9.5	11.3	11.3
70°	4755.6	2424.5	35.3	12.6	6.3	3.8	3.8	6.3	9.5	10.7	11.3
72.5°	3560.7	1610.8	30.3	8.2	5.7	3.8	3.2	6.3	8.8	10.7	10.7
75°	2042.5	668.7	25.8	6.3	5.0	3.2	3.2	5.7	8.8	10.7	10.7
77.5°	577.3	156.3	20.8	5.0	4.4	3.2	2.5	5.7	8.2	10.1	10.1
80°	105.9	46.6	16.4	4.4	3.8	3.2	2.5	5.7	8.2	10.1	10.1
82.5°	70.0	22.1	12.0	4.4	3.8	3.2	2.5	5.0	7.6	9.5	9.5
85°	52.3	15.8	7.6	4.4	3.8	3.2	2.5	5.0	7.6	9.5	9.5
87.5°	29.0	6.9	5.7	5.0	4.4	3.2	2.5	4.4	6.9	8.8	8.8
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)