

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: P197012

Luminaire Tested: **NAV-AF-02-D-UNV-RW-8030-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197012
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-02-D-UNV-RW-8030-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 80 CRI, 3000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11142 lumens
Efficiency: N/A
Efficacy: 86.4 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type II - Medium - Full Cutoff
BUG Rating: B3 - U0 - G3

Input Watts (W): 129
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

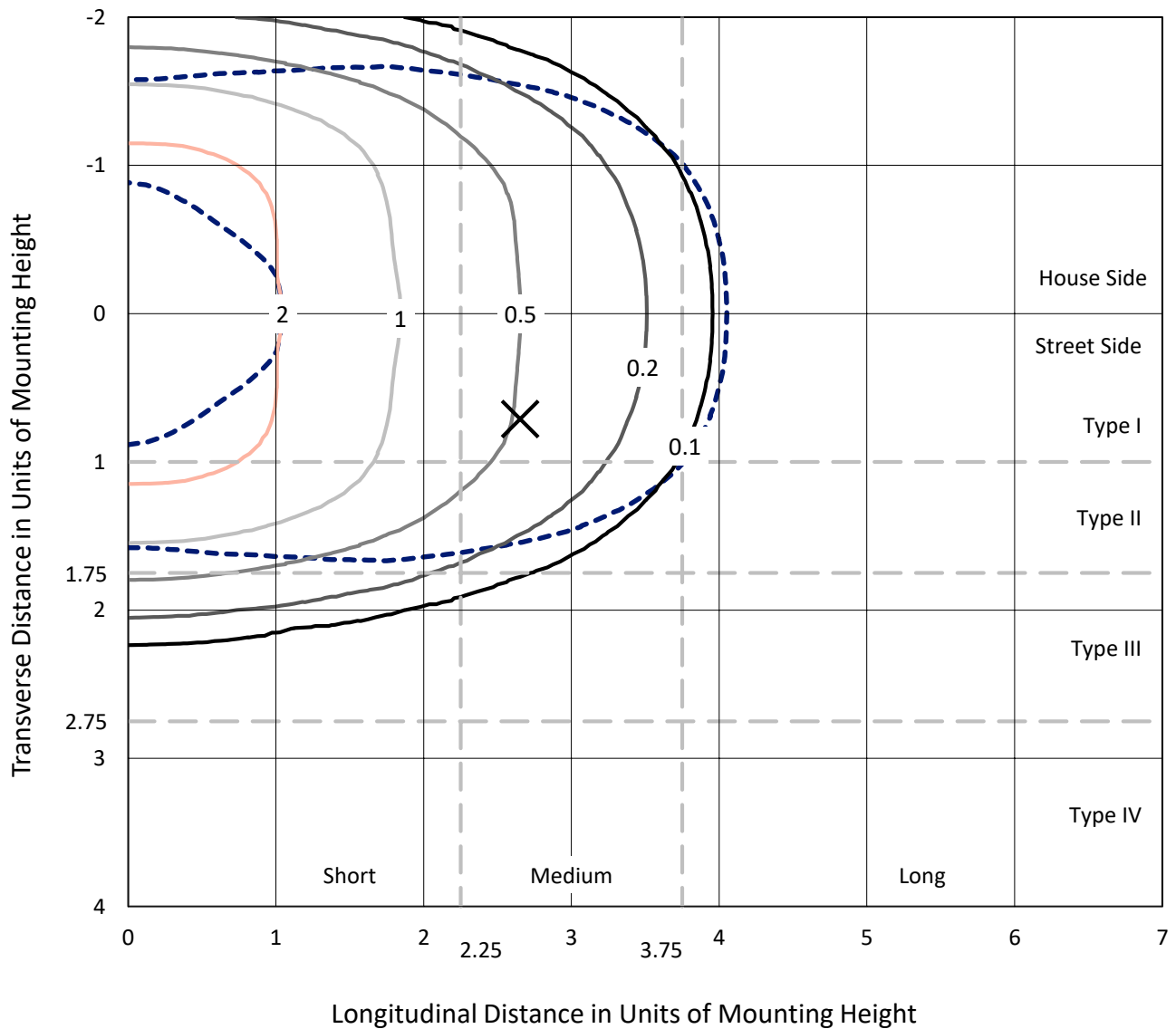


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Iso-Footcandle Lines of Horizontal Illumination

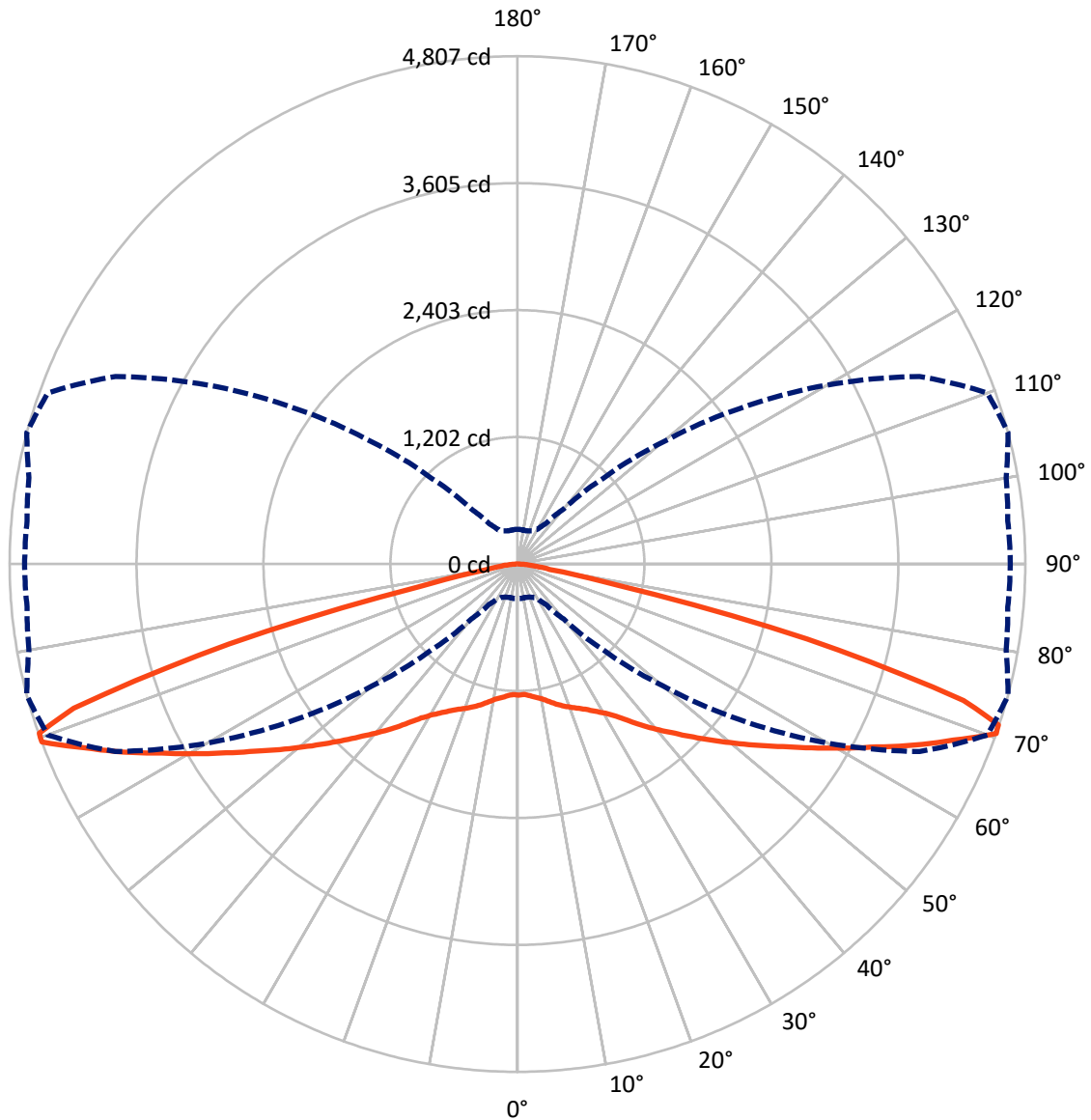
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 3.1 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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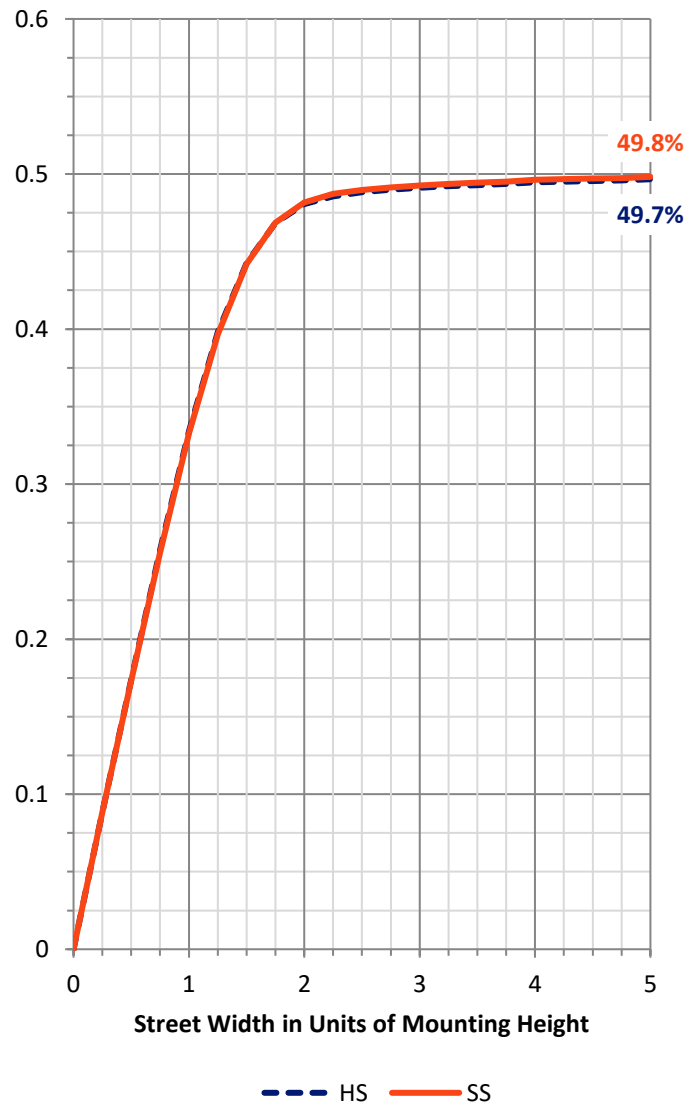
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	5571.0	0.0	5571.0
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	5571.0	0.0	5571.0
	% Fixture	50.0	0.0	50.0
Total	Lumens	11142.0	0.0	11142.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	119.0	1.1
10°-20°	369.1	3.3
20°-30°	693.2	6.2
30°-40°	1221.1	11.0
40°-50°	2023.8	18.2
50°-60°	2815.4	25.3
60°-70°	2657.8	23.9
70°-80°	1135.2	10.2
80°-90°	107.3	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°	11142.0	100.0
0°-180°	11142.0	100.0

Coefficient of Utilization



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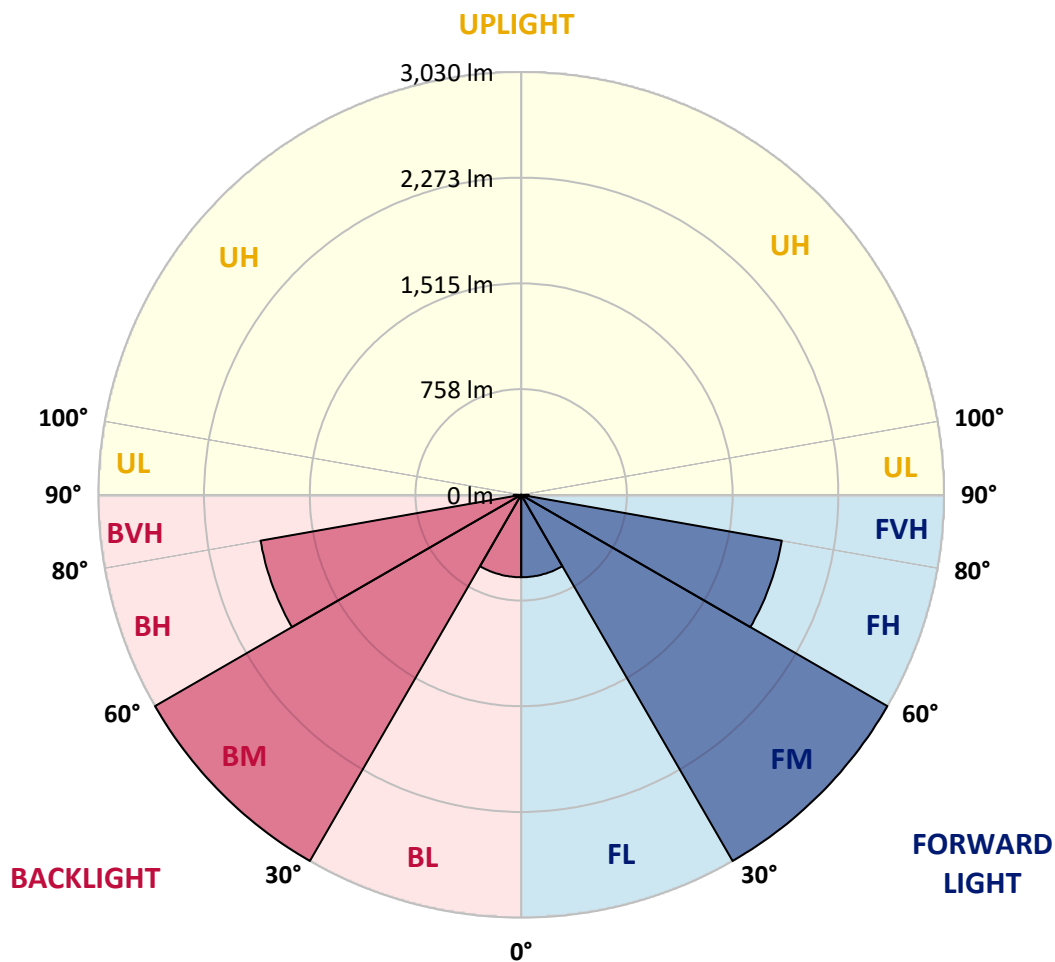
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	590.7	5.3			
FM	(30°-60°)	3030.2	27.2			
FH	(60°-80°)	1896.5	17.0			G2/5000
FVH	(80°-90°)	53.6	0.5			G1/100
BL	(0°-30°)	590.7	5.3	B2/1000		
BM	(30°-60°)	3030.2	27.2	B3/5000		
BH	(60°-80°)	1896.5	17.0	B3/2500		G3/2500
BVH	(80°-90°)	53.6	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°	1240.8	1240.8	1240.8	1240.8	1240.8	1240.8	1240.8	1240.8	1240.8	1240.8	1240.8
2.5°	1248.5	1247.8	1248.5	1246.4	1247.1	1246.4	1246.4	1243.6	1243.6	1242.2	1240.1
5°	1234.5	1235.9	1235.9	1235.9	1238.0	1238.0	1240.8	1241.5	1243.6	1245.7	1247.1
7.5°	1211.4	1212.1	1214.2	1215.6	1219.8	1225.4	1231.0	1237.3	1242.9	1249.8	1257.5
10°	1191.9	1193.3	1196.8	1200.3	1208.0	1214.9	1224.7	1234.5	1244.3	1256.1	1268.0
12.5°	1181.4	1183.5	1189.1	1194.7	1206.6	1215.6	1228.9	1244.3	1257.5	1268.7	1282.0
15°	1182.8	1183.5	1191.2	1198.9	1215.6	1228.2	1247.1	1265.2	1281.3	1293.8	1309.2
17.5°	1203.1	1204.5	1212.1	1223.3	1239.4	1255.4	1275.7	1294.5	1316.2	1330.8	1349.0
20°	1242.9	1245.0	1253.3	1265.2	1282.7	1299.4	1320.4	1339.9	1362.3	1379.7	1397.9
22.5°	1294.5	1298.0	1307.1	1321.8	1339.2	1359.5	1381.1	1401.4	1422.3	1439.8	1455.1
25°	1363.7	1367.8	1377.6	1392.3	1409.7	1431.4	1453.7	1474.7	1496.3	1509.6	1522.2
27.5°	1456.5	1463.5	1474.0	1485.9	1501.2	1524.3	1545.2	1562.7	1583.6	1598.3	1606.6
30°	1581.5	1591.3	1599.7	1612.2	1623.4	1647.8	1664.6	1678.6	1694.6	1703.0	1705.1
32.5°	1734.4	1743.5	1751.9	1761.0	1776.3	1798.7	1814.7	1822.4	1830.8	1829.4	1821.7
35°	1906.9	1913.9	1918.8	1934.8	1960.0	1974.6	1986.5	1989.3	1990.7	1976.0	1961.4
37.5°	2088.4	2096.8	2101.0	2126.1	2149.9	2166.6	2172.2	2178.5	2174.3	2149.9	2123.3
40°	2284.6	2293.7	2306.3	2327.9	2355.9	2371.9	2378.9	2378.2	2374.7	2346.1	2302.8
42.5°	2477.4	2488.5	2499.0	2536.7	2559.7	2587.0	2590.5	2589.8	2582.1	2549.3	2499.0
45°	2640.7	2654.0	2675.7	2717.5	2754.6	2787.4	2800.6	2805.5	2797.8	2762.9	2705.7
47.5°	2775.5	2784.6	2811.8	2862.8	2910.3	2958.4	2985.0	3003.8	3003.1	2978.0	2917.2
50°	2867.7	2878.1	2911.7	2968.9	3028.3	3084.8	3137.2	3179.8	3200.0	3181.9	3125.3
52.5°	2894.2	2907.5	2951.5	3019.9	3089.0	3165.1	3243.3	3318.7	3364.1	3375.3	3331.3
55°	2782.5	2797.1	2861.4	2956.3	3070.2	3182.6	3301.3	3408.8	3502.4	3545.7	3528.2
57.5°	2457.1	2467.6	2549.3	2672.2	2834.8	3032.5	3232.1	3429.1	3589.6	3702.1	3721.6
60°	1943.2	1956.5	2045.8	2175.7	2360.7	2610.7	2890.0	3212.6	3527.5	3785.2	3912.9
62.5°	1311.3	1320.4	1406.3	1525.0	1727.4	1968.3	2279.7	2688.2	3137.2	3597.3	3957.6
65°	688.5	688.5	746.4	829.5	990.8	1206.6	1525.7	1944.6	2478.7	3053.4	3656.0
67.5°	399.4	398.7	412.0	430.8	481.8	569.1	745.0	1052.9	1558.5	2227.4	2913.1
70°	329.6	327.5	325.4	325.4	333.1	346.3	379.8	464.3	679.4	1148.6	1792.4
71°	314.9	313.5	307.9	305.8	309.3	316.3	331.0	370.1	482.5	783.4	1338.5
72.5°	297.4	294.0	285.6	282.1	282.8	285.6	289.8	305.1	339.3	445.5	763.2
75°	270.9	262.5	252.1	247.2	245.1	244.4	244.4	248.6	256.3	268.8	312.8
77.5°	240.2	228.3	217.2	212.3	208.8	206.7	205.3	202.5	201.1	206.7	222.7
80°	203.2	190.6	181.5	178.7	176.7	172.5	166.9	161.3	157.8	160.6	170.4
82.5°	157.1	144.5	145.9	146.6	143.1	136.2	130.6	124.3	118.0	116.6	121.5
85°	125.0	118.7	114.5	123.6	115.9	107.5	99.8	89.4	74.7	61.4	67.0
87.5°	53.8	54.5	78.2	118.0	103.3	83.1	69.1	55.9	35.6	26.5	27.2
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°	1240.8	1240.8	1240.8	1240.8	1240.8	1240.8	1240.8	1240.8
2.5°	1239.4	1239.4	1237.3	1235.9	1235.9	1235.9	1234.5	1235.2
5°	1247.8	1249.1	1250.5	1249.8	1251.9	1254.0	1253.3	1252.6
7.5°	1261.7	1265.9	1270.1	1272.2	1275.0	1277.8	1278.5	1276.4
10°	1275.7	1284.1	1290.3	1295.9	1299.4	1302.2	1304.3	1303.6
12.5°	1293.1	1305.0	1316.2	1327.4	1335.0	1339.2	1343.4	1342.0
15°	1321.8	1335.0	1349.0	1363.7	1375.5	1381.8	1388.1	1386.7
17.5°	1360.9	1372.7	1383.9	1398.6	1413.2	1420.2	1427.2	1426.5
20°	1409.7	1418.8	1425.1	1433.5	1447.4	1455.1	1461.4	1459.3
22.5°	1465.6	1468.4	1469.1	1471.9	1483.1	1492.1	1500.5	1502.6
25°	1526.4	1524.3	1520.1	1518.0	1525.7	1535.4	1545.9	1548.7
27.5°	1601.8	1594.8	1584.3	1575.9	1578.0	1590.6	1602.5	1605.3
30°	1696.7	1680.7	1658.3	1642.3	1639.5	1652.7	1665.3	1669.5
32.5°	1804.9	1783.3	1752.6	1728.1	1717.7	1729.5	1740.7	1747.0
35°	1933.4	1909.7	1872.7	1841.3	1824.5	1832.2	1851.7	1858.7
37.5°	2085.6	2052.8	2011.6	1971.8	1943.9	1945.3	1966.2	1974.6
40°	2253.9	2206.4	2154.1	2104.5	2064.0	2061.2	2080.1	2086.3
42.5°	2429.2	2368.4	2307.0	2242.0	2191.8	2182.7	2207.1	2207.8
45°	2617.7	2539.5	2463.4	2388.0	2335.6	2319.5	2343.3	2346.1
47.5°	2818.8	2721.0	2631.0	2549.3	2492.7	2467.6	2490.6	2494.8
50°	3028.3	2927.0	2822.3	2731.5	2665.2	2634.5	2661.7	2664.5
52.5°	3235.6	3140.0	3035.9	2931.9	2851.6	2816.7	2848.8	2858.6
55°	3444.4	3352.2	3254.5	3150.5	3049.2	3018.5	3053.4	3063.9
57.5°	3661.6	3572.9	3484.2	3379.5	3281.0	3234.2	3271.9	3286.6
60°	3901.1	3822.9	3739.1	3633.6	3536.6	3482.1	3514.2	3531.0
62.5°	4136.4	4120.3	4044.2	3934.6	3811.7	3757.2	3784.5	3796.3
65°	4155.9	4416.4	4412.9	4303.9	4132.2	4040.7	4048.4	4054.0
67.5°	3627.4	4225.0	4607.0	4641.2	4449.9	4306.7	4290.0	4293.5
70°	2568.1	3388.6	4199.2	4731.3	4806.7	4695.7	4659.3	4664.9
71°	2057.7	2907.5	3799.8	4515.5	4801.1	4769.0	4748.7	4763.4
72.5°	1313.4	2142.2	3010.8	3866.8	4415.0	4572.1	4595.1	4604.2
75°	476.9	921.7	1559.9	2235.1	2832.8	3244.0	3470.2	3488.4
77.5°	256.3	330.3	510.4	762.5	958.0	1062.7	1075.3	1080.2
80°	188.5	218.5	250.0	285.6	307.9	312.1	304.4	288.4
82.5°	133.4	150.8	163.4	176.0	185.0	177.4	147.3	112.4
85°	77.5	85.2	92.2	98.5	99.8	94.3	62.1	51.0
87.5°	30.7	33.5	32.8	37.0	35.6	32.8	24.4	20.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)