

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: P197264

Luminaire Tested: **NAV-AF-02-D-UNV-T3-8030-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197264
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (p24135)
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-T3-8030-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 80 CRI, 3000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8033 lumens
Efficiency: N/A
Efficacy: 94.5 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type III - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G2

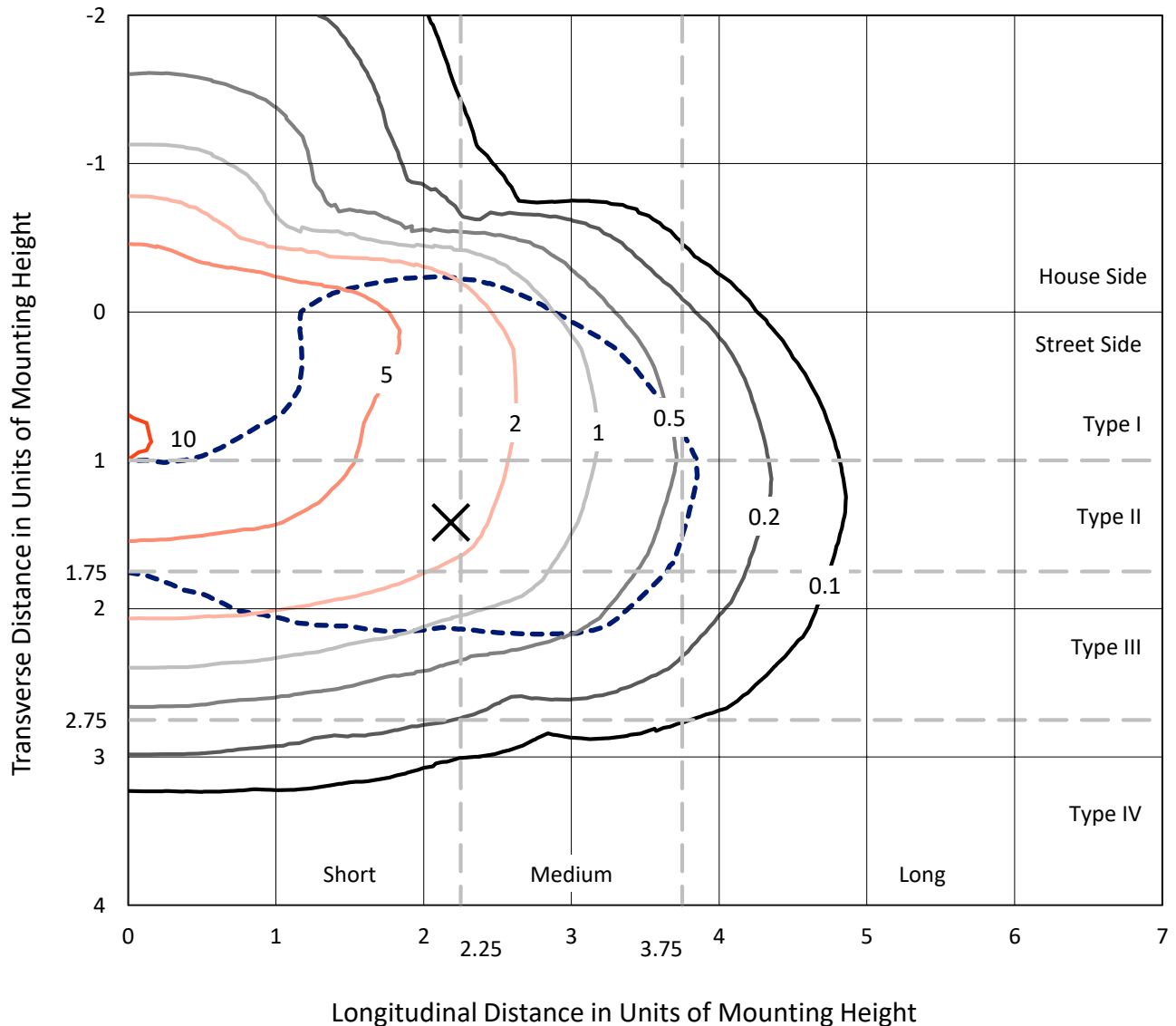
Input Watts (W): 85
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

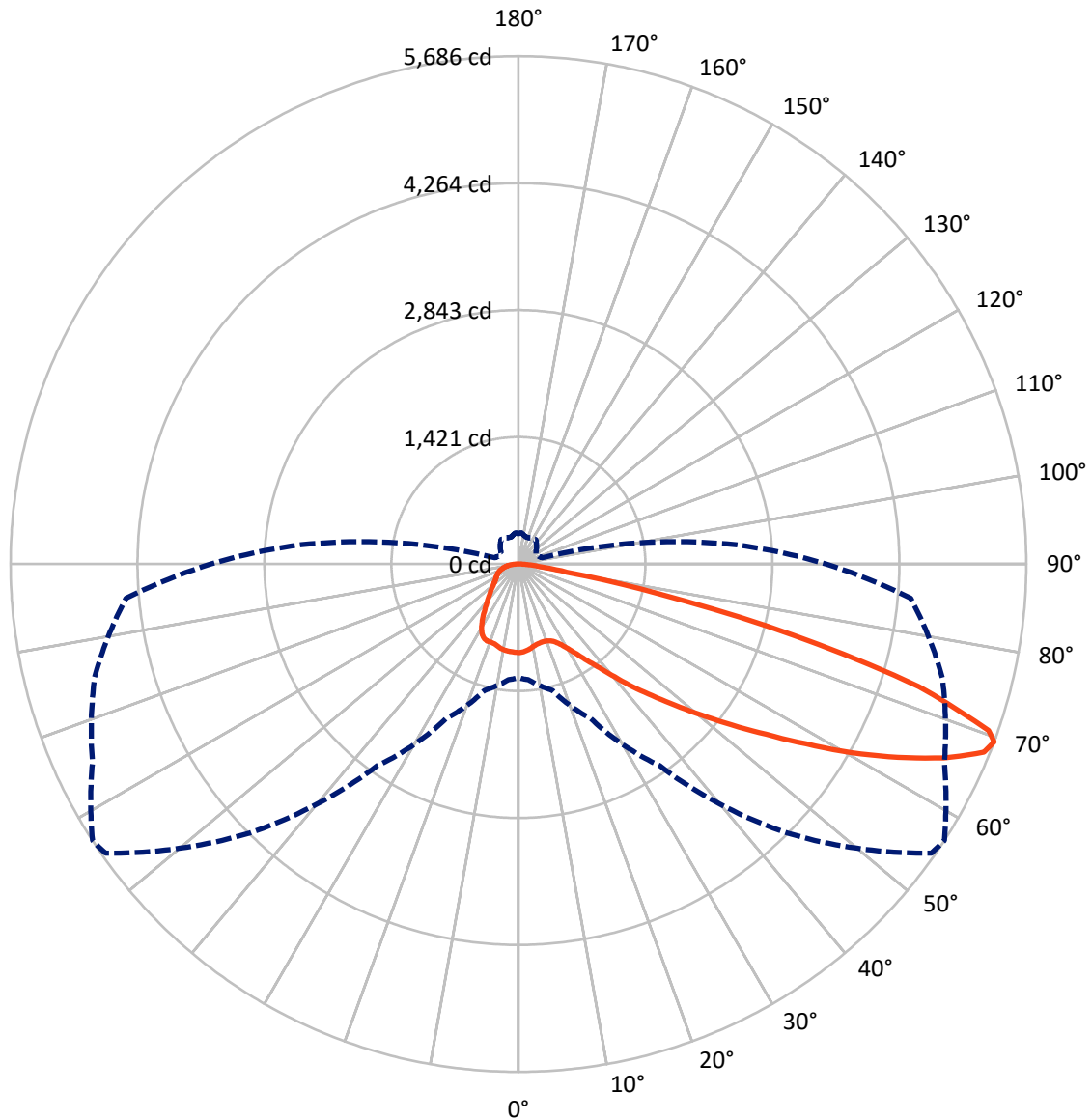
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 10.2 fc
 Type III - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 57-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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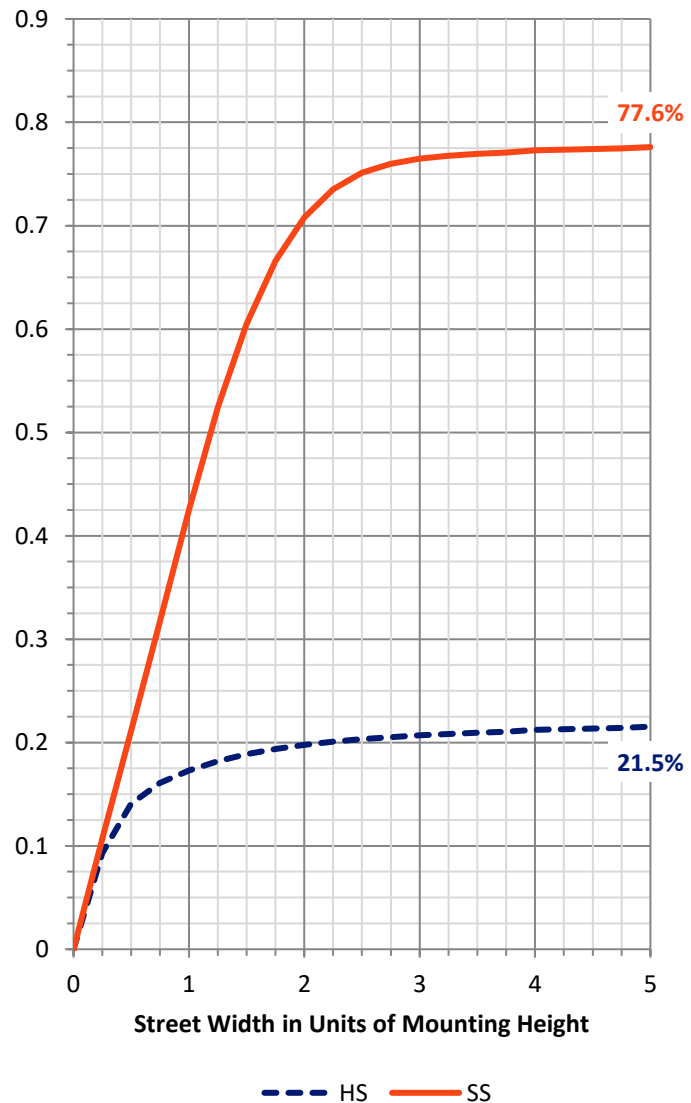
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1772.6	0.0	1772.6
	% Fixture	22.1	0.0	22.1
Street Side	Lumens	6260.4	0.0	6260.4
	% Fixture	77.9	0.0	77.9
Total	Lumens	8033.0	0.0	8033.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	92.9	1.2
10°-20°	264.2	3.3
20°-30°	439.5	5.5
30°-40°	717.7	8.9
40°-50°	1211.3	15.1
50°-60°	1884.2	23.5
60°-70°	2244.5	27.9
70°-80°	1045.6	13.0
80°-90°	133.0	1.7
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°	8033.0	100.0
0°-180°	8033.0	100.0



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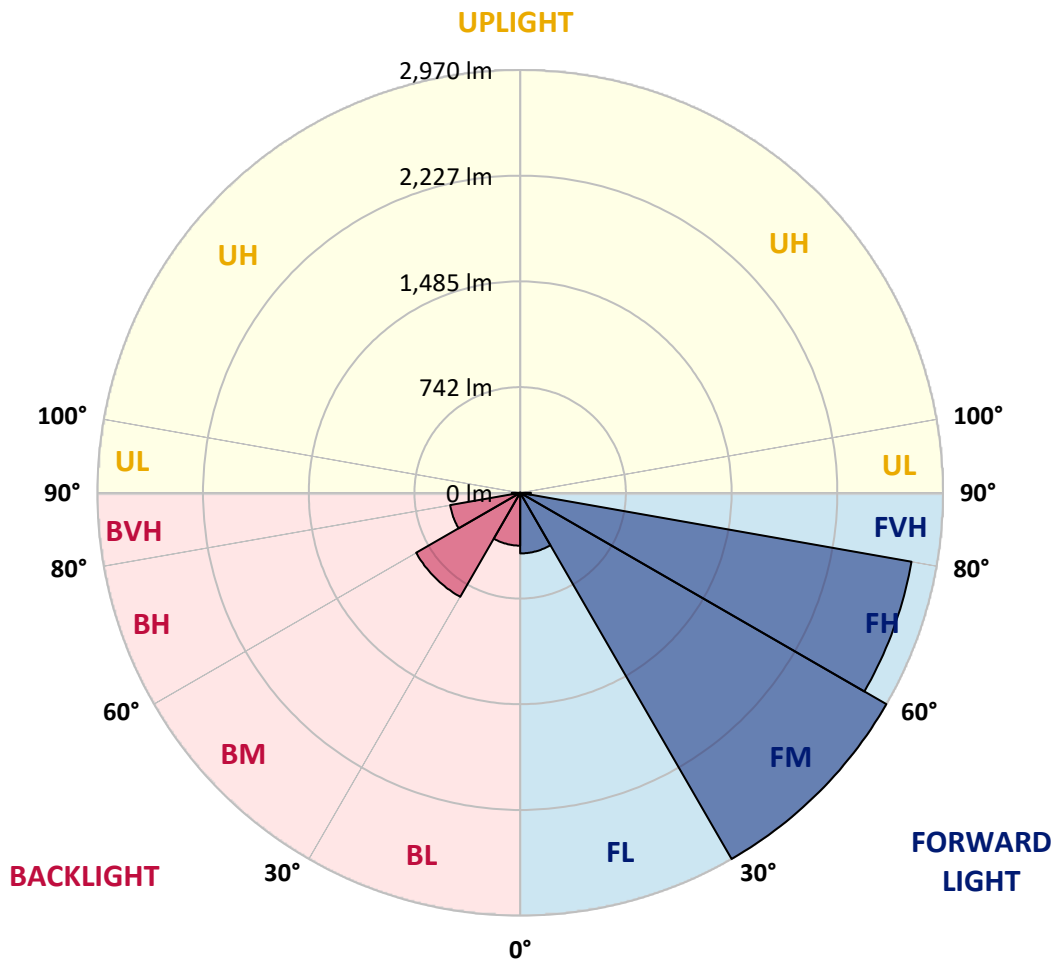
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	425.4	5.3			
FM	(30°-60°)	2969.6	37.0			
FH	(60°-80°)	2790.7	34.7			G2/5000
FVH	(80°-90°)	74.8	0.9			G1/100
BL	(0°-30°)	371.2	4.6	B1/500		
BM	(30°-60°)	843.7	10.5	B1/1000		
BH	(60°-80°)	499.5	6.2	B1/500		G1/500
BVH	(80°-90°)	58.2	0.7			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G2

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	57°	65°	75°	85°
0°	992.6	992.6	992.6	992.6	992.6	992.6	992.6	992.6	992.6	992.6	992.6
2.5°	986.9	986.9	989.5	989.5	989.5	988.4	985.4	986.4	984.3	982.8	980.2
5°	966.8	967.9	971.0	972.0	973.5	974.0	974.0	973.5	974.0	974.0	972.5
7.5°	939.1	940.1	943.7	945.8	950.4	954.5	956.6	956.6	959.1	961.2	961.7
10°	922.1	922.1	924.2	924.2	927.8	929.8	936.5	936.0	943.2	949.9	953.0
12.5°	920.0	920.0	919.0	915.4	913.4	912.8	919.5	920.6	931.4	943.2	948.8
15°	926.7	926.7	923.6	916.4	908.7	905.1	911.8	913.9	925.7	939.6	948.3
17.5°	948.3	947.8	941.1	926.7	913.4	907.7	909.8	911.8	922.6	938.6	949.4
20°	996.2	996.2	981.8	955.5	932.4	919.0	915.9	917.5	925.2	940.1	954.0
22.5°	1080.0	1081.5	1055.8	1012.6	973.0	944.7	932.4	933.9	937.5	951.9	967.4
25°	1203.4	1199.3	1162.8	1101.6	1039.9	991.5	966.3	967.9	967.9	981.2	997.2
27.5°	1334.0	1335.1	1282.6	1216.8	1135.5	1063.5	1023.4	1022.9	1022.4	1035.2	1052.2
30°	1481.6	1482.1	1421.5	1345.3	1252.3	1160.2	1100.0	1099.5	1094.9	1110.8	1133.0
32.5°	1643.1	1642.6	1572.1	1486.3	1382.9	1278.5	1200.3	1199.8	1196.2	1217.8	1244.6
35°	1822.1	1822.1	1752.1	1646.2	1534.6	1418.4	1327.9	1327.4	1329.4	1358.7	1383.9
37.5°	2037.6	2042.2	1957.9	1829.3	1707.4	1583.5	1478.0	1474.9	1459.5	1508.9	1550.5
40°	2262.3	2275.2	2187.7	2037.6	1905.9	1777.9	1661.6	1659.6	1646.2	1698.7	1766.0
42.5°	2505.6	2534.9	2437.7	2284.4	2140.9	2002.6	1885.9	1880.2	1828.8	1910.5	2016.0
45°	2824.4	2843.4	2702.5	2563.7	2428.4	2270.5	2131.7	2101.3	2049.9	2154.8	2291.6
47.5°	3041.4	3032.2	2944.2	2851.2	2764.2	2613.0	2399.6	2361.0	2298.3	2437.2	2587.8
50°	3176.2	3182.9	3133.5	3128.9	3124.2	3018.8	2702.0	2655.7	2583.2	2747.8	2923.7
52.5°	3265.1	3234.8	3243.5	3348.5	3475.5	3425.1	3044.0	2992.6	2918.0	3082.6	3281.1
55°	3228.1	3188.0	3268.7	3475.5	3774.3	3785.6	3419.4	3366.5	3302.7	3438.5	3711.0
57.5°	3074.9	3094.9	3222.5	3509.9	3978.5	4108.6	3850.9	3796.9	3671.4	3809.3	4119.4
60°	2859.4	2900.0	3094.9	3455.4	4121.4	4360.0	4324.6	4288.6	4072.6	4170.3	4548.3
62.5°	2628.0	2668.1	2907.7	3362.3	4057.1	4582.7	4789.5	4767.4	4515.4	4517.9	4820.3
65°	2286.0	2302.4	2547.2	3108.3	3878.7	4783.8	5254.9	5235.3	4938.6	4814.7	4896.4
67.5°	1726.4	1747.0	1948.1	2453.6	3335.6	4674.8	5626.7	5623.6	5193.2	4924.7	4715.4
69°	1274.9	1300.1	1464.1	1904.9	2758.1	4259.2	5644.2	5685.9	5262.1	4913.4	4409.4
70°	932.9	961.7	1113.4	1512.0	2297.3	3800.5	5494.5	5584.0	5235.9	4841.9	4170.8
72.5°	396.5	406.3	480.8	682.4	1165.4	2291.6	4500.4	4688.7	4728.8	4338.4	3258.5
75°	248.4	251.5	280.8	350.2	518.4	947.8	2914.4	3171.0	3530.5	3365.9	2181.6
77.5°	187.2	189.8	206.7	241.2	321.9	353.8	1352.0	1612.3	2022.1	1980.0	1085.6
80°	143.5	145.0	156.3	175.4	226.8	221.7	438.7	551.3	843.9	744.7	384.2
82.5°	112.6	113.1	122.9	126.5	158.4	149.1	220.1	245.3	341.0	283.4	187.7
85°	99.8	101.3	111.1	92.6	101.3	90.0	120.9	131.1	181.0	170.7	71.0
87.5°	50.9	53.5	93.1	79.2	50.9	42.7	53.0	57.1	73.5	79.7	34.5
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):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	992.6	992.6	992.6	992.6	992.6	992.6	992.6	992.6	992.6	992.6	992.6
2.5°	980.7	981.2	982.8	985.4	989.5	994.6	1000.8	1007.0	1010.6	1013.1	1012.1
5°	972.5	973.0	976.1	980.7	985.9	993.6	1003.9	1011.6	1017.2	1020.8	1020.3
7.5°	962.2	963.8	969.9	975.1	982.3	988.4	996.7	1003.9	1009.5	1013.1	1012.6
10°	954.5	956.0	963.8	970.4	976.6	977.6	976.1	974.0	973.5	976.1	975.1
12.5°	950.9	954.0	961.2	965.8	963.2	953.5	942.2	937.5	936.0	941.1	941.6
15°	951.9	954.5	960.7	957.6	943.7	927.2	921.1	924.7	927.8	930.8	931.4
17.5°	954.5	956.0	957.6	946.3	926.7	915.9	913.9	910.3	901.0	895.9	895.4
20°	959.1	961.2	958.6	940.6	923.1	908.7	884.0	861.9	840.8	829.5	824.9
22.5°	975.1	976.6	968.9	951.4	924.7	877.9	828.0	789.9	757.5	740.0	733.4
25°	1006.4	1009.0	998.2	976.1	906.2	824.4	753.9	702.5	661.9	640.8	635.1
27.5°	1061.5	1064.0	1052.2	994.6	863.0	752.9	667.5	616.6	581.6	563.6	561.1
30°	1143.8	1147.4	1136.6	994.1	797.1	661.9	583.2	553.4	533.3	521.0	520.4
32.5°	1257.9	1271.3	1227.1	976.6	715.9	569.8	519.4	509.1	499.4	491.1	491.1
35°	1402.9	1434.3	1316.6	940.1	626.4	507.1	483.9	474.2	461.8	453.1	452.0
37.5°	1576.3	1625.1	1380.3	875.3	549.2	476.7	462.3	446.4	426.9	409.9	405.8
40°	1814.4	1825.7	1411.7	769.9	491.6	460.3	442.3	422.2	397.5	378.5	376.5
42.5°	2053.5	2016.5	1405.5	656.7	458.7	445.4	421.7	399.6	377.5	361.5	361.5
45°	2325.6	2183.1	1358.7	543.1	428.9	428.4	402.7	381.6	364.6	352.8	350.2
47.5°	2585.8	2332.8	1278.0	459.2	398.1	411.4	390.3	373.4	357.9	346.6	344.6
50°	2901.6	2506.1	1192.1	400.6	368.2	396.5	385.2	376.5	361.5	342.0	339.9
52.5°	3215.3	2708.7	1125.8	356.4	342.0	384.7	388.3	389.3	375.4	337.4	334.8
55°	3552.1	2925.2	1055.8	321.9	320.4	379.0	395.5	394.5	387.8	338.4	334.3
57.5°	3872.5	3142.7	951.4	297.8	303.4	373.4	397.0	380.6	368.7	343.5	336.9
60°	4137.9	3322.7	798.2	280.8	289.0	362.1	386.7	362.1	342.0	342.5	336.3
62.5°	4267.0	3373.1	610.4	261.3	277.2	343.5	371.8	348.2	329.7	344.6	341.0
65°	4168.7	3229.7	435.1	243.3	262.8	321.9	363.1	336.3	323.5	354.9	350.7
67.5°	3815.9	2838.8	315.8	227.3	248.9	299.8	346.6	325.5	317.3	362.6	353.3
69°	3441.0	2451.0	273.6	218.1	239.1	288.0	335.8	319.9	312.7	351.8	338.4
70°	3129.4	2152.3	252.5	212.4	230.9	281.3	327.6	316.3	308.1	338.9	323.0
72.5°	2243.8	1391.1	212.4	195.4	209.3	266.4	309.6	302.9	290.6	306.0	295.7
75°	1355.6	726.2	180.5	177.9	186.7	245.8	288.5	280.3	267.9	269.5	264.3
77.5°	622.8	335.3	151.2	157.4	163.0	220.1	262.8	253.5	242.2	238.1	238.6
80°	273.1	195.9	126.5	134.2	137.3	198.0	235.0	224.7	212.4	234.5	217.5
82.5°	147.6	113.7	98.7	103.9	112.6	172.3	204.2	190.8	179.0	208.3	168.2
85°	59.7	58.1	66.9	72.0	78.2	123.9	170.7	156.9	142.5	127.5	124.5
87.5°	25.7	27.8	32.9	35.0	41.7	77.1	114.7	100.3	100.8	86.4	84.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)