

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: P270435

Luminaire Tested: **NAV-AF-03-D-UNV-SL3-7027-600-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270435
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-03-D-UNV-SL3-7027-600-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 2700K, 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: 8801.9 lumens
Efficiency: N/A
Efficacy: 91.7 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type III - Medium - Non-Cutoff
BUG Rating: B1 - U0 - G2

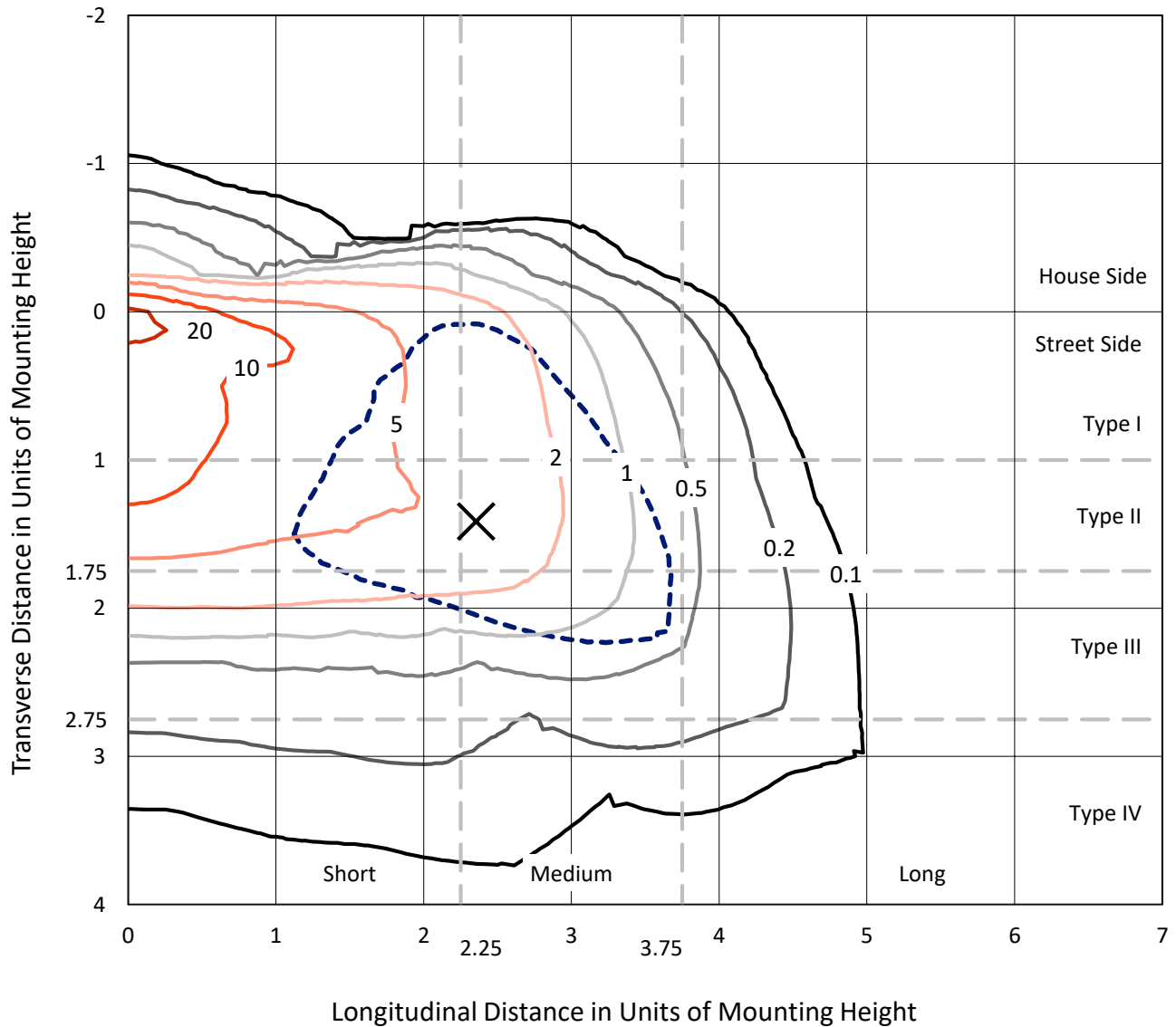
Input Watts (W): 96
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

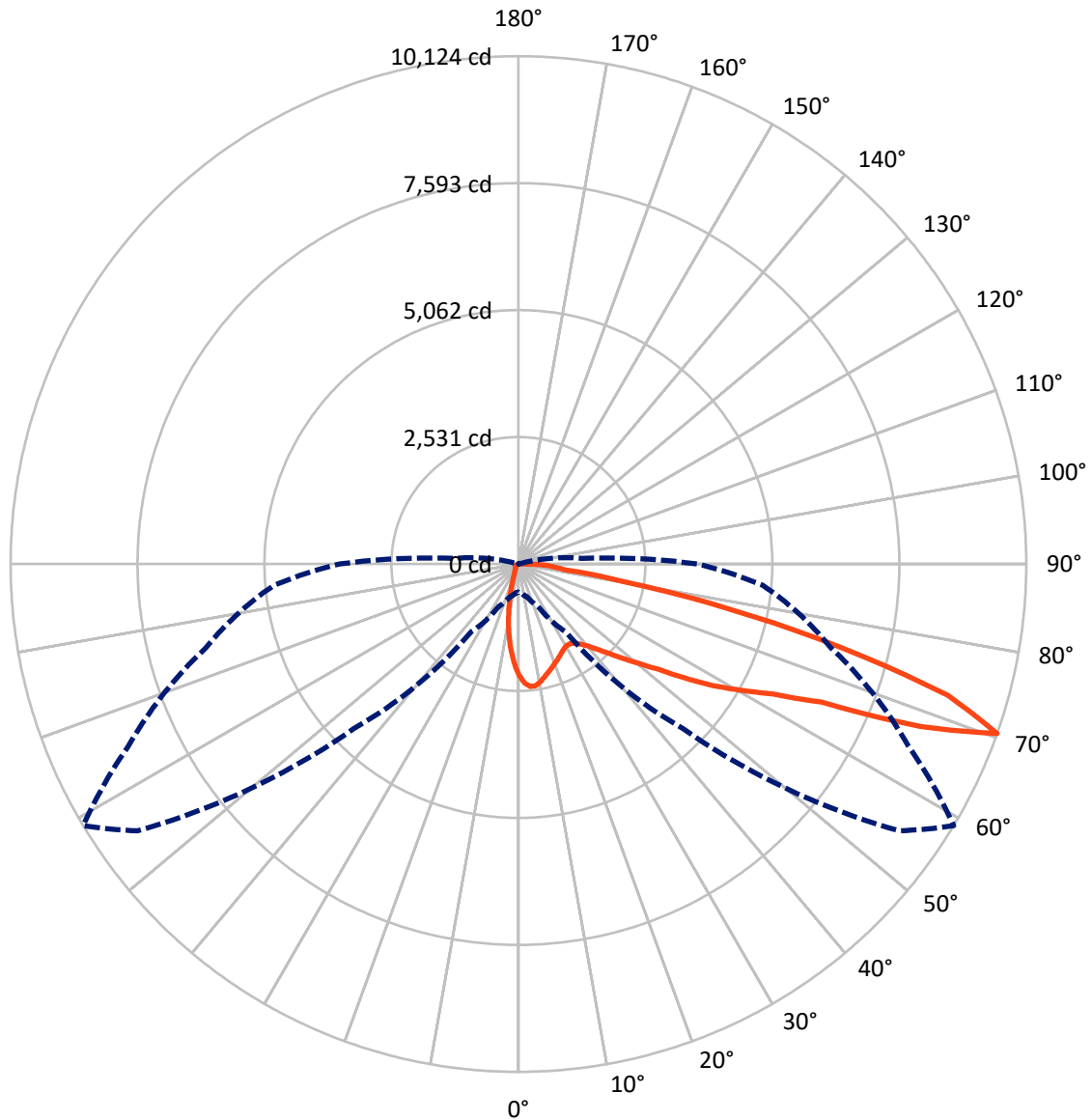
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 23.7 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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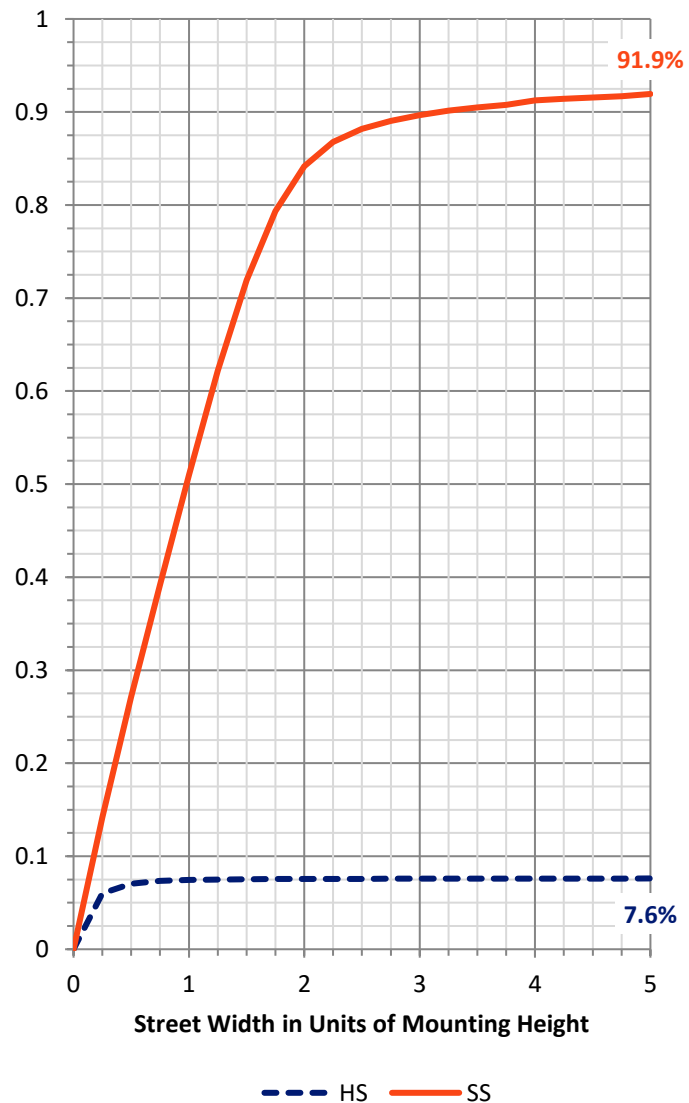
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	676.6	0.0	676.6
	% Fixture	7.7	0.0	7.7
Street Side	Lumens	8125.3	0.0	8125.3
	% Fixture	92.3	0.0	92.3
Total	Lumens	8801.9	0.0	8801.9
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	183.0	2.1
10°-20°	383.9	4.4
20°-30°	519.6	5.9
30°-40°	749.9	8.5
40°-50°	1245.4	14.1
50°-60°	1905.0	21.6
60°-70°	2369.4	26.9
70°-80°	1309.8	14.9
80°-90°	135.8	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°	8801.9	100.0
0°-180°	8801.9	100.0



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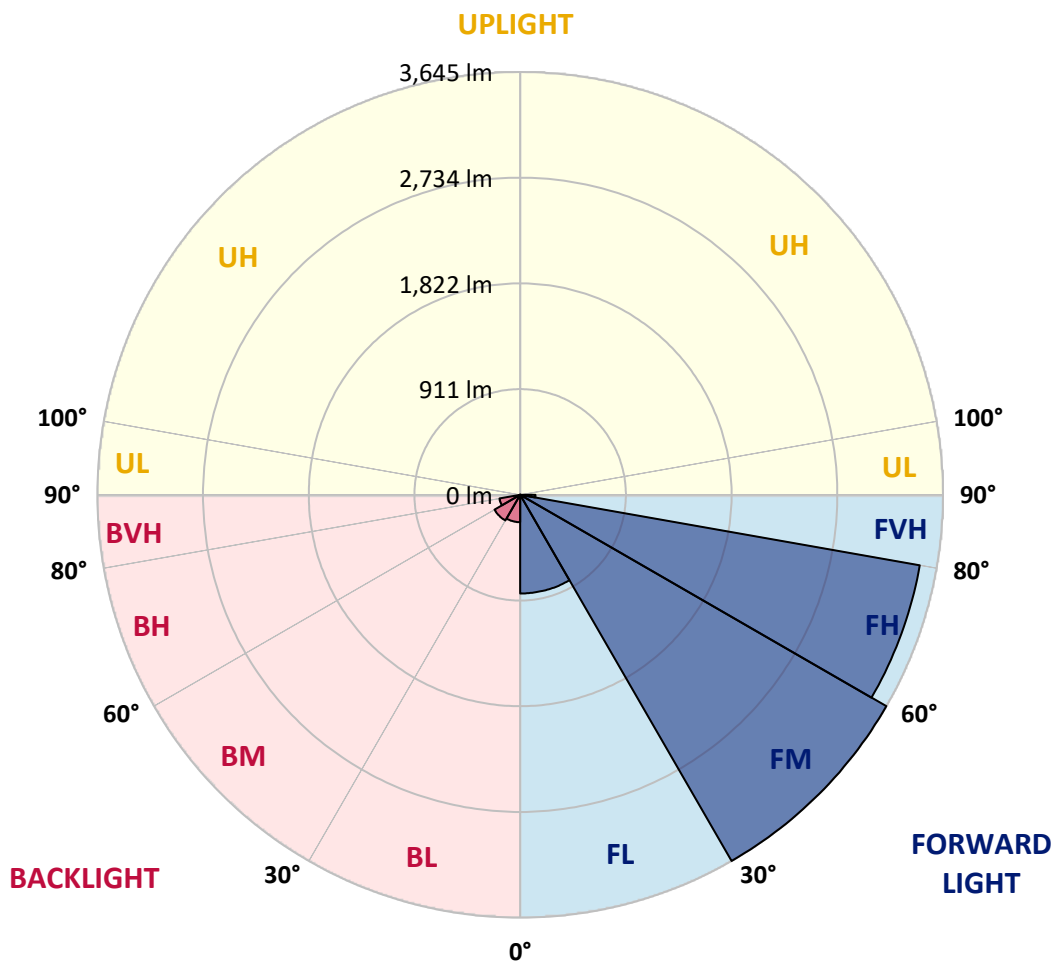
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	850.7	9.7			
FM	(30°-60°)	3645.0	41.4			
FH	(60°-80°)	3497.7	39.7			G2/5000
FVH	(80°-90°)	131.9	1.5			G2/225
BL	(0°-30°)	235.8	2.7	B1/500		
BM	(30°-60°)	255.4	2.9	B1/1000		
BH	(60°-80°)	181.5	2.1	B1/500		G1/500
BVH	(80°-90°)	3.9	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°	2225.7	2225.7	2225.7	2225.7	2225.7	2225.7	2225.7	2225.7	2225.7	2225.7	2225.7
2.5°	2515.9	2511.9	2495.3	2492.0	2473.4	2436.2	2393.1	2375.7	2340.5	2284.7	2223.0
5°	2557.7	2559.7	2561.0	2553.7	2551.0	2520.6	2472.7	2452.2	2404.9	2313.3	2200.5
7.5°	2401.0	2406.3	2422.9	2430.3	2462.1	2474.0	2464.1	2450.8	2413.6	2305.4	2146.7
10°	2235.6	2245.7	2263.5	2275.4	2314.7	2346.6	2387.1	2390.4	2382.3	2278.8	2086.3
12.5°	2093.6	2102.8	2122.8	2146.7	2186.6	2227.6	2288.2	2309.4	2336.0	2261.6	2043.0
15°	1971.4	1974.0	1993.2	2023.2	2075.7	2132.0	2203.8	2235.1	2286.7	2254.9	2009.9
17.5°	1864.5	1865.2	1877.7	1904.9	1968.7	2043.0	2126.7	2167.9	2233.6	2245.7	1980.7
20°	1794.1	1793.5	1794.1	1808.6	1865.2	1953.5	2055.1	2098.3	2182.5	2234.4	1950.8
22.5°	1770.2	1766.8	1751.7	1746.2	1782.1	1859.9	1981.3	2037.7	2136.7	2231.0	1928.9
25°	1799.5	1797.4	1764.9	1734.4	1737.6	1786.1	1906.4	1975.4	2100.9	2243.0	1923.6
27.5°	1893.6	1889.8	1839.9	1780.1	1742.4	1750.9	1850.6	1922.9	2072.3	2272.2	1930.8
30°	2017.2	2017.9	1964.8	1892.4	1803.3	1754.3	1820.7	1889.0	2053.0	2316.0	1946.7
32.5°	2154.7	2154.0	2116.1	2032.4	1918.9	1815.4	1833.9	1891.7	2055.7	2380.4	1977.3
35°	2296.7	2289.4	2276.8	2203.2	2070.4	1922.3	1894.3	1936.8	2083.6	2465.4	2029.1
37.5°	2460.7	2458.1	2470.7	2393.1	2257.6	2079.7	2000.5	2029.1	2154.0	2590.9	2112.9
40°	2721.7	2707.1	2713.1	2607.5	2468.7	2291.4	2149.4	2156.7	2266.2	2756.9	2245.0
42.5°	3219.0	3159.9	3049.0	2851.2	2701.2	2526.5	2343.9	2331.3	2424.9	2958.1	2419.0
45°	3813.2	3745.6	3466.0	3120.2	2933.5	2778.7	2584.2	2550.4	2620.0	3197.7	2643.4
47.5°	4309.3	4236.2	3865.8	3401.0	3169.8	3039.1	2850.5	2810.6	2853.8	3476.0	2912.9
50°	4478.6	4438.0	4112.7	3634.7	3408.3	3331.3	3184.5	3118.0	3128.6	3776.1	3227.6
52.5°	4400.9	4387.0	4169.2	3794.7	3628.8	3653.9	3550.3	3480.7	3468.6	4104.1	3575.6
55°	4236.9	4230.3	4123.9	3883.6	3823.2	3949.4	4063.7	4003.1	3890.3	4452.7	3863.2
57.5°	4002.5	4027.8	4104.1	4054.9	4062.2	4261.5	4540.4	4571.6	4403.0	4730.3	4076.1
60°	3376.4	3444.1	3794.0	4238.9	4579.5	4780.7	5051.0	5109.4	4837.2	4920.1	4322.6
62.5°	2495.9	2592.9	3091.5	3909.0	4864.4	5768.0	5730.2	5704.3	5251.5	5174.4	4770.8
65°	1466.0	1579.6	2001.2	3054.3	4434.8	6402.8	6998.4	6639.9	5882.9	5703.0	5484.5
67.5°	730.4	731.0	921.7	1612.2	3277.5	5960.0	8849.7	8642.5	7225.5	6481.9	5766.1
70°	561.7	577.0	682.0	936.9	1657.4	4641.9	9273.9	10124.4	8574.7	6447.3	4892.3
72.5°	476.1	486.1	606.9	815.4	1239.0	2548.4	8028.3	8949.3	8182.3	5447.3	3606.2
75°	342.7	350.6	537.1	739.7	1140.8	1264.3	5507.1	6637.2	6139.2	3831.9	1984.6
77.5°	85.0	84.4	187.2	600.2	1020.6	1053.2	3159.9	4256.2	3522.4	1569.0	510.0
80°	37.9	36.6	42.5	126.1	949.5	994.0	1389.7	2149.4	1351.2	254.3	156.0
82.5°	26.6	25.2	26.6	46.5	317.5	922.3	839.9	931.6	494.6	87.0	66.5
85°	8.7	7.9	14.6	39.2	89.0	531.8	819.3	695.8	367.9	37.2	44.5
87.5°	1.3	1.3	5.3	21.2	26.0	177.2	480.8	482.1	165.4	21.9	19.9
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°	2225.7	2225.7	2225.7	2225.7	2225.7	2225.7	2225.7	2225.7	2225.7	2225.7	2225.7
2.5°	2191.9	2152.7	2097.5	2042.4	1992.6	1941.4	1900.4	1881.1	1872.4	1860.5	1834.6
5°	2141.4	2070.4	1949.5	1830.7	1719.7	1613.4	1522.5	1470.7	1415.0	1412.3	1385.0
7.5°	2060.4	1959.5	1768.9	1584.3	1415.0	1253.0	1113.4	1023.2	961.5	923.0	896.4
10°	1970.1	1840.5	1588.3	1328.7	1098.3	881.7	702.6	585.6	514.5	478.7	458.1
12.5°	1898.4	1735.6	1410.2	1083.6	794.8	546.4	379.9	294.9	256.9	242.4	235.7
15°	1836.6	1639.3	1243.7	864.4	530.4	314.0	219.7	191.9	185.9	185.9	185.2
17.5°	1774.2	1546.4	1081.6	649.4	334.0	205.8	173.4	169.3	170.0	171.9	171.9
20°	1715.0	1458.0	925.7	462.7	219.1	164.7	157.4	156.0	158.0	160.6	160.0
22.5°	1667.3	1380.4	779.5	318.1	168.6	149.4	144.7	142.8	144.1	146.1	145.4
25°	1633.4	1314.0	645.4	221.8	146.8	136.2	130.9	128.2	126.8	128.2	127.5
27.5°	1612.8	1258.3	519.2	166.6	131.5	122.9	116.2	110.9	107.5	107.5	106.2
30°	1599.5	1205.9	407.0	138.1	118.8	109.6	100.3	93.0	87.7	86.2	85.7
32.5°	1599.0	1160.7	304.0	122.2	106.9	96.3	85.0	75.6	69.7	68.5	67.7
35°	1615.5	1124.0	223.8	110.2	96.3	83.6	71.1	61.1	55.8	55.8	55.2
37.5°	1658.6	1102.8	169.3	100.9	87.7	73.0	59.7	50.5	45.9	47.2	47.2
40°	1738.9	1098.8	138.1	93.7	80.4	63.7	48.5	41.1	39.2	41.1	41.1
42.5°	1861.8	1120.1	122.9	88.4	73.8	54.4	40.6	35.3	34.6	36.6	36.6
45°	2021.8	1162.0	114.3	83.6	66.5	45.2	33.9	30.5	29.9	32.5	32.5
47.5°	2215.7	1218.5	106.2	78.3	59.1	37.2	28.6	26.0	26.0	28.6	29.3
50°	2445.5	1294.7	98.3	73.0	53.1	31.3	24.0	21.9	22.5	25.2	26.0
52.5°	2709.7	1388.4	91.0	68.5	46.5	25.2	19.9	18.5	19.3	21.9	22.5
55°	2937.5	1470.0	82.4	63.7	37.9	20.7	16.6	15.9	16.6	19.9	19.9
57.5°	3136.1	1548.4	74.4	56.5	29.9	16.6	13.2	13.2	14.6	18.0	18.5
60°	3399.6	1671.9	67.7	47.8	22.5	12.7	10.6	11.3	13.2	15.9	16.6
62.5°	3866.5	1881.7	59.1	39.9	16.6	9.9	8.7	9.3	11.9	15.4	15.9
65°	4450.7	2080.3	49.1	33.1	12.7	7.2	6.6	8.7	11.9	15.4	15.9
67.5°	4390.9	1809.4	38.4	26.6	9.3	6.0	5.3	7.9	11.3	15.4	15.9
70°	3561.1	1268.1	28.6	18.0	7.2	5.3	5.3	7.9	11.3	14.6	15.4
72.5°	2470.0	705.8	21.9	11.9	6.6	5.3	4.6	7.2	10.6	14.6	15.4
75°	1175.3	216.4	17.2	8.7	6.0	4.6	4.0	7.2	10.6	14.6	15.4
77.5°	225.7	55.2	14.0	7.2	5.3	4.6	4.0	6.6	10.6	14.0	14.6
80°	76.4	24.6	11.3	6.6	5.3	4.6	4.0	6.6	9.9	13.2	14.0
82.5°	41.9	14.0	9.9	6.0	5.3	4.0	3.4	6.0	9.3	13.2	14.0
85°	32.5	9.9	7.9	6.0	5.3	4.0	3.4	6.0	9.3	12.7	13.2
87.5°	16.6	7.2	6.6	6.0	5.3	4.0	3.4	5.3	8.7	11.9	13.2
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)