

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: P197001

Luminaire Tested: **NAV-AF-03-D-UNV-RW-8030-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197001
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24161)
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-RW-8030-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 80 CRI, 3000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12203 lumens
Efficiency: N/A
Efficacy: 98.4 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type II - Medium - Full Cutoff
BUG Rating: B3 - U0 - G3

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

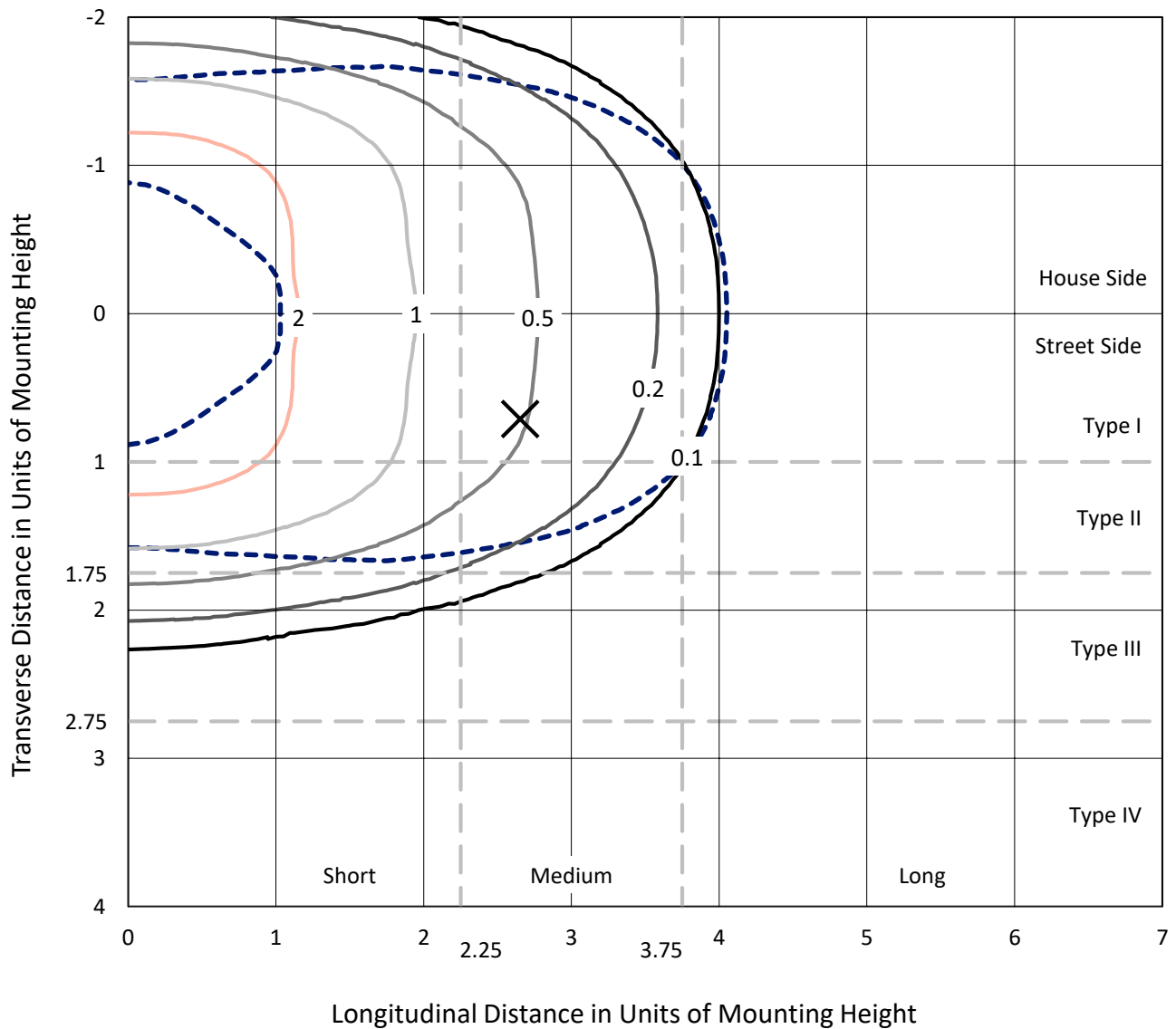


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Iso-Footcandle Lines of Horizontal Illumination

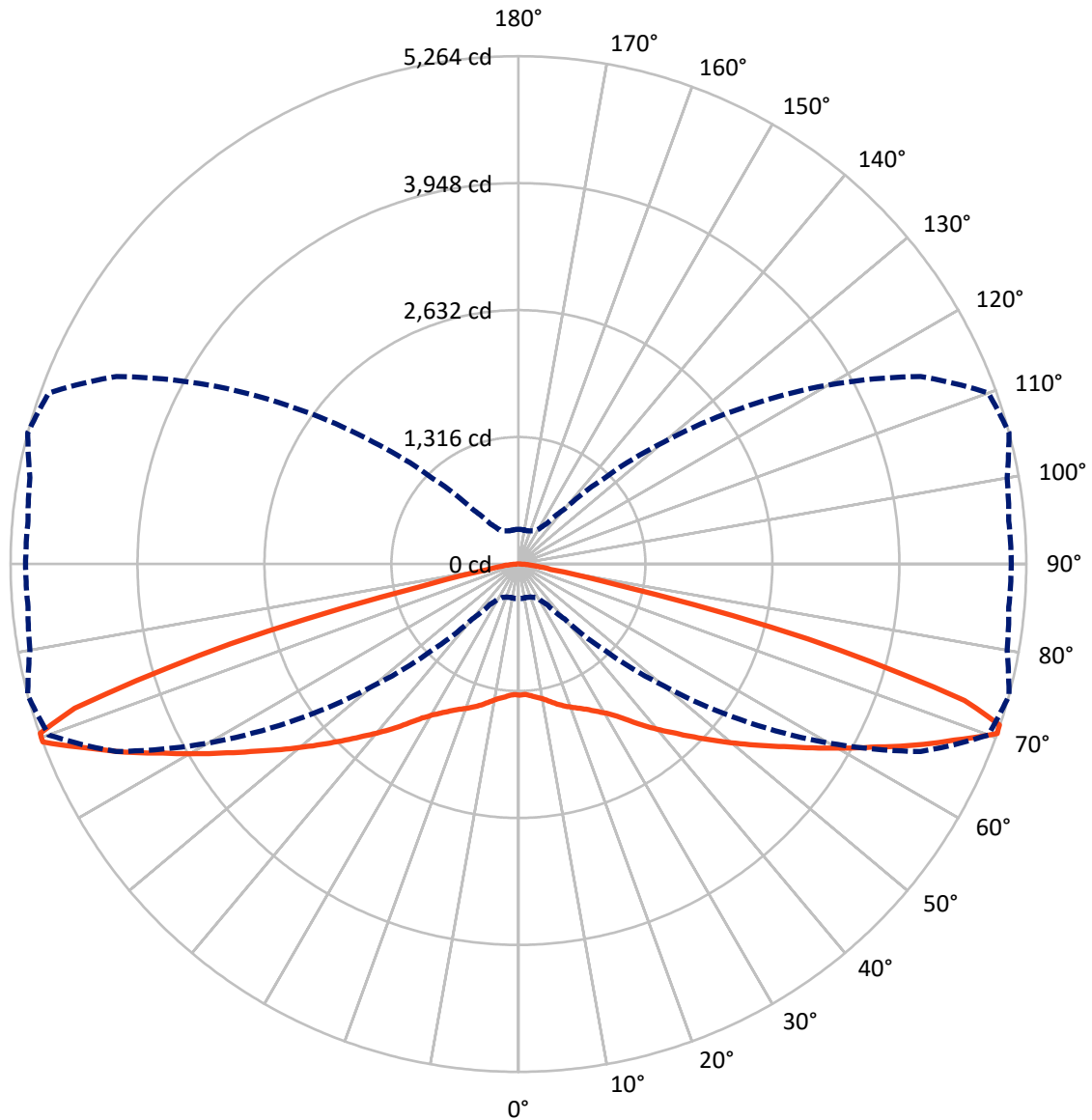
× Max cd
 - - - 1/2 Max cd



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

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Luminous Intensity Polar Plot



— Vertical Plane Through 75-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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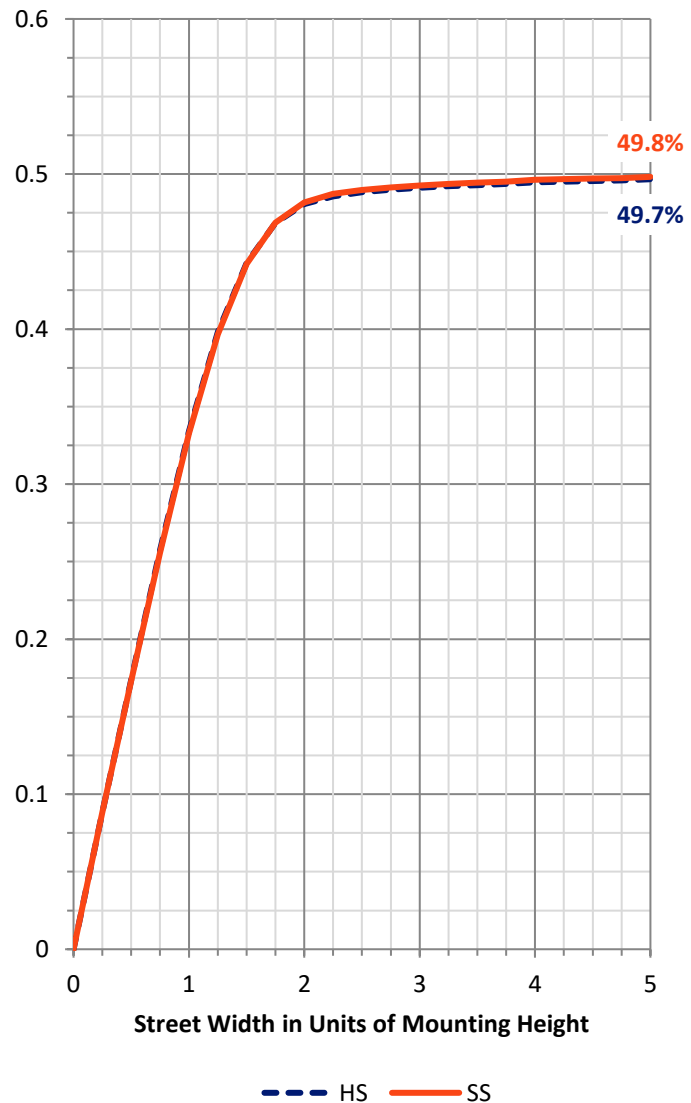
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	6101.5	0.0	6101.5
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	6101.5	0.0	6101.5
	% Fixture	50.0	0.0	50.0
Total	Lumens	12203.0	0.0	12203.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	130.3	1.1
10°-20°	404.2	3.3
20°-30°	759.2	6.2
30°-40°	1337.4	11.0
40°-50°	2216.5	18.2
50°-60°	3083.5	25.3
60°-70°	2910.9	23.9
70°-80°	1243.3	10.2
80°-90°	117.5	1.0
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°	12203.0	100.0
0°-180°	12203.0	100.0



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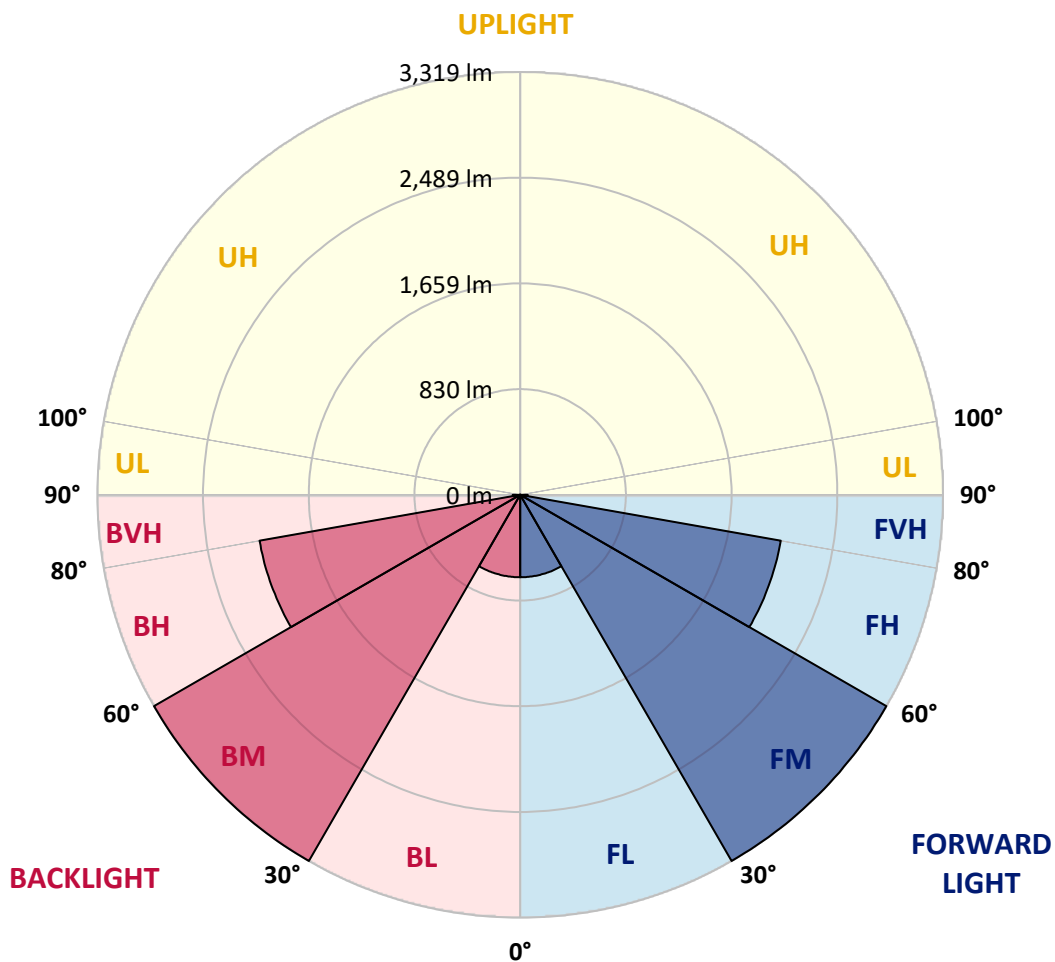
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	646.9	5.3			
FM	(30°-60°)	3318.7	27.2			
FH	(60°-80°)	2077.1	17.0			G2/5000
FVH	(80°-90°)	58.7	0.5			G1/100
BL	(0°-30°)	646.9	5.3	B2/1000		
BM	(30°-60°)	3318.7	27.2	B3/5000		
BH	(60°-80°)	2077.1	17.0	B3/2500		G3/2500
BVH	(80°-90°)	58.7	0.5			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G3

Type II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1358.9	1358.9	1358.9	1358.9	1358.9	1358.9	1358.9	1358.9	1358.9	1358.9	1358.9
2.5°	1367.3	1366.6	1367.3	1365.0	1365.8	1365.0	1365.0	1362.0	1362.0	1360.5	1358.2
5°	1352.0	1353.6	1353.6	1353.6	1355.9	1355.9	1358.9	1359.7	1362.0	1364.3	1365.8
7.5°	1326.8	1327.6	1329.9	1331.4	1336.0	1342.1	1348.2	1355.1	1361.2	1368.9	1377.3
10°	1305.4	1306.9	1310.7	1314.6	1323.0	1330.6	1341.3	1352.0	1362.7	1375.7	1388.7
12.5°	1293.9	1296.2	1302.3	1308.5	1321.5	1331.4	1345.9	1362.7	1377.3	1389.5	1404.0
15°	1295.5	1296.2	1304.6	1313.0	1331.4	1345.2	1365.8	1385.7	1403.3	1417.0	1433.9
17.5°	1317.6	1319.2	1327.6	1339.8	1357.4	1375.0	1397.2	1417.8	1441.5	1457.6	1477.5
20°	1361.2	1363.5	1372.7	1385.7	1404.8	1423.2	1446.1	1467.5	1492.0	1511.1	1531.0
22.5°	1417.8	1421.6	1431.6	1447.6	1466.7	1488.9	1512.6	1534.8	1557.8	1576.9	1593.7
25°	1493.5	1498.1	1508.8	1524.9	1544.0	1567.7	1592.2	1615.1	1638.8	1653.3	1667.1
27.5°	1595.2	1602.9	1614.3	1627.3	1644.2	1669.4	1692.3	1711.5	1734.4	1750.5	1759.6
30°	1732.1	1742.8	1752.0	1765.8	1778.0	1804.8	1823.1	1838.4	1856.0	1865.2	1867.5
32.5°	1899.6	1909.5	1918.7	1928.6	1945.5	1969.9	1987.5	1995.9	2005.1	2003.6	1995.2
35°	2088.5	2096.1	2101.5	2119.1	2146.6	2162.7	2175.7	2178.7	2180.2	2164.2	2148.1
37.5°	2287.3	2296.5	2301.1	2328.6	2354.6	2373.0	2379.1	2386.0	2381.4	2354.6	2325.5
40°	2502.2	2512.1	2525.9	2549.6	2580.2	2597.8	2605.4	2604.7	2600.8	2569.5	2522.1
42.5°	2713.3	2725.5	2737.0	2778.3	2803.5	2833.3	2837.1	2836.4	2828.0	2792.0	2737.0
45°	2892.2	2906.7	2930.4	2976.3	3016.9	3052.8	3067.3	3072.7	3064.3	3026.0	2963.3
47.5°	3039.8	3049.7	3079.6	3135.4	3187.4	3240.2	3269.2	3289.9	3289.1	3261.6	3195.0
50°	3140.7	3152.2	3188.9	3251.6	3316.6	3378.6	3435.9	3482.6	3504.8	3484.9	3422.9
52.5°	3169.8	3184.3	3232.5	3307.5	3383.2	3466.5	3552.2	3634.8	3684.5	3696.7	3648.5
55°	3047.4	3063.5	3133.9	3237.9	3362.5	3485.6	3615.6	3733.4	3835.9	3883.3	3864.2
57.5°	2691.1	2702.6	2792.0	2926.6	3104.8	3321.2	3539.9	3755.6	3931.5	4054.6	4076.0
60°	2128.2	2142.8	2240.7	2382.9	2585.5	2859.3	3165.2	3518.5	3863.4	4145.6	4285.5
62.5°	1436.2	1446.1	1540.2	1670.2	1891.9	2155.8	2496.8	2944.2	3435.9	3939.9	4334.5
65°	754.0	754.0	817.5	908.5	1085.2	1321.5	1670.9	2129.8	2714.8	3344.2	4004.1
67.5°	437.4	436.7	451.2	471.8	527.7	623.3	816.0	1153.2	1706.9	2439.5	3190.4
70°	361.0	358.7	356.4	356.4	364.8	379.3	416.0	508.5	744.1	1258.0	1963.1
71°	344.9	343.4	337.2	335.0	338.8	346.4	362.5	405.3	528.4	858.0	1466.0
72.5°	325.8	322.0	312.8	309.0	309.7	312.8	317.4	334.2	371.7	487.9	835.8
75°	296.7	287.5	276.1	270.7	268.4	267.7	267.7	272.2	280.7	294.4	342.6
77.5°	263.1	250.1	237.8	232.5	228.7	226.4	224.8	221.8	220.2	226.4	243.9
80°	222.5	208.8	198.8	195.8	193.5	188.9	182.8	176.7	172.8	175.9	186.6
82.5°	172.1	158.3	159.8	160.6	156.8	149.1	143.0	136.1	129.2	127.7	133.1
85°	136.9	130.0	125.4	135.4	126.9	117.8	109.4	97.9	81.8	67.3	73.4
87.5°	58.9	59.6	85.6	129.2	113.2	91.0	75.7	61.2	39.0	29.1	29.8
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°	1358.9	1358.9	1358.9	1358.9	1358.9	1358.9	1358.9	1358.9
2.5°	1357.4	1357.4	1355.1	1353.6	1353.6	1353.6	1352.0	1352.8
5°	1366.6	1368.1	1369.6	1368.9	1371.2	1373.5	1372.7	1371.9
7.5°	1381.9	1386.5	1391.0	1393.3	1396.4	1399.5	1400.2	1397.9
10°	1397.2	1406.3	1413.2	1419.3	1423.2	1426.2	1428.5	1427.7
12.5°	1416.3	1429.3	1441.5	1453.7	1462.2	1466.7	1471.3	1469.8
15°	1447.6	1462.2	1477.5	1493.5	1506.5	1513.4	1520.3	1518.8
17.5°	1490.5	1503.5	1515.7	1531.8	1547.8	1555.5	1563.1	1562.3
20°	1544.0	1553.9	1560.8	1570.0	1585.3	1593.7	1600.6	1598.3
22.5°	1605.2	1608.2	1609.0	1612.0	1624.3	1634.2	1643.4	1645.7
25°	1671.7	1669.4	1664.8	1662.5	1670.9	1681.6	1693.1	1696.2
27.5°	1754.3	1746.6	1735.2	1726.0	1728.3	1742.1	1755.1	1758.1
30°	1858.3	1840.7	1816.2	1798.6	1795.6	1810.1	1823.9	1828.5
32.5°	1976.8	1953.1	1919.5	1892.7	1881.2	1894.2	1906.5	1913.4
35°	2117.5	2091.5	2051.0	2016.6	1998.2	2006.6	2028.1	2035.7
37.5°	2284.2	2248.3	2203.2	2159.6	2129.0	2130.5	2153.5	2162.7
40°	2468.5	2416.5	2359.2	2304.9	2260.5	2257.5	2278.1	2285.0
42.5°	2660.5	2594.0	2526.7	2455.5	2400.5	2390.5	2417.3	2418.1
45°	2867.0	2781.3	2698.0	2615.4	2558.0	2540.4	2566.4	2569.5
47.5°	3087.2	2980.1	2881.5	2792.0	2730.1	2702.6	2727.8	2732.4
50°	3316.6	3205.7	3091.0	2991.6	2919.0	2885.3	2915.1	2918.2
52.5°	3543.8	3439.0	3325.0	3211.1	3123.2	3084.9	3120.1	3130.8
55°	3772.4	3671.5	3564.4	3450.5	3339.6	3305.9	3344.2	3355.6
57.5°	4010.2	3913.1	3816.0	3701.3	3593.5	3542.2	3583.5	3599.6
60°	4272.5	4186.9	4095.1	3979.6	3873.4	3813.7	3848.9	3867.2
62.5°	4530.3	4512.7	4429.3	4309.2	4174.7	4115.0	4144.8	4157.8
65°	4551.7	4836.9	4833.1	4713.8	4525.7	4425.5	4433.9	4440.0
67.5°	3972.8	4627.4	5045.7	5083.2	4873.6	4716.8	4698.5	4702.3
70°	2812.7	3711.2	4599.1	5181.8	5264.4	5142.8	5103.0	5109.2
71°	2253.7	3184.3	4161.7	4945.5	5258.3	5223.1	5200.9	5217.0
72.5°	1438.5	2346.2	3297.5	4235.1	4835.4	5007.4	5032.7	5042.6
75°	522.3	1009.4	1708.4	2447.9	3102.5	3552.9	3800.7	3820.6
77.5°	280.7	361.7	559.0	835.1	1049.2	1163.9	1177.7	1183.0
80°	206.5	239.4	273.8	312.8	337.2	341.8	333.4	315.8
82.5°	146.1	165.2	178.9	192.7	202.7	194.2	161.4	123.1
85°	84.9	93.3	100.9	107.8	109.4	103.2	68.1	55.8
87.5°	33.6	36.7	35.9	40.5	39.0	35.9	26.8	22.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)