

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: P196419

Luminaire Tested: **NAV-AF-03-D-UNV-5NQ-7030-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196419  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24130)  
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-5NQ-7030-600  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(3) 70 CRI, 3000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V NARROW OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 11866.7 lumens  
Efficiency: N/A  
Efficacy: 123.6 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')  
IES Classification: Type V - Short - Full Cutoff  
BUG Rating: B3 - U0 - G2

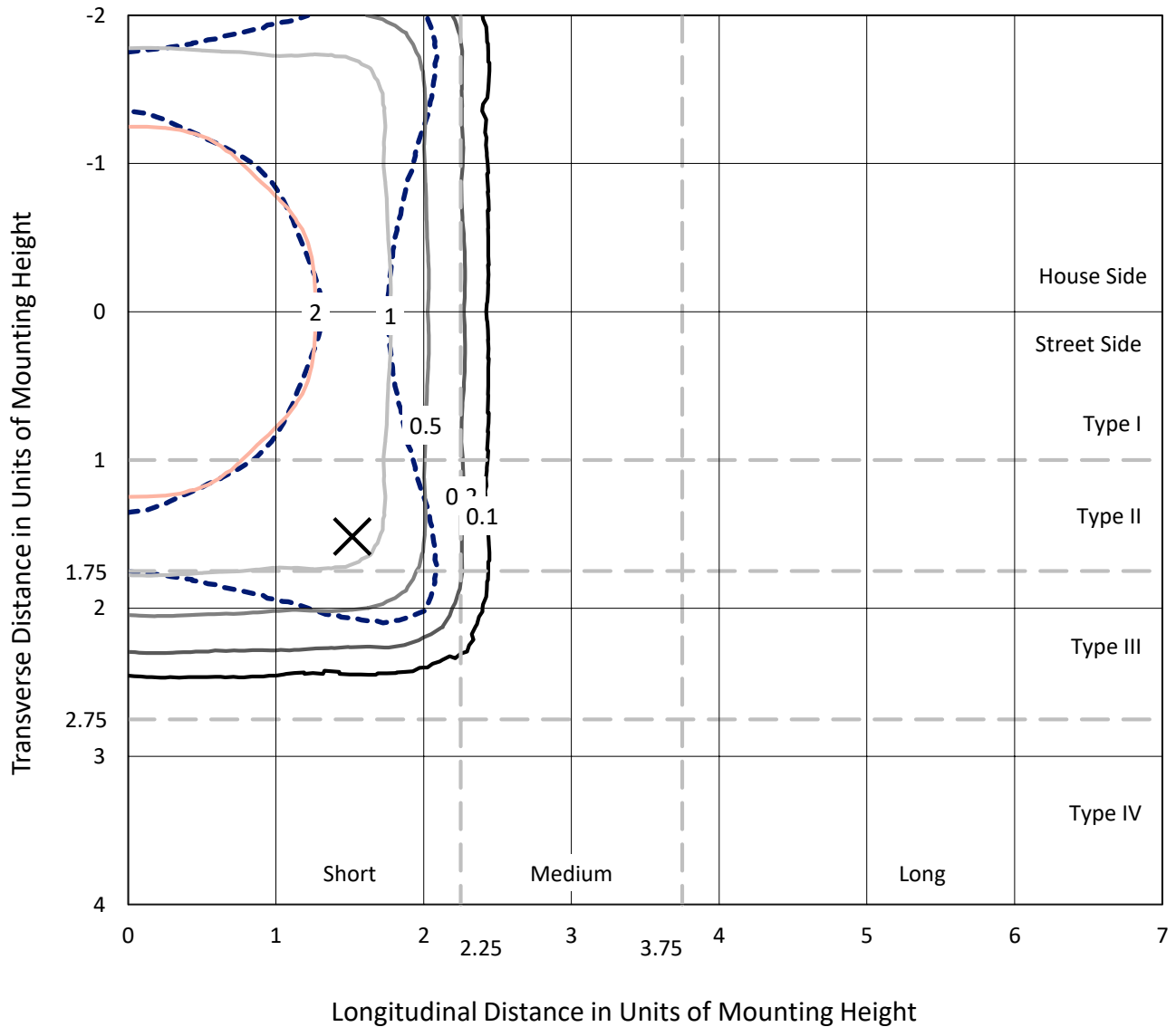
Input Watts (W): 96  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

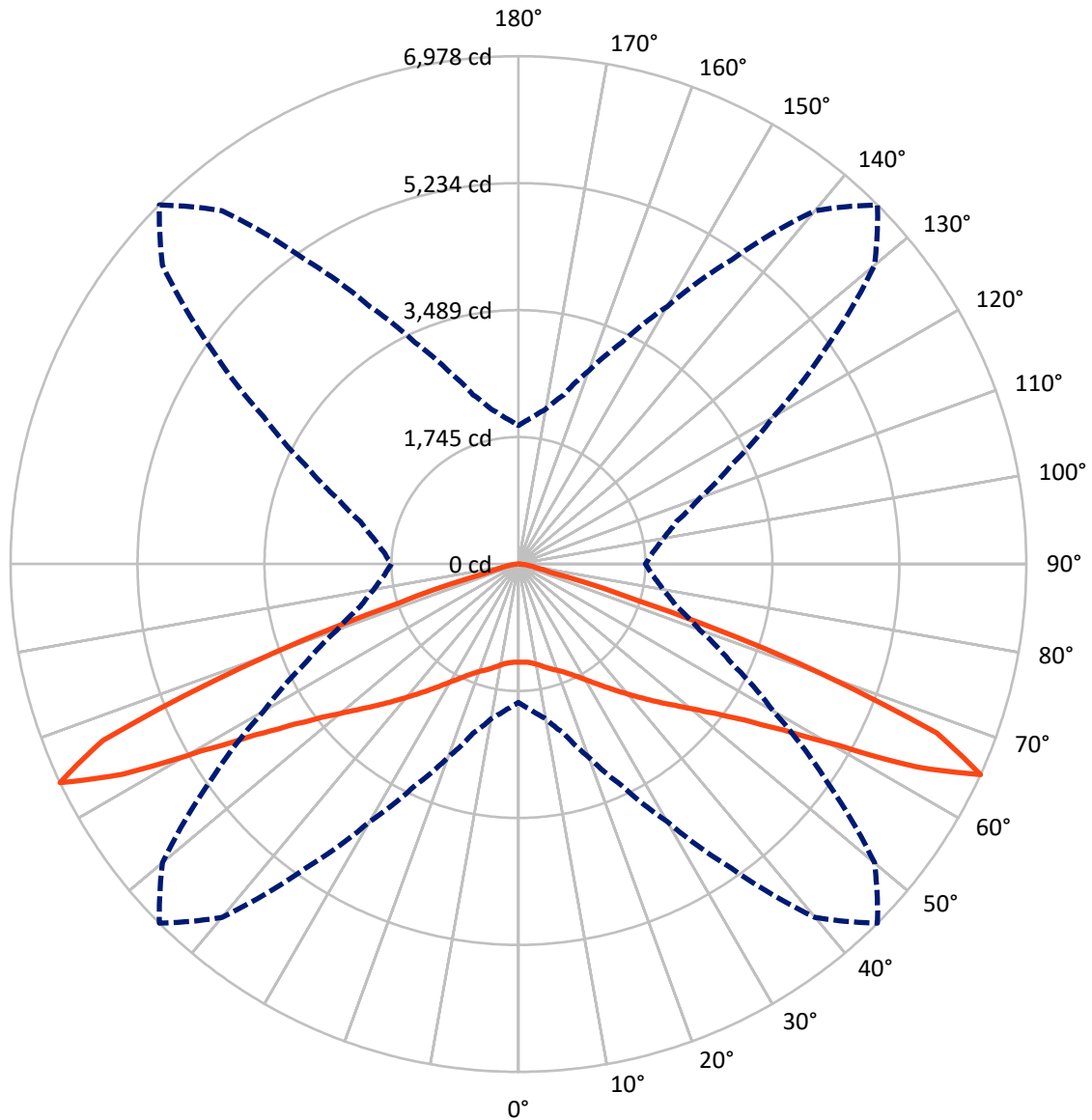
× Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 3.4 fc  
 Type V - Short - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral      - - - Horizontal Cone Through 65-Deg Vertical

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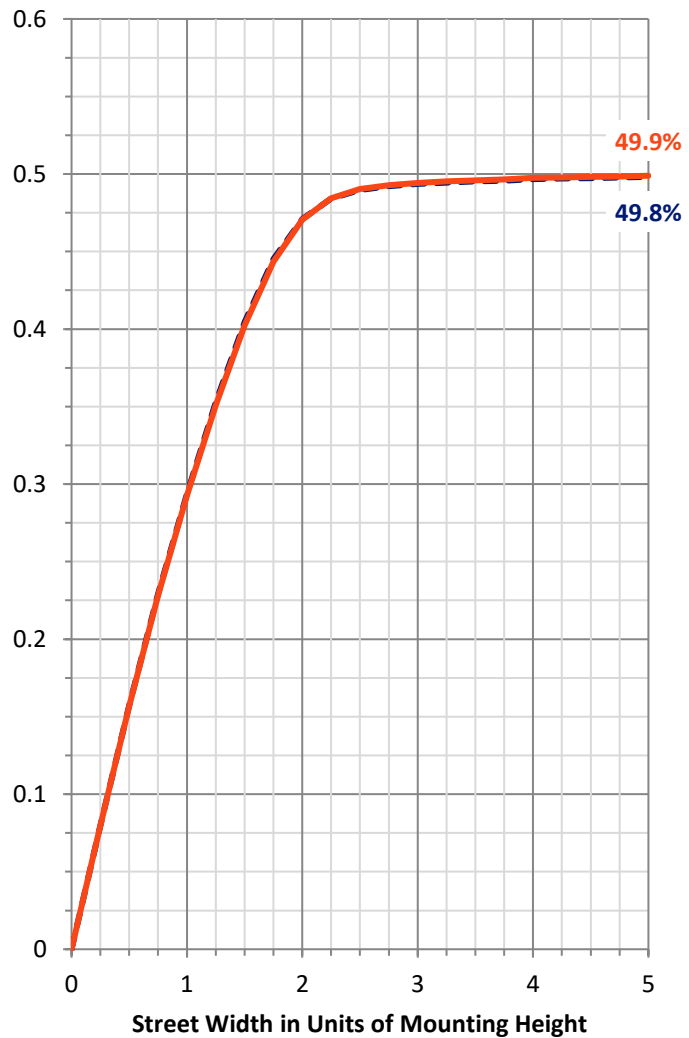
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	5933.3	0.0	5933.3
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	5933.3	0.0	5933.3
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	11866.7	0.0	11866.7
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	131.4	1.1
10°-20°	421.3	3.6
20°-30°	785.9	6.6
30°-40°	1325.2	11.2
40°-50°	2152.5	18.1
50°-60°	3372.5	28.4
60°-70°	3183.5	26.8
70°-80°	429.0	3.6
80°-90°	65.4	0.6
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°	11866.7	100.0
0°-180°	11866.7	100.0



--- HS    — SS

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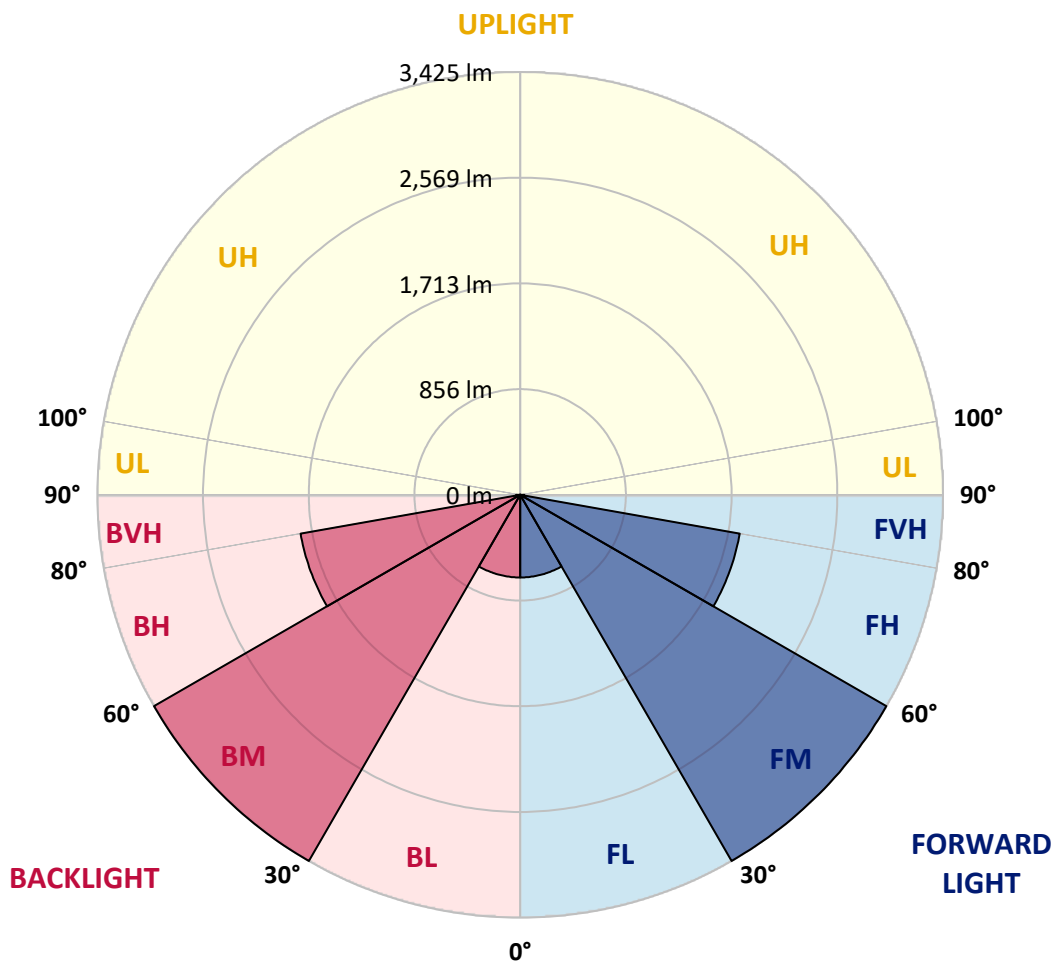
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	669.3	5.6			
FM (30°-60°)	3425.1	28.9			
FH (60°-80°)	1806.3	15.2			G2/5000
FVH (80°-90°)	32.7	0.3			G1/100
BL (0°-30°)	669.3	5.6	B2/1000		
BM (30°-60°)	3425.1	28.9	B3/5000		
BH (60°-80°)	1806.3	15.2	B3/2500		G2/5000
BVH (80°-90°)	32.7	0.3			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B3-U0-G2**

Type V Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1349.8	1349.8	1349.8	1349.8	1349.8	1349.8	1349.8	1349.8	1349.8	1349.8	1349.8
2.5°	1361.0	1361.0	1363.1	1362.4	1359.4	1357.2	1355.1	1352.1	1350.6	1349.1	1348.4
5°	1368.3	1368.3	1370.5	1369.8	1367.6	1364.6	1363.1	1361.0	1358.6	1357.2	1358.0
7.5°	1386.8	1387.5	1388.2	1387.5	1385.3	1383.1	1380.2	1379.4	1376.4	1374.3	1375.7
10°	1414.9	1414.9	1415.6	1416.3	1414.9	1409.7	1409.7	1408.3	1405.3	1402.4	1403.0
12.5°	1445.9	1445.9	1446.7	1446.7	1446.7	1443.8	1444.4	1443.8	1440.0	1438.5	1440.0
15°	1476.2	1476.9	1476.9	1478.4	1478.4	1479.2	1482.1	1482.1	1480.7	1479.9	1479.9
17.5°	1511.7	1513.1	1513.9	1516.2	1516.8	1518.3	1521.3	1522.1	1522.7	1520.6	1521.3
20°	1559.0	1559.7	1562.0	1562.7	1565.6	1565.6	1567.1	1566.4	1564.9	1562.0	1562.0
22.5°	1612.2	1613.8	1618.1	1618.1	1621.9	1619.7	1620.5	1618.1	1614.5	1613.0	1611.5
25°	1681.7	1683.9	1687.6	1686.2	1687.6	1683.9	1683.9	1683.9	1681.7	1679.6	1678.8
27.5°	1769.7	1765.9	1769.7	1766.7	1765.9	1763.0	1763.8	1762.4	1760.0	1759.3	1756.4
30°	1861.3	1857.0	1859.1	1859.9	1858.4	1857.6	1854.6	1852.5	1848.7	1849.5	1847.3
32.5°	1966.3	1961.9	1964.2	1964.8	1963.4	1964.8	1964.2	1958.9	1954.5	1957.5	1957.5
35°	2091.2	2088.3	2094.2	2096.4	2092.0	2089.8	2086.9	2081.0	2074.3	2078.6	2079.4
37.5°	2241.4	2237.6	2242.1	2248.0	2239.9	2235.5	2223.5	2214.6	2210.4	2212.5	2215.4
40°	2397.2	2398.0	2410.6	2412.1	2403.1	2398.0	2386.2	2372.9	2360.3	2360.3	2364.1
42.5°	2561.4	2563.7	2578.4	2583.6	2580.6	2571.0	2554.7	2538.5	2522.2	2525.2	2529.6
45°	2747.0	2743.9	2759.6	2772.1	2769.8	2766.9	2751.3	2721.7	2707.0	2706.3	2713.7
47.5°	2942.2	2948.1	2964.3	2985.7	2985.0	2977.6	2957.6	2930.3	2902.9	2905.1	2914.1
50°	3169.8	3178.0	3205.2	3226.7	3229.7	3227.4	3203.8	3172.1	3133.5	3135.7	3147.6
52.5°	3373.8	3385.6	3417.4	3461.8	3489.0	3501.6	3486.1	3456.6	3417.4	3419.6	3432.2
55°	3558.6	3577.0	3624.3	3685.0	3739.7	3790.7	3813.5	3812.9	3784.0	3790.7	3807.0
57.5°	3674.7	3700.5	3772.2	3869.9	3978.4	4081.3	4170.0	4253.5	4271.9	4306.7	4306.7
60°	3518.7	3579.4	3674.7	3841.8	4055.3	4286.0	4535.9	4779.1	4935.8	5059.2	4992.7
62.5°	2938.4	3027.9	3161.6	3381.9	3714.6	4126.2	4628.2	5193.7	5783.6	6144.4	5879.8
65°	1901.3	2013.6	2159.3	2406.9	2826.0	3356.1	4087.2	5103.6	6338.1	6978.3	6386.9
67.5°	753.3	829.4	918.1	1094.0	1457.7	1978.1	2798.6	4052.4	5596.6	6200.6	5537.5
70°	360.0	372.6	389.6	427.3	518.2	699.3	1124.4	1996.6	3432.2	4068.7	3350.1
72.5°	260.2	262.4	270.5	283.1	309.8	346.7	421.3	610.6	1183.5	1721.0	1184.9
75°	197.3	200.4	204.8	211.4	225.5	243.2	271.3	325.3	405.2	467.2	404.4
77.5°	150.0	153.1	156.7	163.4	170.8	183.3	193.7	215.1	249.1	262.4	260.9
80°	109.4	114.6	120.5	126.4	131.5	137.4	138.2	148.6	167.8	180.4	176.7
82.5°	69.5	74.0	89.5	96.1	96.8	98.4	97.6	98.4	108.7	117.6	114.6
85°	44.4	47.3	55.4	62.9	61.4	64.4	64.4	62.9	58.4	50.3	59.9
87.5°	22.2	23.0	26.7	33.3	31.8	28.1	27.4	27.4	20.0	17.1	18.5
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):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1349.8	1349.8	1349.8	1349.8	1349.8	1349.8	1349.8	1349.8
2.5°	1346.1	1347.6	1345.4	1345.4	1344.7	1346.1	1343.9	1343.9
5°	1356.5	1358.6	1358.0	1358.0	1359.4	1361.0	1360.2	1359.4
7.5°	1374.9	1376.4	1377.9	1378.7	1380.2	1379.4	1380.8	1380.2
10°	1403.0	1401.6	1403.8	1401.6	1402.4	1400.8	1401.6	1401.6
12.5°	1438.5	1436.3	1434.8	1433.4	1433.4	1430.4	1430.4	1431.1
15°	1479.2	1475.4	1472.5	1471.0	1469.5	1469.5	1467.4	1468.9
17.5°	1519.1	1515.4	1510.2	1510.2	1508.0	1506.5	1505.0	1508.8
20°	1561.2	1557.5	1554.5	1553.8	1549.4	1547.8	1548.6	1553.1
22.5°	1610.1	1607.9	1607.9	1606.3	1603.4	1601.2	1601.2	1606.3
25°	1675.8	1671.3	1672.1	1672.9	1671.3	1671.3	1669.9	1673.7
27.5°	1756.4	1752.7	1754.9	1756.4	1754.9	1757.1	1754.9	1757.9
30°	1851.0	1848.7	1851.0	1853.2	1849.5	1849.5	1848.0	1850.3
32.5°	1964.2	1961.2	1962.7	1962.7	1957.5	1953.0	1947.1	1951.6
35°	2088.3	2084.5	2087.5	2089.8	2083.9	2079.4	2070.6	2074.3
37.5°	2225.1	2226.4	2230.2	2239.9	2238.4	2231.0	2224.3	2227.2
40°	2378.0	2385.4	2401.7	2408.4	2406.9	2399.6	2390.6	2392.1
42.5°	2551.1	2560.7	2577.7	2588.8	2583.6	2573.3	2562.1	2566.6
45°	2739.5	2754.3	2776.5	2787.6	2780.9	2769.8	2754.3	2762.5
47.5°	2939.2	2968.7	2998.3	3013.1	3010.8	2995.4	2975.3	2977.6
50°	3178.0	3217.1	3254.9	3269.6	3258.4	3234.8	3206.8	3206.0
52.5°	3475.1	3517.2	3548.3	3544.6	3517.2	3480.2	3448.4	3447.0
55°	3846.2	3860.2	3855.8	3824.0	3775.9	3718.3	3677.6	3671.0
57.5°	4294.9	4247.6	4178.1	4081.9	3974.1	3864.6	3790.7	3763.3
60°	4843.4	4629.8	4381.4	4119.7	3880.9	3702.0	3588.9	3520.2
62.5°	5296.6	4677.8	4122.7	3668.1	3296.2	3075.2	2920.6	2825.3
65°	5141.3	4041.3	3237.1	2650.8	2245.1	2016.6	1853.2	1744.6
67.5°	3971.8	2700.4	1879.2	1302.5	987.6	836.1	730.4	661.6
70°	2002.5	1035.7	627.5	442.8	378.5	351.9	334.2	323.7
72.5°	587.7	392.6	326.0	288.3	265.4	249.1	238.7	233.6
75°	325.3	265.4	234.4	212.9	198.1	187.1	180.4	175.9
77.5°	224.0	193.0	177.4	163.4	151.6	143.4	138.2	133.9
80°	156.7	141.2	134.5	127.2	118.3	111.7	104.3	101.3
82.5°	104.3	97.6	96.1	90.1	85.0	77.6	64.4	59.9
85°	61.4	60.6	60.6	58.4	54.7	48.1	38.5	38.5
87.5°	21.5	22.2	23.0	24.4	23.7	20.0	16.3	15.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)