

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: P196586

Luminaire Tested: **NAV-AF-02-D-UNV-SL3-7030-600-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196586
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24263)
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-SL3-7030-600-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 3000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III
SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6589.4 lumens
Efficiency: N/A
Efficacy: 99.8 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type III - Medium - Non-Cutoff
BUG Rating: B1 - U0 - G2

Input Watts (W): 66
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

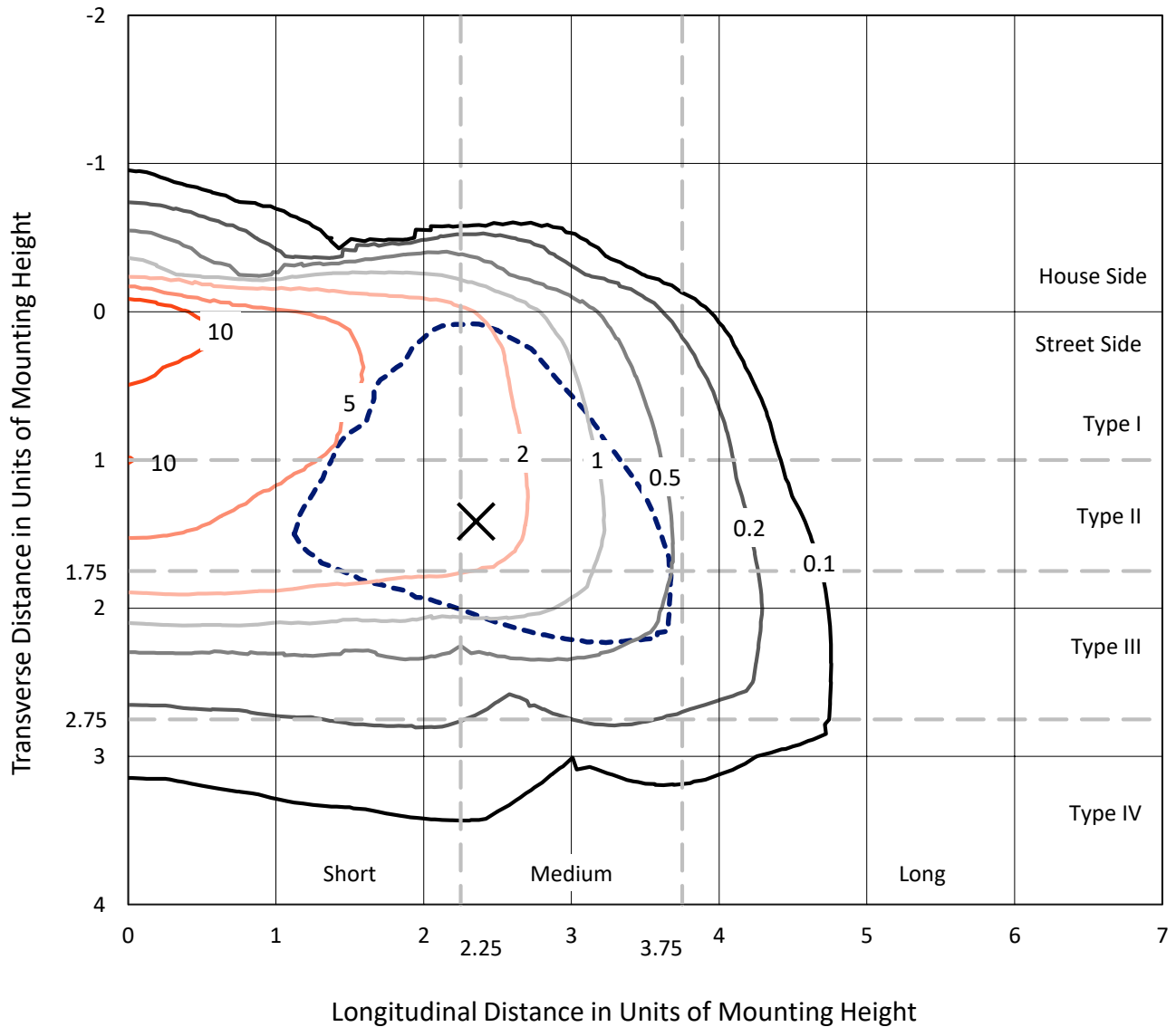


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

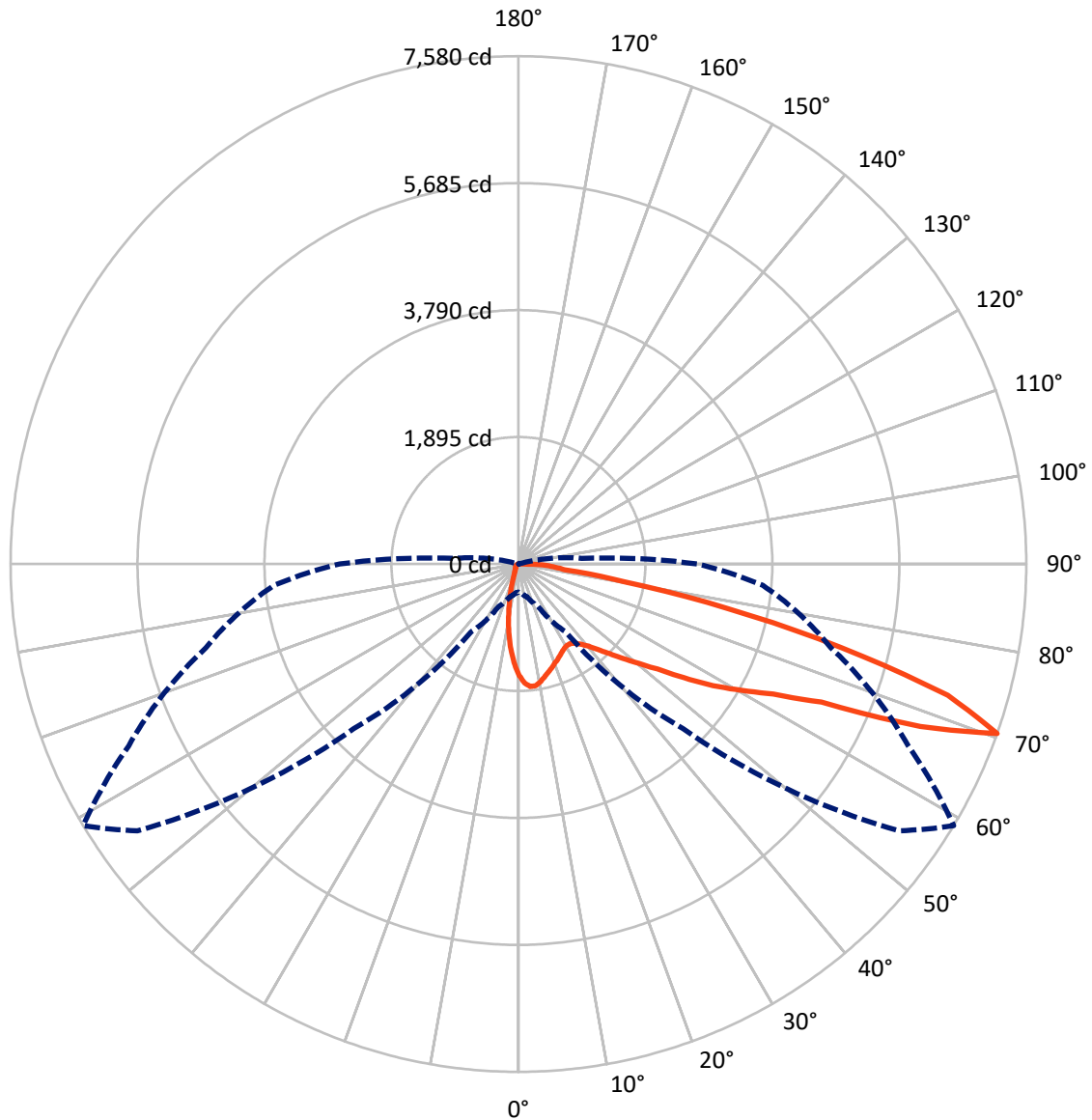


Based on 10 foot mounting height. Maximum calculated value = 17.7 fc
 Type III - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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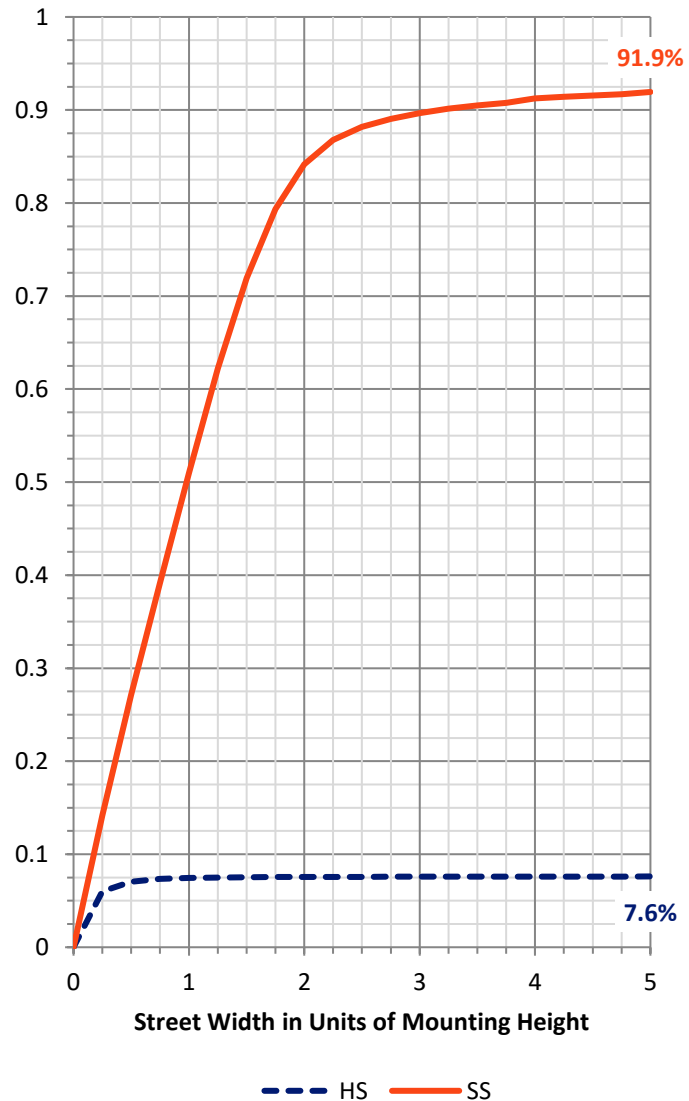
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	506.5	0.0	506.5
	% Fixture	7.7	0.0	7.7
Street Side	Lumens	6082.9	0.0	6082.9
	% Fixture	92.3	0.0	92.3
Total	Lumens	6589.4	0.0	6589.4
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	137.0	2.1
10°-20°	287.4	4.4
20°-30°	389.0	5.9
30°-40°	561.4	8.5
40°-50°	932.4	14.1
50°-60°	1426.2	21.6
60°-70°	1773.8	26.9
70°-80°	980.6	14.9
80°-90°	101.7	1.5
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°	6589.4	100.0
0°-180°	6589.4	100.0

Coefficient of Utilization



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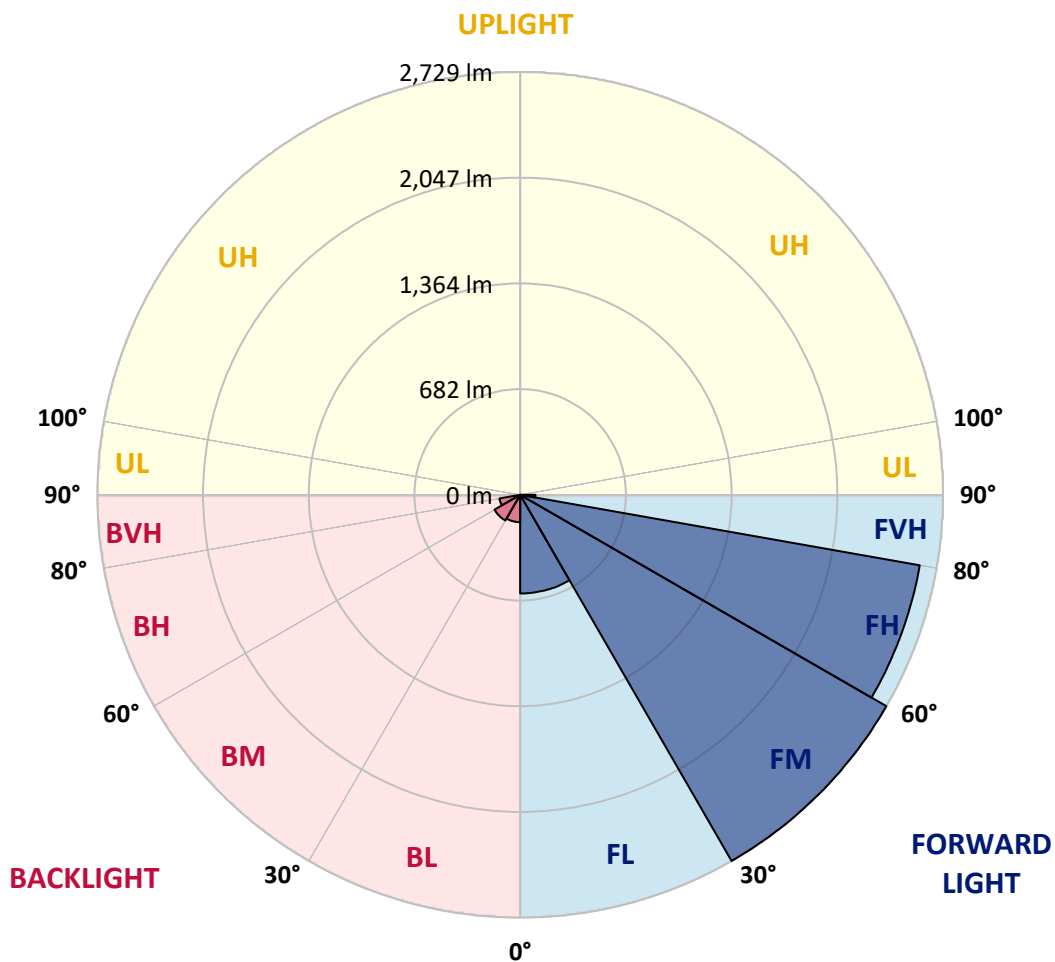
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	636.9	9.7			
FM	(30°-60°)	2728.8	41.4			
FH	(60°-80°)	2618.5	39.7			G2/5000
FVH	(80°-90°)	98.7	1.5			G1/100
BL	(0°-30°)	176.5	2.7	B1/500		
BM	(30°-60°)	191.2	2.9	B0/220		
BH	(60°-80°)	135.9	2.1	B1/500		G1/500
BVH	(80°-90°)	2.9	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 III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	1666.2	1666.2	1666.2	1666.2	1666.2	1666.2	1666.2	1666.2	1666.2	1666.2	1666.2
2.5°	1883.4	1880.5	1868.0	1865.6	1851.6	1823.7	1791.6	1778.5	1752.2	1710.5	1664.2
5°	1914.8	1916.3	1917.3	1911.8	1909.9	1886.9	1851.2	1835.8	1800.5	1731.9	1647.3
7.5°	1797.5	1801.4	1813.8	1819.3	1843.2	1852.2	1844.8	1834.8	1806.9	1725.9	1607.1
10°	1673.7	1681.2	1694.6	1703.5	1732.9	1756.7	1787.1	1789.5	1783.5	1706.0	1561.9
12.5°	1567.4	1574.3	1589.1	1607.1	1636.9	1667.8	1712.9	1728.8	1748.7	1693.1	1529.5
15°	1475.9	1477.8	1492.3	1514.7	1553.8	1596.2	1649.9	1673.2	1712.0	1688.0	1504.7
17.5°	1395.8	1396.4	1405.7	1426.2	1473.9	1529.5	1592.1	1622.9	1672.2	1681.2	1482.7
20°	1343.2	1342.6	1343.2	1354.0	1396.4	1462.4	1538.5	1570.8	1634.0	1672.6	1460.5
22.5°	1325.2	1322.7	1311.3	1307.3	1334.2	1392.3	1483.3	1525.6	1599.7	1670.2	1444.1
25°	1347.0	1345.6	1321.3	1298.4	1300.8	1337.2	1427.2	1478.9	1572.8	1679.2	1440.0
27.5°	1417.6	1414.7	1377.4	1332.6	1304.3	1310.8	1385.4	1439.6	1551.4	1701.0	1445.5
30°	1510.2	1510.6	1470.8	1416.6	1350.1	1313.3	1363.0	1414.3	1537.0	1733.8	1457.4
32.5°	1613.0	1612.5	1584.3	1521.6	1436.5	1359.0	1373.0	1416.2	1539.0	1782.0	1480.4
35°	1719.4	1714.0	1704.6	1649.4	1550.0	1439.1	1418.1	1450.0	1559.9	1845.7	1519.1
37.5°	1842.2	1840.3	1849.6	1791.6	1690.1	1556.8	1497.7	1519.1	1612.5	1939.7	1581.7
40°	2037.5	2026.6	2031.1	1952.0	1848.1	1715.5	1609.1	1614.6	1696.6	2063.9	1680.6
42.5°	2409.8	2365.7	2282.7	2134.5	2022.2	1891.4	1754.7	1745.3	1815.4	2214.4	1810.9
45°	2854.7	2804.0	2594.8	2335.9	2196.1	2080.3	1934.7	1909.3	1961.5	2394.0	1978.9
47.5°	3226.1	3171.4	2894.1	2546.1	2373.1	2275.1	2134.0	2104.2	2136.4	2602.2	2180.7
50°	3352.8	3322.5	3078.9	2721.0	2551.5	2493.9	2384.0	2334.4	2342.3	2827.0	2416.4
52.5°	3294.7	3284.3	3121.2	2840.8	2716.6	2735.5	2658.0	2605.8	2596.8	3072.5	2676.9
55°	3171.9	3166.9	3087.4	2907.5	2862.3	2956.7	3042.1	2996.9	2912.5	3333.5	2892.1
57.5°	2996.4	3015.3	3072.5	3035.7	3041.1	3190.3	3399.0	3422.4	3296.2	3541.2	3051.6
60°	2527.7	2578.4	2840.3	3173.4	3428.4	3579.0	3781.4	3825.0	3621.3	3683.3	3236.0
62.5°	1868.6	1941.1	2314.4	2926.3	3641.6	4318.2	4289.8	4270.5	3931.4	3873.8	3571.5
65°	1097.5	1182.5	1498.2	2286.6	3320.1	4793.4	5239.3	4970.9	4404.1	4269.5	4106.0
67.5°	546.9	547.3	690.0	1206.9	2453.6	4461.8	6625.2	6470.0	5409.3	4852.5	4316.8
70°	420.5	432.0	510.5	701.3	1240.7	3475.1	6942.8	7579.6	6419.3	4826.7	3662.5
72.5°	356.4	363.9	454.3	610.4	927.6	1907.7	6010.3	6699.7	6125.6	4078.1	2699.7
75°	256.5	262.4	402.2	553.7	854.0	946.4	4122.8	4968.9	4596.1	2868.7	1485.8
77.5°	63.6	63.2	140.2	449.4	764.0	788.5	2365.7	3186.3	2637.1	1174.6	381.8
80°	28.3	27.4	31.8	94.4	710.8	744.2	1040.3	1609.1	1011.5	190.3	116.8
82.5°	19.8	18.9	19.8	34.8	237.6	690.4	628.8	697.4	370.3	65.1	49.7
85°	6.4	6.0	10.9	29.3	66.6	398.1	613.4	520.9	275.4	27.9	33.4
87.5°	1.0	1.0	4.0	16.0	19.3	132.8	359.9	360.9	123.8	16.4	14.9
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°	1666.2	1666.2	1666.2	1666.2	1666.2	1666.2	1666.2	1666.2	1666.2	1666.2	1666.2
2.5°	1640.8	1611.6	1570.3	1529.1	1491.7	1453.4	1422.7	1408.3	1401.8	1392.8	1373.5
5°	1603.1	1550.0	1459.4	1370.4	1287.4	1208.0	1139.8	1101.0	1059.3	1057.3	1036.9
7.5°	1542.4	1467.0	1324.2	1186.0	1059.3	938.0	833.6	766.0	719.8	690.9	671.1
10°	1474.9	1377.9	1189.1	994.7	822.1	660.2	525.9	438.4	385.2	358.4	343.0
12.5°	1421.1	1299.4	1055.8	811.2	595.0	409.0	284.3	220.7	192.4	181.5	176.5
15°	1374.9	1227.3	931.0	647.3	397.1	235.1	164.6	143.6	139.2	139.2	138.6
17.5°	1328.3	1157.7	809.7	486.1	249.9	154.0	129.7	126.7	127.3	128.7	128.7
20°	1284.1	1091.6	692.9	346.5	164.0	123.3	117.8	116.8	118.3	120.3	119.7
22.5°	1248.2	1033.5	583.6	238.0	126.3	111.9	108.3	106.8	107.8	109.4	108.8
25°	1222.8	983.8	483.2	166.1	109.8	101.9	97.9	95.9	94.9	95.9	95.5
27.5°	1207.5	942.0	388.8	124.8	98.5	92.0	87.0	83.0	80.6	80.6	79.5
30°	1197.5	902.7	304.8	103.4	88.9	82.1	75.1	69.6	65.7	64.6	64.1
32.5°	1196.9	868.9	227.7	91.4	80.0	72.1	63.6	56.7	52.2	51.3	50.7
35°	1209.4	841.6	167.5	82.5	72.1	62.6	53.2	45.8	41.7	41.7	41.3
37.5°	1241.7	825.7	126.7	75.6	65.7	54.6	44.7	37.8	34.3	35.3	35.3
40°	1301.9	822.7	103.4	70.0	60.2	47.7	36.3	30.8	29.3	30.8	30.8
42.5°	1393.8	838.6	92.0	66.1	55.1	40.8	30.4	26.3	25.9	27.4	27.4
45°	1513.7	869.9	85.5	62.6	49.7	33.8	25.3	22.8	22.4	24.4	24.4
47.5°	1658.8	912.1	79.5	58.7	44.2	27.9	21.5	19.3	19.3	21.5	21.9
50°	1830.7	969.3	73.5	54.6	39.8	23.4	17.9	16.4	16.9	18.9	19.3
52.5°	2028.6	1039.4	68.1	51.3	34.8	18.9	14.9	13.8	14.4	16.4	16.9
55°	2199.1	1100.6	61.6	47.7	28.3	15.4	12.4	11.9	12.4	14.9	14.9
57.5°	2347.8	1159.2	55.7	42.3	22.4	12.4	10.0	10.0	10.9	13.4	13.8
60°	2545.0	1251.7	50.7	35.8	16.9	9.4	7.9	8.4	10.0	11.9	12.4
62.5°	2894.5	1408.8	44.2	29.8	12.4	7.4	6.4	7.0	9.0	11.5	11.9
65°	3332.0	1557.4	36.8	24.8	9.4	5.5	4.9	6.4	9.0	11.5	11.9
67.5°	3287.2	1354.6	28.9	19.8	7.0	4.5	4.0	6.0	8.4	11.5	11.9
70°	2665.8	949.5	21.5	13.4	5.5	4.0	4.0	6.0	8.4	10.9	11.5
72.5°	1849.1	528.4	16.4	9.0	4.9	4.0	3.5	5.5	7.9	10.9	11.5
75°	879.9	162.0	12.9	6.4	4.5	3.5	2.9	5.5	7.9	10.9	11.5
77.5°	169.1	41.3	10.5	5.5	4.0	3.5	2.9	4.9	7.9	10.5	10.9
80°	57.2	18.3	8.4	4.9	4.0	3.5	2.9	4.9	7.4	10.0	10.5
82.5°	31.3	10.5	7.4	4.5	4.0	2.9	2.5	4.5	7.0	10.0	10.5
85°	24.4	7.4	6.0	4.5	4.0	2.9	2.5	4.5	7.0	9.4	10.0
87.5°	12.4	5.5	4.9	4.5	4.0	2.9	2.5	4.0	6.4	9.0	10.0
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)