

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: P197000

Luminaire Tested: **NAV-AF-02-D-UNV-RW-8030-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197000
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-8030-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 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: 8206 lumens
Efficiency: N/A
Efficacy: 96.5 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

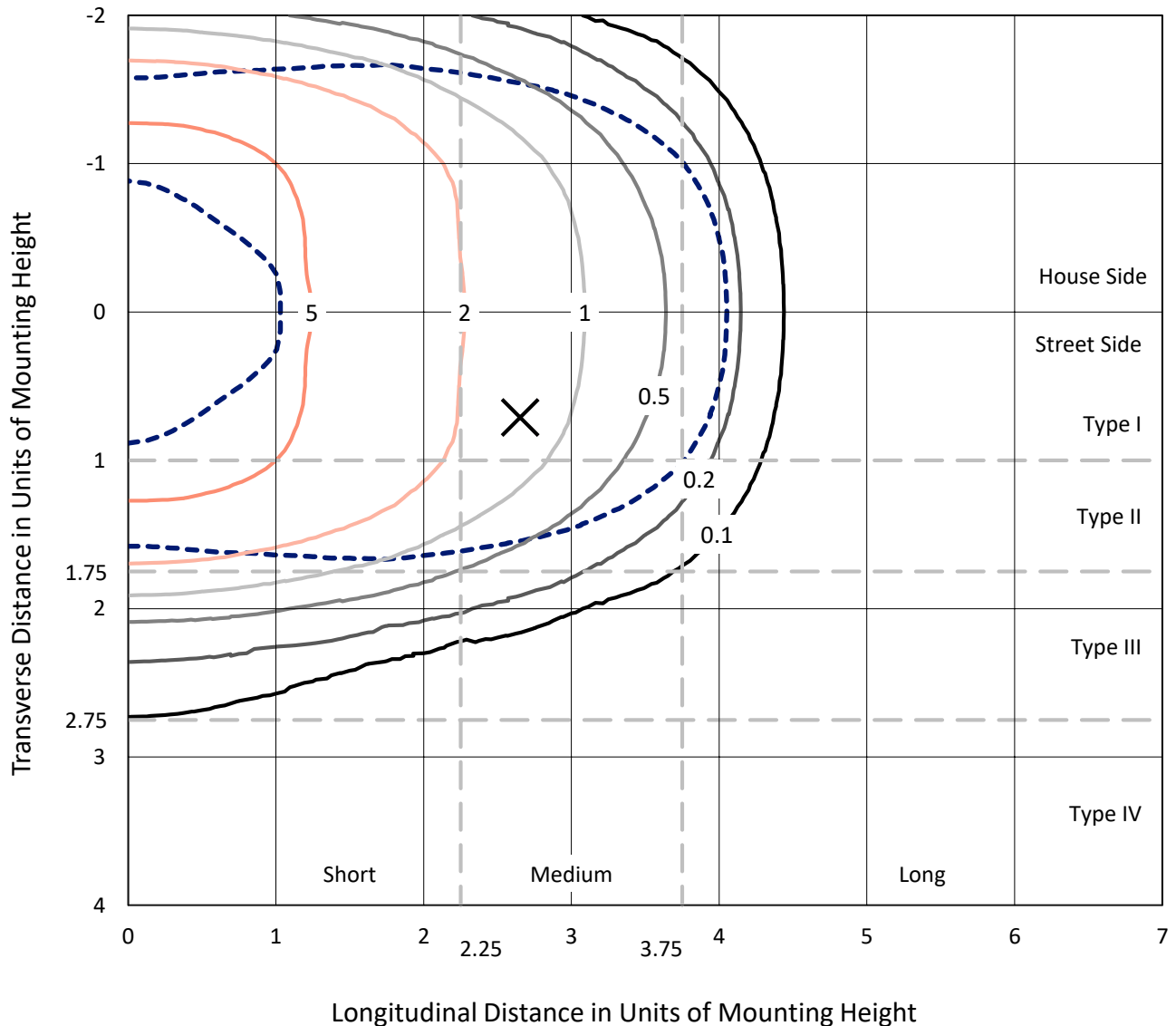
Input Watts (W): 85
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

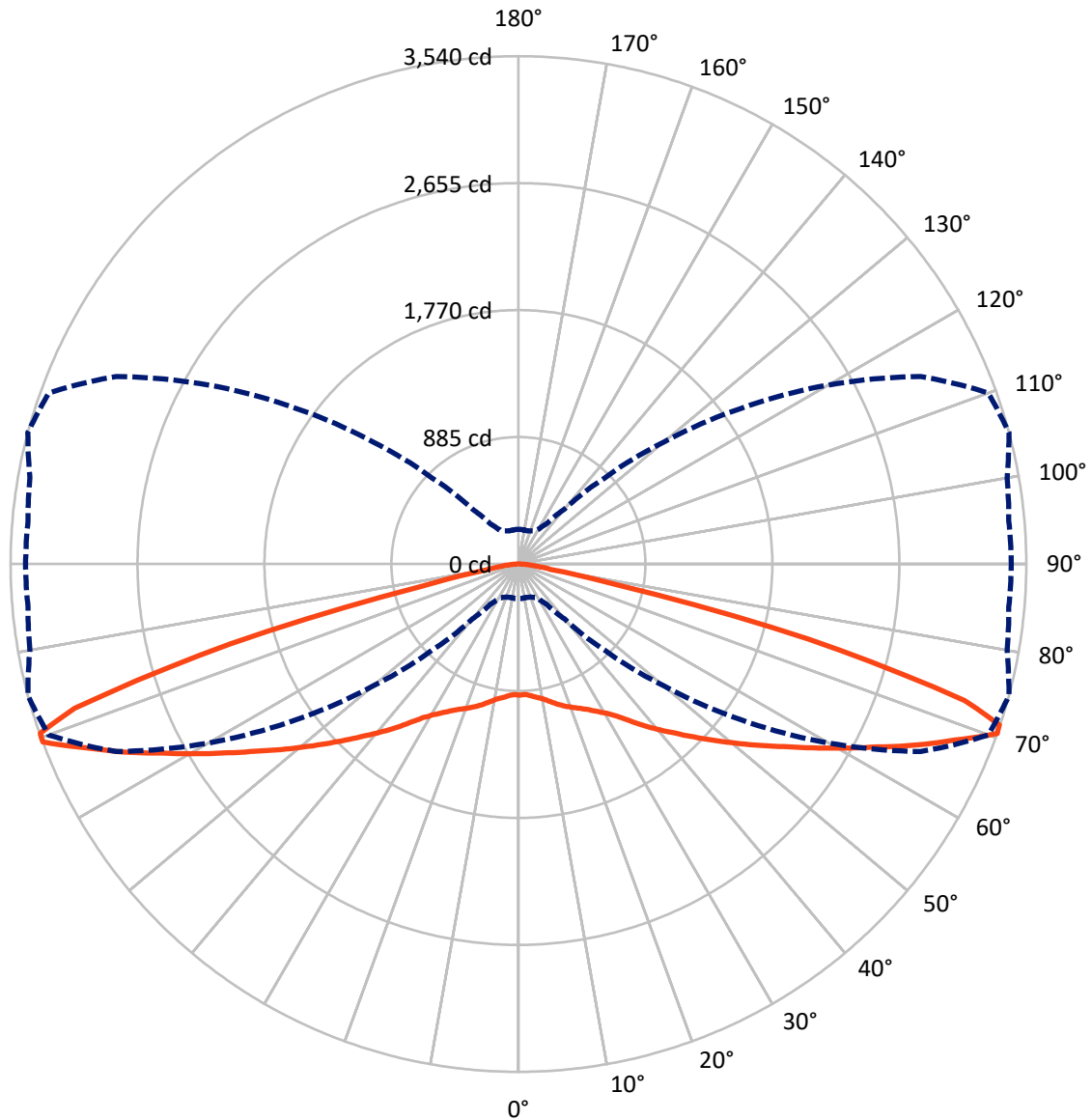
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 9.2 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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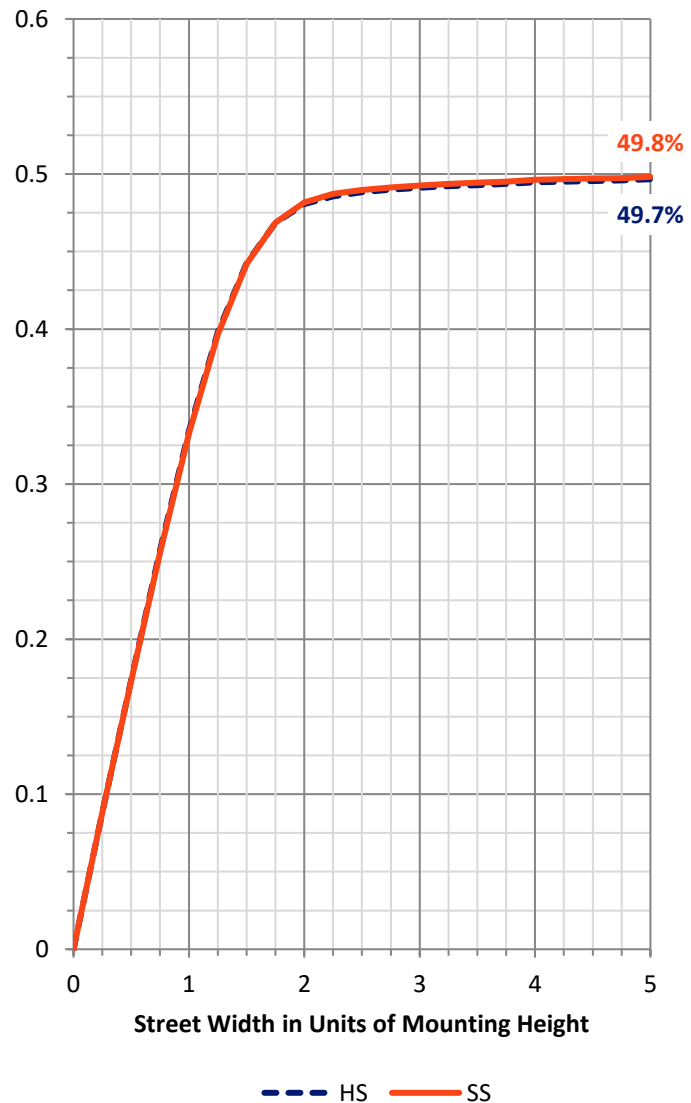
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4103.0	0.0	4103.0
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	4103.0	0.0	4103.0
	% Fixture	50.0	0.0	50.0
Total	Lumens	8206.0	0.0	8206.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	87.7	1.1
10°-20°	271.8	3.3
20°-30°	510.6	6.2
30°-40°	899.4	11.0
40°-50°	1490.5	18.2
50°-60°	2073.5	25.3
60°-70°	1957.5	23.9
70°-80°	836.0	10.2
80°-90°	79.0	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°	8206.0	100.0
0°-180°	8206.0	100.0



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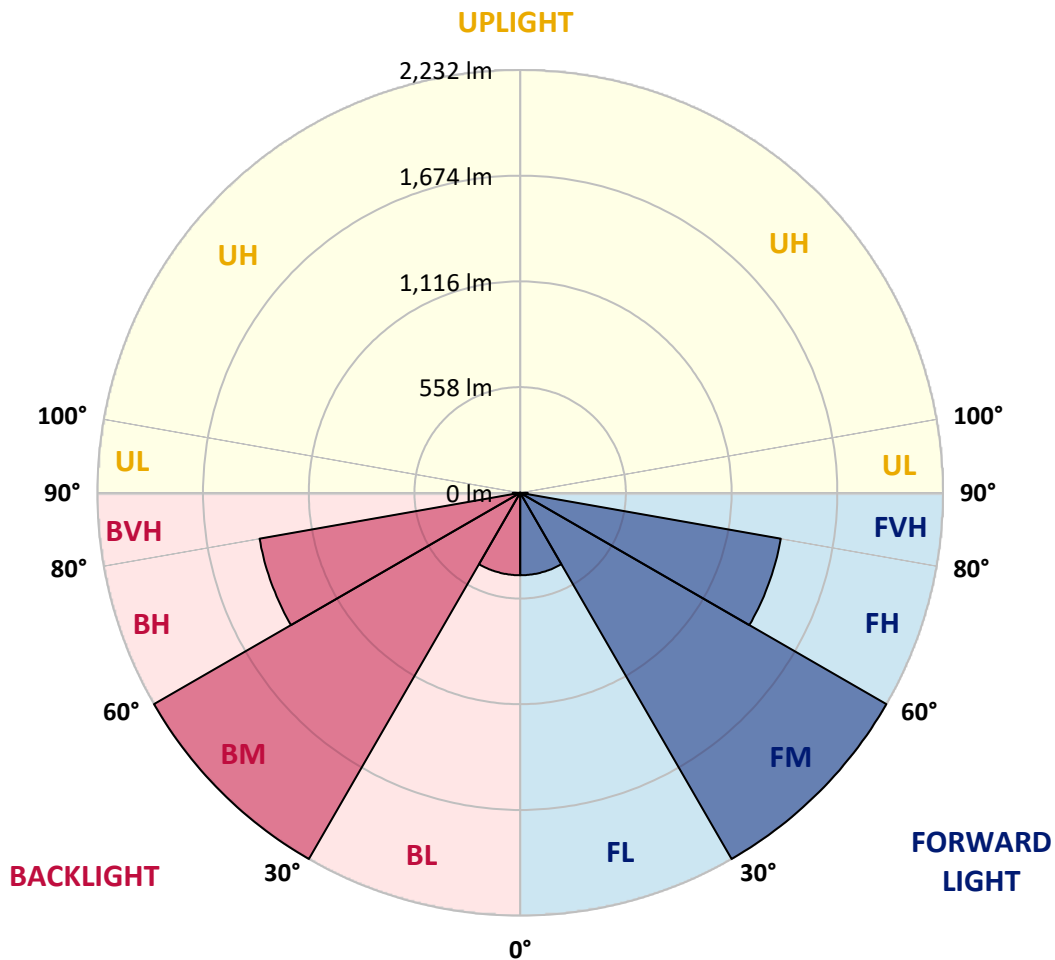
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	435.0	5.3			
FM	(30°-60°)	2231.7	27.2			
FH	(60°-80°)	1396.8	17.0			G1/1800
FVH	(80°-90°)	39.5	0.5			G1/100
BL	(0°-30°)	435.0	5.3	B1/500		
BM	(30°-60°)	2231.7	27.2	B2/2500		
BH	(60°-80°)	1396.8	17.0	B3/2500		G3/2500
BVH	(80°-90°)	39.5	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°	913.8	913.8	913.8	913.8	913.8	913.8	913.8	913.8	913.8	913.8	913.8
2.5°	919.5	919.0	919.5	917.9	918.4	917.9	917.9	915.9	915.9	914.8	913.3
5°	909.2	910.2	910.2	910.2	911.8	911.8	913.8	914.3	915.9	917.4	918.4
7.5°	892.2	892.7	894.3	895.3	898.4	902.5	906.6	911.2	915.4	920.5	926.2
10°	877.8	878.8	881.4	884.0	889.6	894.8	902.0	909.2	916.4	925.1	933.9
12.5°	870.1	871.6	875.8	879.9	888.6	895.3	905.1	916.4	926.2	934.4	944.2
15°	871.1	871.6	877.3	883.0	895.3	904.6	918.4	931.8	943.6	952.9	964.2
17.5°	886.0	887.1	892.7	901.0	912.8	924.6	939.5	953.4	969.4	980.2	993.5
20°	915.4	916.9	923.1	931.8	944.7	957.0	972.4	986.8	1003.3	1016.2	1029.5
22.5°	953.4	956.0	962.7	973.5	986.3	1001.2	1017.2	1032.1	1047.5	1060.4	1071.7
25°	1004.3	1007.4	1014.6	1025.4	1038.3	1054.2	1070.7	1086.1	1102.0	1111.8	1121.1
27.5°	1072.7	1077.9	1085.6	1094.3	1105.6	1122.6	1138.0	1150.9	1166.3	1177.1	1183.3
30°	1164.8	1172.0	1178.1	1187.4	1195.6	1213.6	1226.0	1236.3	1248.1	1254.3	1255.8
32.5°	1277.4	1284.1	1290.2	1296.9	1308.2	1324.7	1336.5	1342.2	1348.4	1347.3	1341.7
35°	1404.4	1409.6	1413.2	1425.0	1443.5	1454.3	1463.0	1465.1	1466.1	1455.3	1444.5
37.5°	1538.1	1544.3	1547.4	1565.9	1583.4	1595.7	1599.8	1604.5	1601.4	1583.4	1563.8
40°	1682.6	1689.3	1698.6	1714.5	1735.1	1746.9	1752.0	1751.5	1749.0	1727.9	1696.0
42.5°	1824.6	1832.8	1840.5	1868.3	1885.2	1905.3	1907.9	1907.3	1901.7	1877.5	1840.5
45°	1944.9	1954.7	1970.6	2001.5	2028.7	2052.9	2062.6	2066.2	2060.6	2034.9	1992.7
47.5°	2044.1	2050.8	2070.9	2108.4	2143.4	2178.9	2198.4	2212.3	2211.8	2193.3	2148.5
50°	2112.0	2119.7	2144.4	2186.6	2230.3	2271.9	2310.5	2341.9	2356.8	2343.4	2301.8
52.5°	2131.6	2141.3	2173.7	2224.1	2275.0	2331.1	2388.7	2444.2	2477.6	2485.9	2453.5
55°	2049.3	2060.1	2107.4	2177.3	2261.1	2343.9	2431.4	2510.6	2579.5	2611.3	2598.5
57.5°	1809.6	1817.4	1877.5	1968.0	2087.8	2233.4	2380.5	2525.5	2643.7	2726.5	2740.9
60°	1431.2	1440.9	1506.7	1602.4	1738.7	1922.8	2128.5	2366.1	2598.0	2787.7	2881.8
62.5°	965.8	972.4	1035.7	1123.1	1272.2	1449.7	1679.0	1979.9	2310.5	2649.4	2914.8
65°	507.0	507.0	549.7	610.9	729.7	888.6	1123.6	1432.2	1825.6	2248.8	2692.6
67.5°	294.1	293.6	303.4	317.3	354.8	419.1	548.7	775.5	1147.8	1640.5	2145.4
70°	242.7	241.2	239.6	239.6	245.3	255.1	279.8	342.0	500.4	845.9	1320.1
71°	231.9	230.9	226.8	225.2	227.8	233.0	243.8	272.6	355.3	577.0	985.8
72.5°	219.1	216.5	210.3	207.8	208.3	210.3	213.4	224.7	249.9	328.1	562.1
75°	199.5	193.4	185.6	182.0	180.5	180.0	180.0	183.1	188.7	198.0	230.4
77.5°	176.9	168.2	159.9	156.3	153.8	152.2	151.2	149.1	148.1	152.2	164.0
80°	149.6	140.4	133.7	131.6	130.1	127.0	122.9	118.8	116.2	118.3	125.5
82.5°	115.7	106.4	107.5	108.0	105.4	100.3	96.2	91.5	86.9	85.9	89.5
85°	92.1	87.4	84.3	91.0	85.4	79.2	73.5	65.8	55.0	45.3	49.4
87.5°	39.6	40.1	57.6	86.9	76.1	61.2	50.9	41.1	26.2	19.5	20.1
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°	913.8	913.8	913.8	913.8	913.8	913.8	913.8	913.8
2.5°	912.8	912.8	911.2	910.2	910.2	910.2	909.2	909.7
5°	919.0	920.0	921.0	920.5	922.0	923.6	923.1	922.6
7.5°	929.2	932.3	935.4	937.0	939.0	941.1	941.6	940.0
10°	939.5	945.7	950.3	954.4	957.0	959.1	960.6	960.1
12.5°	952.4	961.1	969.4	977.6	983.2	986.3	989.4	988.4
15°	973.5	983.2	993.5	1004.3	1013.1	1017.7	1022.3	1021.3
17.5°	1002.3	1011.0	1019.2	1030.0	1040.8	1046.0	1051.1	1050.6
20°	1038.3	1045.0	1049.6	1055.8	1066.0	1071.7	1076.3	1074.8
22.5°	1079.4	1081.5	1082.0	1084.0	1092.3	1098.9	1105.1	1106.7
25°	1124.1	1122.6	1119.5	1118.0	1123.6	1130.8	1138.5	1140.6
27.5°	1179.7	1174.5	1166.8	1160.7	1162.2	1171.5	1180.2	1182.3
30°	1249.6	1237.8	1221.3	1209.5	1207.5	1217.2	1226.5	1229.6
32.5°	1329.3	1313.4	1290.8	1272.8	1265.0	1273.8	1282.0	1286.6
35°	1424.0	1406.5	1379.2	1356.1	1343.7	1349.4	1363.8	1368.9
37.5°	1536.1	1511.9	1481.5	1452.2	1431.7	1432.7	1448.1	1454.3
40°	1660.0	1625.0	1586.5	1549.9	1520.1	1518.1	1531.9	1536.6
42.5°	1789.1	1744.3	1699.1	1651.2	1614.2	1607.5	1625.5	1626.1
45°	1927.9	1870.3	1814.3	1758.7	1720.2	1708.3	1725.8	1727.9
47.5°	2076.0	2004.0	1937.7	1877.5	1835.9	1817.4	1834.3	1837.4
50°	2230.3	2155.7	2078.6	2011.7	1962.9	1940.3	1960.3	1962.4
52.5°	2383.0	2312.6	2235.9	2159.3	2100.2	2074.5	2098.1	2105.3
55°	2536.8	2468.9	2396.9	2320.3	2245.7	2223.1	2248.8	2256.5
57.5°	2696.7	2631.4	2566.1	2489.0	2416.4	2382.0	2409.8	2420.6
60°	2873.1	2815.5	2753.8	2676.1	2604.7	2564.6	2588.2	2600.6
62.5°	3046.4	3034.6	2978.5	2897.8	2807.3	2767.2	2787.2	2796.0
65°	3060.8	3252.6	3250.0	3169.8	3043.3	2976.0	2981.6	2985.7
67.5°	2671.5	3111.7	3393.0	3418.2	3277.3	3171.9	3159.5	3162.1
70°	1891.4	2495.6	3092.7	3484.5	3540.1	3458.3	3431.6	3435.7
71°	1515.5	2141.3	2798.5	3325.6	3536.0	3512.3	3497.4	3508.2
72.5°	967.3	1577.7	2217.4	2847.9	3251.6	3367.3	3384.3	3390.9
75°	351.2	678.8	1148.8	1646.1	2086.3	2389.2	2555.8	2569.2
77.5°	188.7	243.2	375.9	561.6	705.5	782.7	791.9	795.5
80°	138.8	161.0	184.1	210.3	226.8	229.9	224.2	212.4
82.5°	98.2	111.1	120.3	129.6	136.3	130.6	108.5	82.8
85°	57.1	62.7	67.9	72.5	73.5	69.4	45.8	37.5
87.5°	22.6	24.7	24.2	27.3	26.2	24.2	18.0	15.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)