

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: P270407

Luminaire Tested: **NAV-AF-03-D-UNV-5NQ-7027-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270407
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-7027-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 2700K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V NARROW OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13071.4 lumens
Efficiency: N/A
Efficacy: 105.4 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

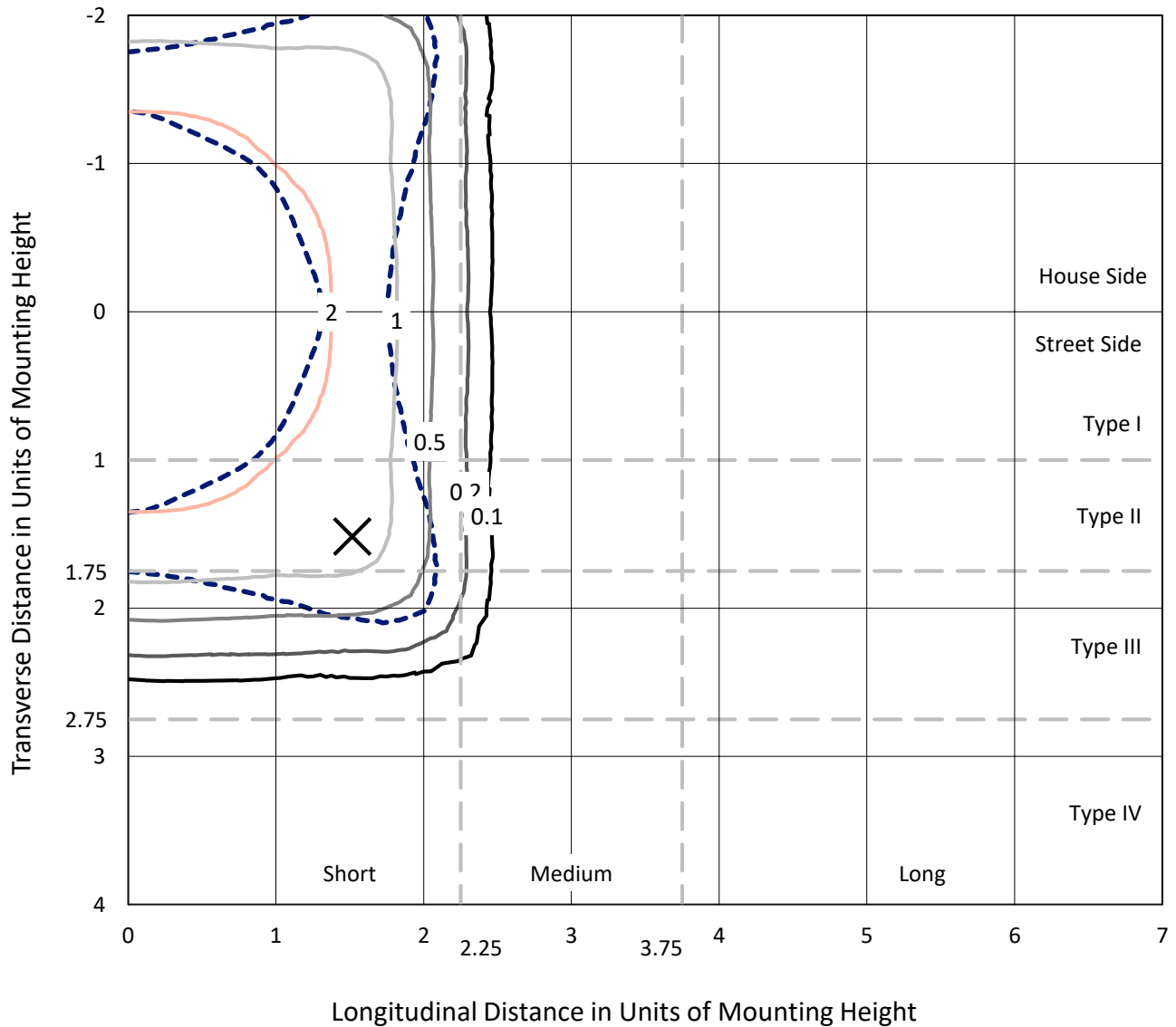
Input Watts (W): 124
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

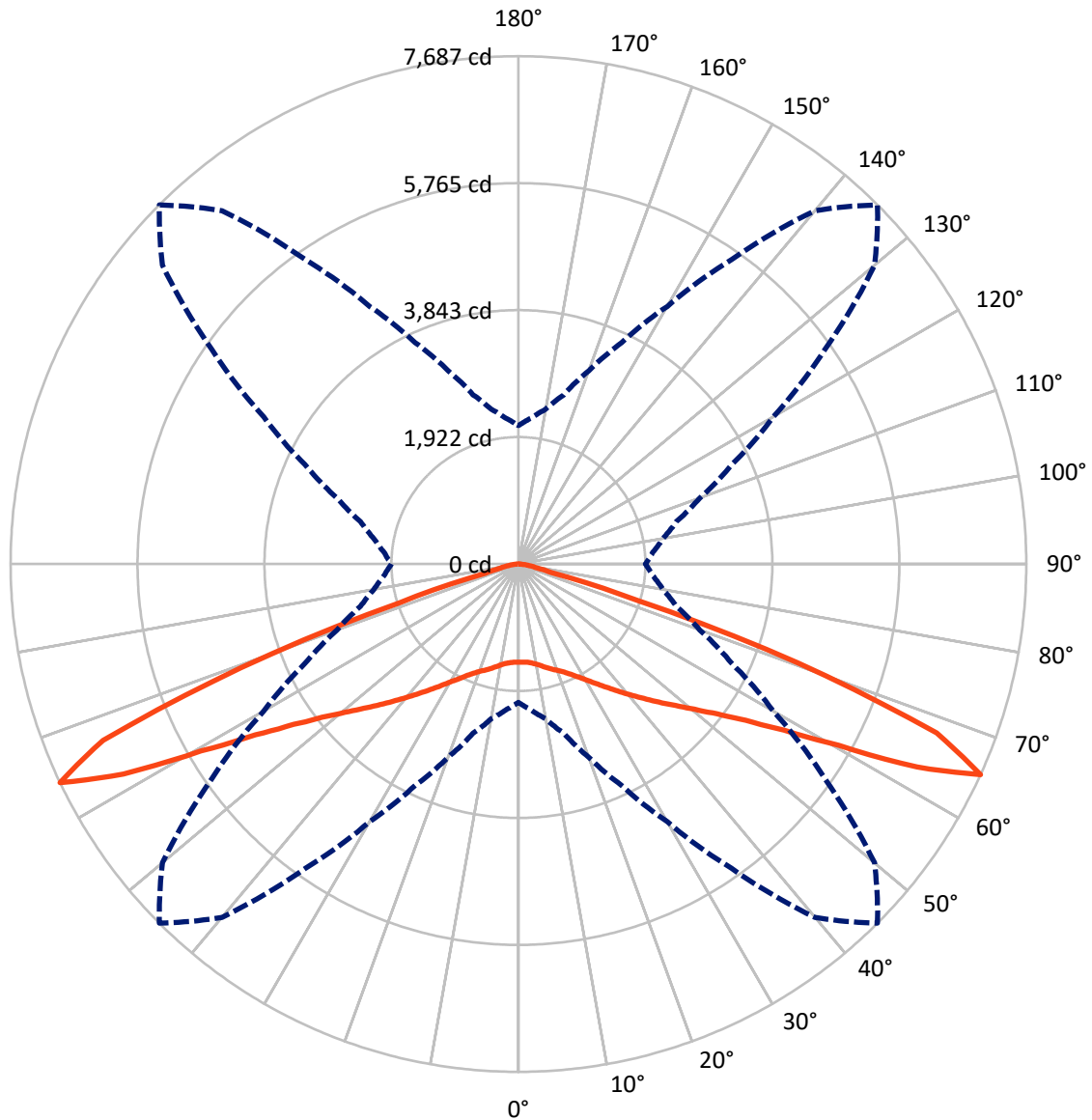
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 3.7 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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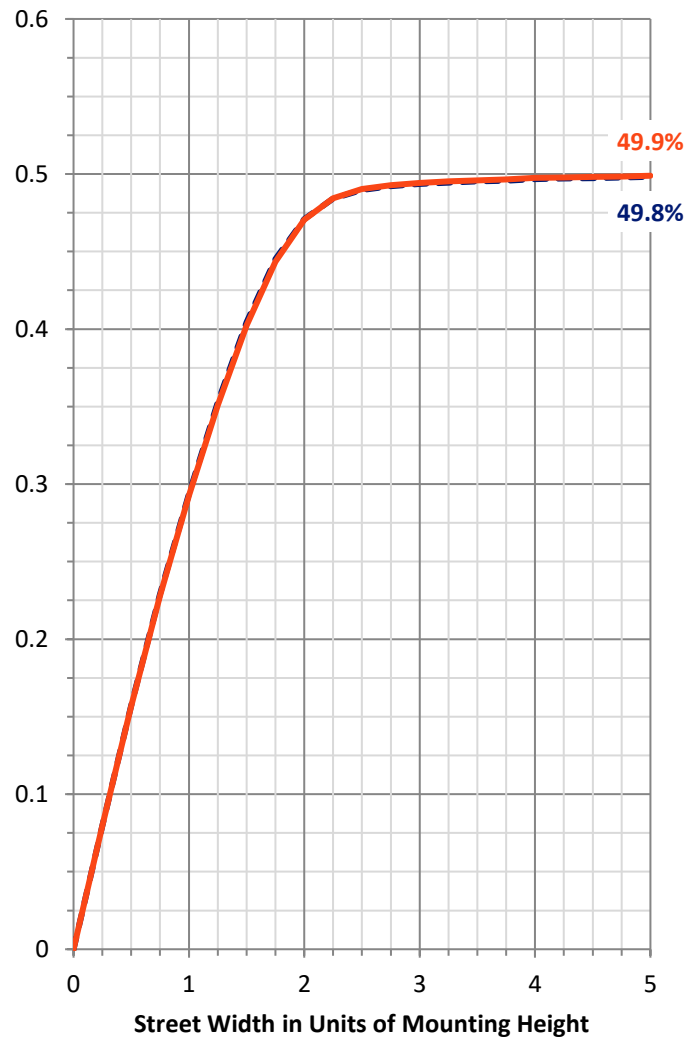
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	6535.7	0.0	6535.7
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	6535.7	0.0	6535.7
	% Fixture	50.0	0.0	50.0
Total	Lumens	13071.4	0.0	13071.4
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	144.8	1.1
10°-20°	464.1	3.6
20°-30°	865.7	6.6
30°-40°	1459.7	11.2
40°-50°	2371.0	18.1
50°-60°	3714.9	28.4
60°-70°	3506.7	26.8
70°-80°	472.6	3.6
80°-90°	72.0	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°	13071.4	100.0
0°-180°	13071.4	100.0



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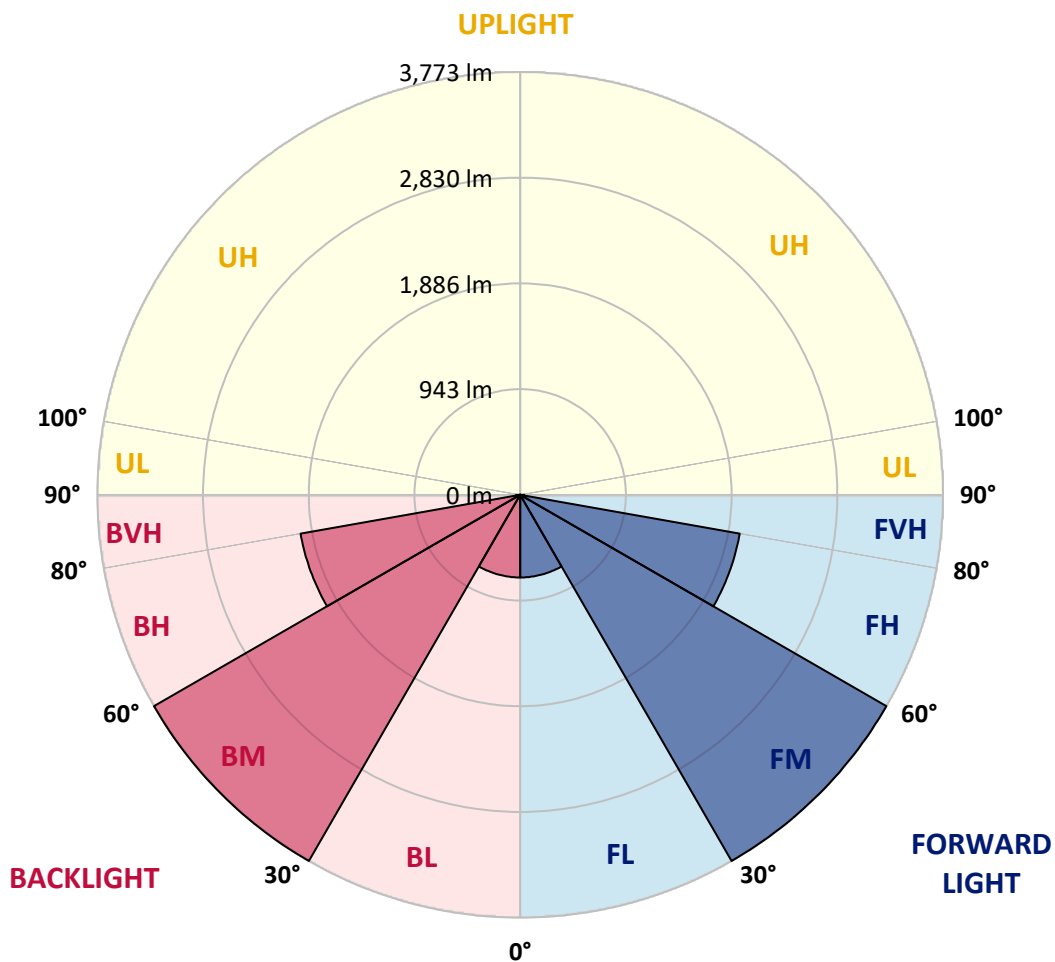
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	737.3	5.6			
FM	(30°-60°)	3772.8	28.9			
FH	(60°-80°)	1989.6	15.2			G2/5000
FVH	(80°-90°)	36.0	0.3			G1/100
BL	(0°-30°)	737.3	5.6	B2/1000		
BM	(30°-60°)	3772.8	28.9	B3/5000		
BH	(60°-80°)	1989.6	15.2	B3/2500		G2/5000
BVH	(80°-90°)	36.0	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°	1486.9	1486.9	1486.9	1486.9	1486.9	1486.9	1486.9	1486.9	1486.9	1486.9	1486.9
2.5°	1499.1	1499.1	1501.4	1500.7	1497.5	1495.0	1492.5	1489.3	1487.7	1486.1	1485.2
5°	1507.1	1507.1	1509.6	1508.9	1506.4	1503.1	1501.4	1499.1	1496.7	1495.0	1495.8
7.5°	1527.6	1528.3	1529.2	1528.3	1526.0	1523.4	1520.2	1519.5	1516.2	1513.7	1515.4
10°	1558.5	1558.5	1559.3	1560.1	1558.5	1552.8	1552.8	1551.2	1547.9	1544.6	1545.4
12.5°	1592.8	1592.8	1593.6	1593.6	1593.6	1590.3	1591.1	1590.3	1586.1	1584.6	1586.1
15°	1626.1	1626.9	1626.9	1628.5	1628.5	1629.3	1632.6	1632.6	1631.1	1630.2	1630.2
17.5°	1665.2	1666.8	1667.7	1670.0	1670.8	1672.6	1675.8	1676.5	1677.3	1675.0	1675.8
20°	1717.3	1718.1	1720.6	1721.3	1724.7	1724.7	1726.3	1725.5	1723.8	1720.6	1720.6
22.5°	1775.9	1777.6	1782.4	1782.4	1786.5	1784.0	1784.9	1782.4	1778.4	1776.8	1775.1
25°	1852.5	1854.9	1859.0	1857.3	1859.0	1854.9	1854.9	1854.9	1852.5	1850.0	1849.3
27.5°	1949.3	1945.3	1949.3	1946.1	1945.3	1942.0	1942.9	1941.1	1938.8	1938.0	1934.7
30°	2050.3	2045.4	2047.9	2048.8	2047.1	2046.2	2042.9	2040.6	2036.5	2037.3	2034.8
32.5°	2166.0	2161.1	2163.5	2164.3	2162.7	2164.3	2163.5	2157.8	2152.9	2156.2	2156.2
35°	2303.6	2300.3	2306.8	2309.3	2304.4	2301.9	2298.7	2292.1	2284.7	2289.7	2290.6
37.5°	2468.8	2464.8	2469.7	2476.2	2467.3	2462.3	2449.3	2439.5	2434.6	2437.1	2440.3
40°	2640.7	2641.5	2655.3	2656.9	2647.1	2641.5	2628.4	2613.8	2600.0	2600.0	2604.0
42.5°	2821.4	2823.9	2840.3	2845.9	2842.5	2832.0	2814.1	2796.2	2778.3	2781.5	2786.5
45°	3025.9	3022.5	3039.7	3053.5	3051.1	3047.8	3030.7	2998.2	2981.8	2981.0	2989.2
47.5°	3240.7	3247.4	3265.2	3288.9	3288.1	3279.9	3258.0	3227.8	3197.6	3200.1	3209.9
50°	3491.6	3500.5	3530.7	3554.2	3557.6	3555.1	3529.0	3494.0	3451.6	3454.2	3467.2
52.5°	3716.3	3729.4	3764.3	3813.2	3843.4	3857.2	3840.1	3807.6	3764.3	3766.9	3780.6
55°	3919.8	3940.2	3992.3	4059.1	4119.4	4175.5	4200.8	4199.9	4168.2	4175.5	4193.5
57.5°	4047.8	4076.1	4155.2	4262.6	4382.4	4495.6	4593.3	4685.3	4705.6	4743.9	4743.9
60°	3875.8	3942.8	4047.8	4231.7	4467.1	4721.1	4996.4	5264.2	5436.8	5572.8	5499.6
62.5°	3236.8	3335.2	3482.5	3725.4	4091.7	4545.2	5098.2	5721.0	6370.8	6768.2	6476.7
65°	2094.3	2218.1	2378.5	2651.3	3112.9	3696.7	4502.0	5621.8	6981.5	7686.6	7035.3
67.5°	829.8	913.5	1011.3	1205.2	1605.7	2179.0	3082.9	4463.8	6164.8	6830.1	6099.8
70°	396.5	410.3	429.1	470.6	570.9	770.2	1238.6	2199.3	3780.6	4481.7	3690.2
72.5°	286.6	289.1	298.0	311.8	341.1	381.9	464.2	672.7	1303.6	1895.7	1305.2
75°	217.4	220.7	225.6	232.9	248.3	267.9	298.9	358.2	446.2	514.5	445.4
77.5°	165.3	168.5	172.7	179.9	188.0	201.8	213.3	237.0	274.4	289.1	287.5
80°	120.6	126.2	132.7	139.2	144.9	151.5	152.3	163.8	184.8	198.6	194.7
82.5°	76.5	81.4	98.5	105.9	106.7	108.2	107.4	108.2	119.7	129.4	126.2
85°	48.9	52.1	61.1	69.2	67.6	70.8	70.8	69.2	64.3	55.3	65.9
87.5°	24.4	25.2	29.4	36.7	35.0	30.9	30.2	30.2	22.0	18.8	20.3
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°	1486.9	1486.9	1486.9	1486.9	1486.9	1486.9	1486.9	1486.9
2.5°	1482.8	1484.4	1481.9	1481.9	1481.1	1482.8	1480.3	1480.3
5°	1494.2	1496.7	1495.8	1495.8	1497.5	1499.1	1498.3	1497.5
7.5°	1514.5	1516.2	1517.7	1518.7	1520.2	1519.5	1521.1	1520.2
10°	1545.4	1543.8	1546.3	1543.8	1544.6	1543.1	1543.8	1543.8
12.5°	1584.6	1582.2	1580.5	1579.0	1579.0	1575.5	1575.5	1576.4
15°	1629.3	1625.3	1622.0	1620.5	1618.7	1618.7	1616.3	1617.9
17.5°	1673.4	1669.2	1663.5	1663.5	1661.1	1659.4	1657.8	1662.0
20°	1719.7	1715.7	1712.3	1711.6	1706.7	1705.1	1705.9	1710.8
22.5°	1773.4	1771.0	1771.0	1769.4	1766.2	1763.7	1763.7	1769.4
25°	1845.9	1841.0	1841.9	1842.8	1841.0	1841.0	1839.4	1843.5
27.5°	1934.7	1930.6	1933.1	1934.7	1933.1	1935.5	1933.1	1936.3
30°	2039.0	2036.5	2039.0	2041.4	2037.3	2037.3	2035.6	2038.2
32.5°	2163.5	2160.2	2162.0	2162.0	2156.2	2151.4	2144.8	2149.6
35°	2300.3	2296.2	2299.5	2301.9	2295.3	2290.6	2280.7	2284.7
37.5°	2450.9	2452.6	2456.7	2467.3	2465.6	2457.5	2450.1	2453.5
40°	2619.5	2627.6	2645.6	2652.9	2651.3	2643.2	2633.3	2635.0
42.5°	2810.1	2820.6	2839.4	2851.6	2845.9	2834.4	2822.2	2827.1
45°	3017.6	3033.9	3058.4	3070.5	3063.3	3051.1	3033.9	3042.9
47.5°	3237.5	3270.1	3302.7	3319.0	3316.5	3299.5	3277.5	3279.9
50°	3500.5	3543.8	3585.2	3601.6	3589.3	3563.2	3532.2	3531.4
52.5°	3827.9	3874.3	3908.4	3904.5	3874.3	3833.5	3798.6	3797.0
55°	4236.6	4252.0	4247.2	4212.2	4159.3	4095.7	4050.9	4043.6
57.5°	4731.0	4678.8	4602.2	4496.3	4377.5	4257.0	4175.5	4145.5
60°	5335.0	5099.8	4826.1	4537.9	4274.9	4077.9	3953.4	3877.5
62.5°	5834.2	5152.7	4541.2	4040.3	3630.8	3387.4	3217.2	3112.2
65°	5663.3	4451.6	3565.7	2920.0	2472.9	2221.2	2041.4	1921.7
67.5°	4375.0	2974.5	2069.9	1434.8	1087.8	920.9	804.5	728.7
70°	2205.9	1140.8	691.3	487.7	417.0	387.6	368.0	356.6
72.5°	647.4	432.4	359.1	317.6	292.3	274.4	263.1	257.4
75°	358.2	292.3	258.2	234.5	218.2	206.0	198.6	193.9
77.5°	246.8	212.4	195.4	179.9	166.9	157.9	152.3	147.4
80°	172.7	155.5	148.2	140.0	130.3	123.0	114.9	111.6
82.5°	114.9	107.4	105.9	99.4	93.7	85.5	70.8	65.9
85°	67.6	66.7	66.7	64.3	60.2	52.9	42.3	42.3
87.5°	23.6	24.4	25.2	26.9	26.1	22.0	18.0	17.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)