

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: P270410

Luminaire Tested: **NAV-AF-03-D-UNV-5WQ-7027-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270410
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24131)
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-5WQ-7027-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 2700K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10788.4 lumens
Efficiency: N/A
Efficacy: 112.4 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type V - Short - Semi-Cutoff
BUG Rating: B4 - U0 - G2

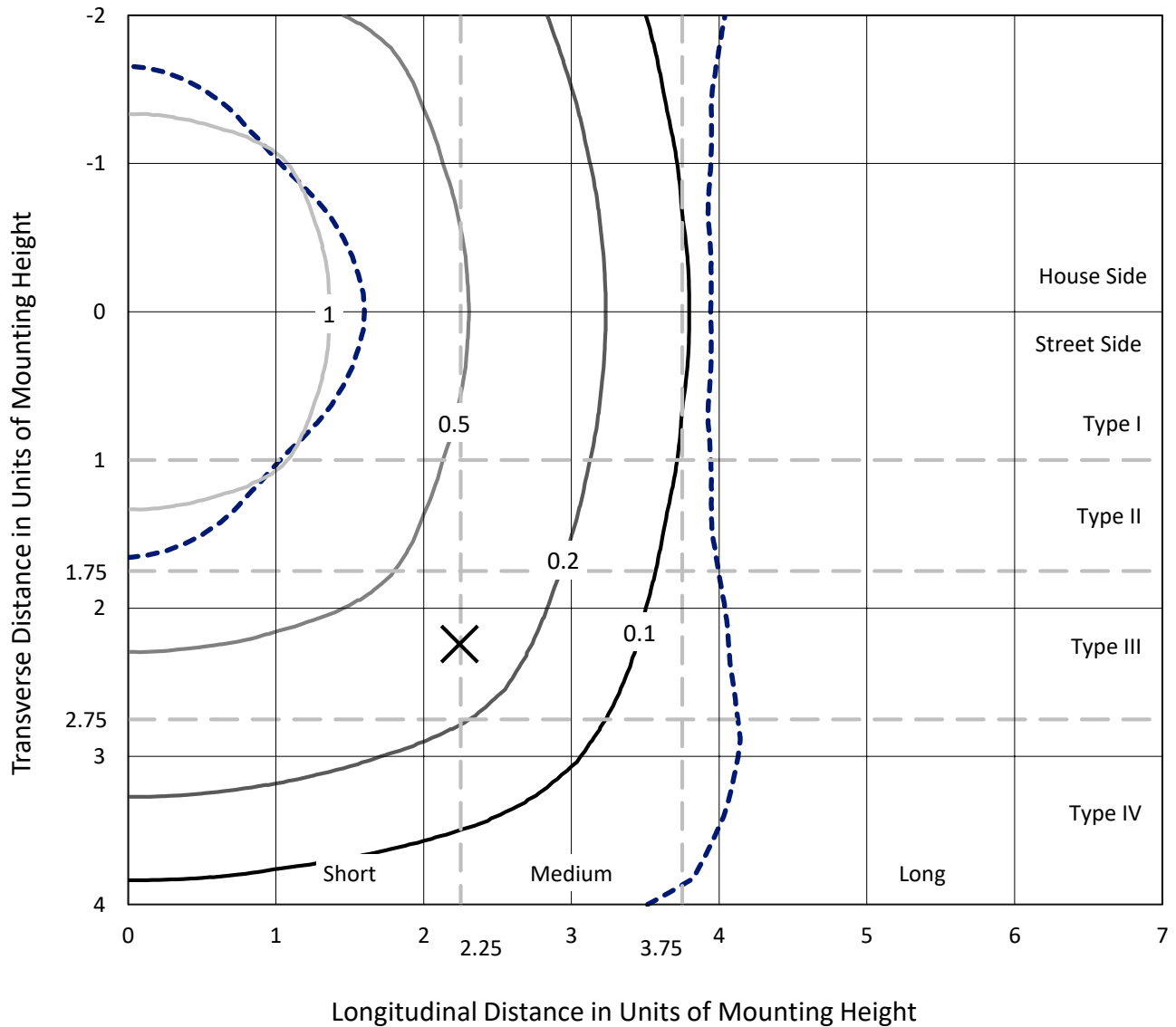
Input Watts (W): 96
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

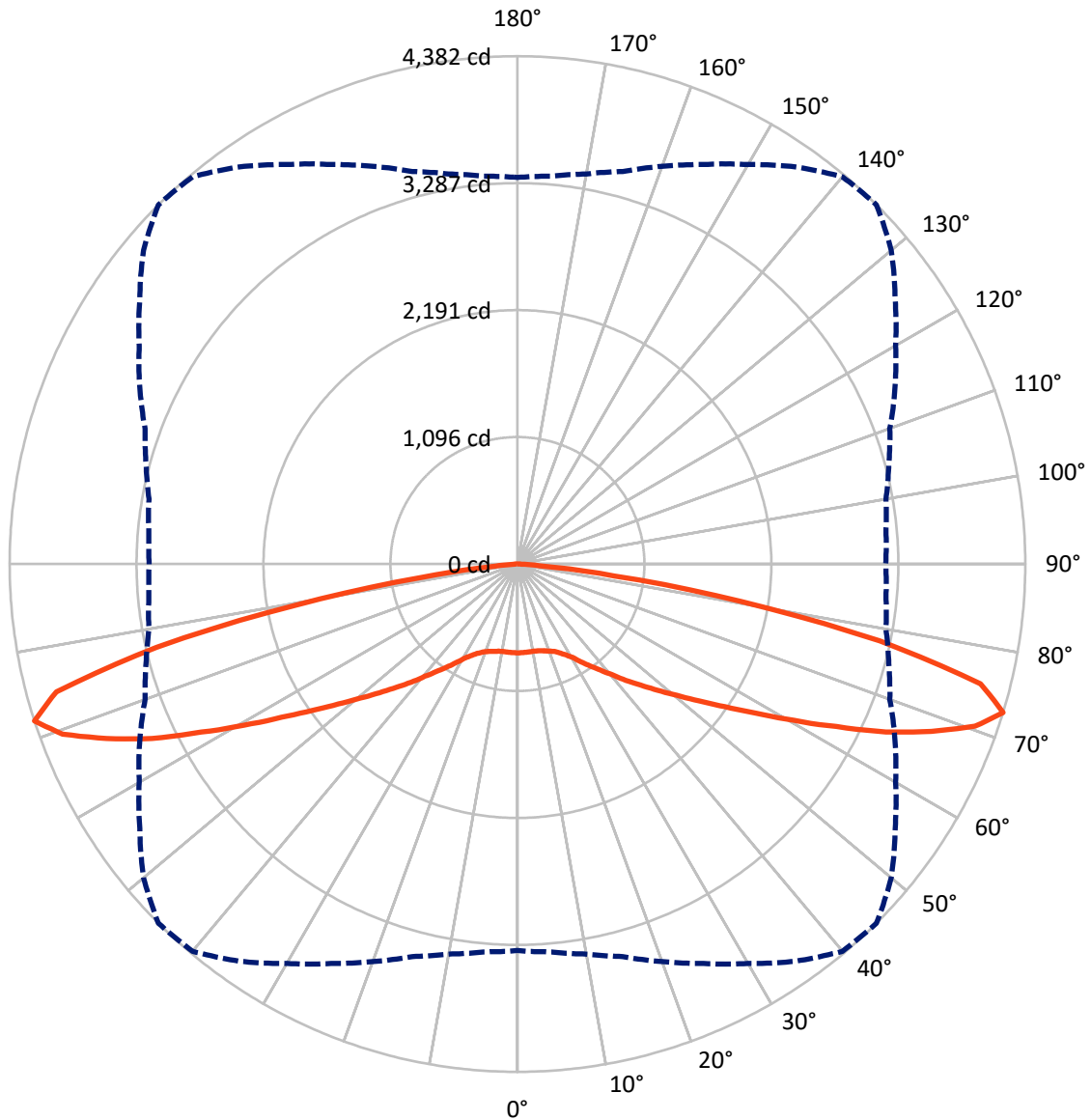
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 1.9 fc
 Type V - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

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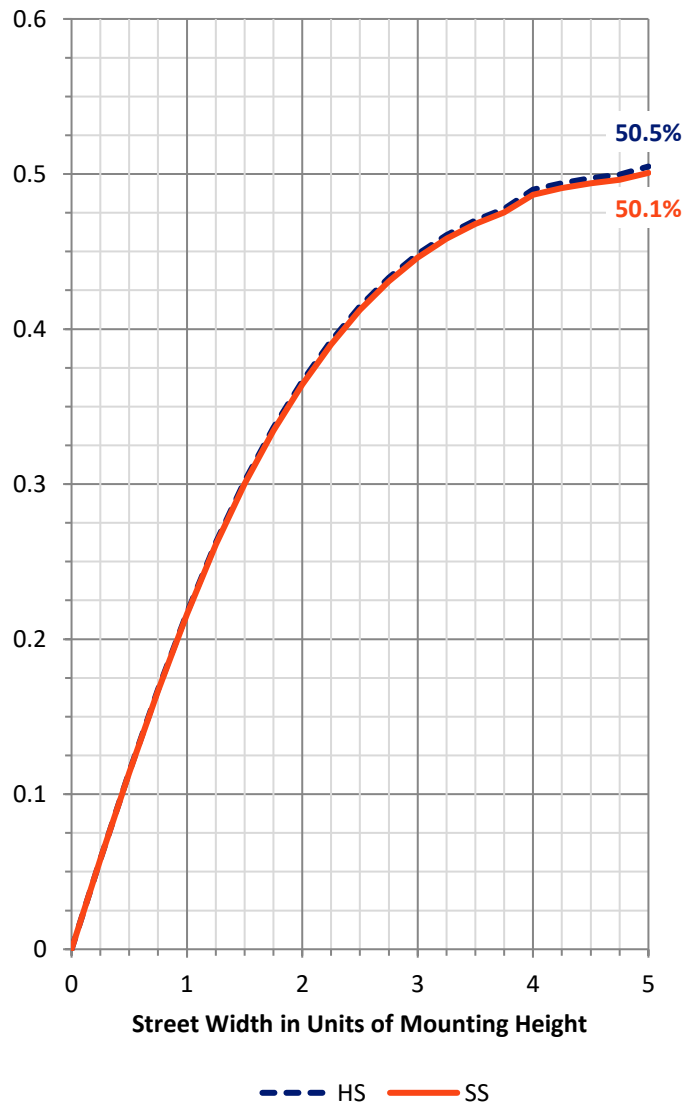
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	5394.2	0.0	5394.2
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	5394.2	0.0	5394.2
	% Fixture	50.0	0.0	50.0
Total	Lumens	10788.4	0.0	10788.4
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.2	0.7
10°-20°	221.5	2.1
20°-30°	400.0	3.7
30°-40°	682.2	6.3
40°-50°	1161.5	10.8
50°-60°	1869.3	17.3
60°-70°	3108.7	28.8
70°-80°	3007.3	27.9
80°-90°	264.7	2.5
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°	10788.4	100.0
0°-180°	10788.4	100.0

Coefficient of Utilization



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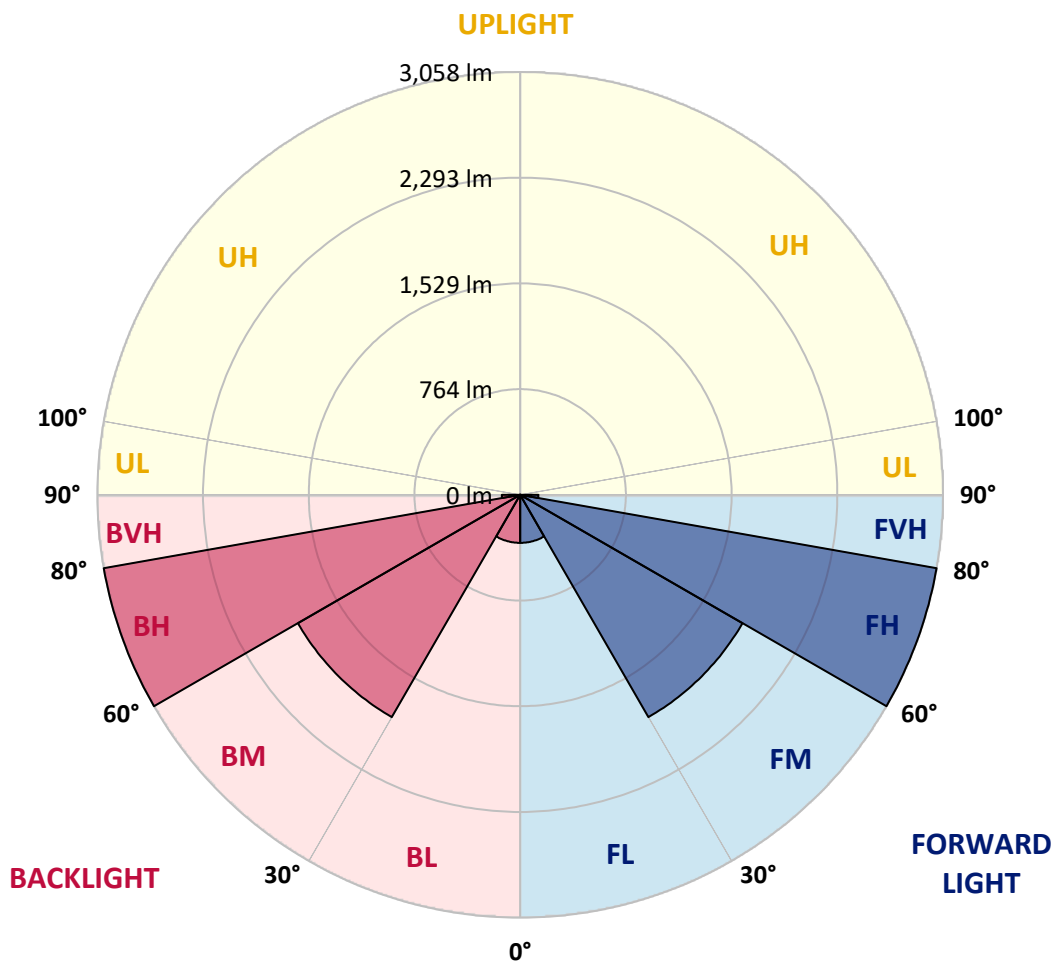
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	347.4	3.2			
FM	(30°-60°)	1856.5	17.2			
FH	(60°-80°)	3058.0	28.3			G2/5000
FVH	(80°-90°)	132.3	1.2			G2/225
BL	(0°-30°)	347.4	3.2	B1/500		
BM	(30°-60°)	1856.5	17.2	B2/2500		
BH	(60°-80°)	3058.0	28.3	B4/5000		G2/5000
BVH	(80°-90°)	132.3	1.2			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B4-U0-G2

Type V Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	767.0	767.0	767.0	767.0	767.0	767.0	767.0	767.0	767.0	767.0	767.0
2.5°	772.9	772.9	773.6	772.9	771.6	770.9	768.9	767.6	766.3	765.6	764.3
5°	773.6	773.6	774.2	773.6	772.4	770.9	769.7	767.6	766.3	764.9	764.3
7.5°	776.2	776.9	777.7	776.9	774.2	772.9	770.9	768.9	766.3	764.9	763.6
10°	781.5	781.5	781.5	780.9	778.9	776.2	773.6	771.6	768.3	764.9	763.0
12.5°	785.6	786.2	786.2	784.8	782.2	778.9	776.2	774.2	771.6	768.9	767.0
15°	791.5	791.5	790.9	788.3	784.2	781.5	780.3	779.5	778.9	777.7	775.5
17.5°	803.5	802.8	800.8	796.8	792.2	790.1	788.9	788.9	788.9	788.3	786.8
20°	820.8	820.8	818.0	811.4	807.4	805.5	803.5	803.5	803.5	801.5	799.5
22.5°	848.7	849.3	845.3	837.4	832.1	828.1	825.5	823.4	821.4	820.2	816.7
25°	886.4	885.9	881.1	871.3	867.3	863.4	857.9	854.6	852.0	849.9	846.1
27.5°	926.3	925.8	920.4	911.7	909.1	903.1	899.2	894.5	891.2	887.9	883.8
30°	977.4	974.1	970.2	963.5	962.3	957.6	952.3	945.6	940.3	935.0	930.4
32.5°	1023.3	1023.3	1017.3	1013.9	1016.6	1014.6	1015.4	1011.3	1008.0	1006.0	1001.4
35°	1087.0	1087.0	1084.4	1080.4	1081.1	1076.3	1075.8	1076.3	1079.0	1079.0	1073.7
37.5°	1172.1	1173.4	1164.7	1163.5	1160.2	1153.5	1150.1	1151.4	1157.5	1160.8	1153.5
40°	1277.6	1280.3	1277.6	1268.9	1265.1	1253.8	1247.0	1247.0	1251.8	1255.0	1252.3
42.5°	1382.0	1386.5	1382.0	1375.2	1371.9	1363.3	1359.9	1362.5	1368.6	1372.6	1368.6
45°	1498.2	1501.3	1495.5	1487.5	1483.6	1478.8	1476.9	1478.8	1485.4	1489.5	1488.1
47.5°	1612.3	1616.9	1609.7	1606.3	1606.3	1601.7	1607.0	1612.3	1618.2	1627.5	1623.5
50°	1723.8	1729.9	1725.3	1725.9	1731.2	1739.7	1749.8	1760.4	1771.0	1781.0	1782.2
52.5°	1823.5	1832.8	1833.4	1845.4	1861.9	1875.3	1903.1	1926.4	1951.7	1960.3	1956.2
55°	1928.4	1941.0	1957.6	1976.2	2002.9	2030.0	2077.2	2119.0	2152.2	2172.8	2169.4
57.5°	2078.5	2091.1	2108.3	2139.0	2178.7	2215.8	2280.3	2345.5	2395.9	2427.1	2411.8
60°	2273.0	2286.4	2309.0	2341.4	2393.3	2443.7	2532.1	2625.7	2704.0	2739.9	2712.0
62.5°	2530.6	2543.3	2558.0	2601.1	2658.9	2723.9	2834.8	2955.1	3054.6	3089.1	3049.9
65°	2897.9	2913.3	2917.9	2953.0	3009.5	3069.9	3189.4	3324.8	3438.4	3494.9	3416.6
67.5°	3311.6	3317.6	3336.1	3377.4	3435.1	3489.6	3583.9	3712.1	3820.9	3852.1	3768.5
70°	3554.1	3565.9	3598.5	3655.7	3724.6	3810.3	3913.2	4051.4	4175.0	4189.4	4083.2
72.5°	3334.9	3359.4	3417.2	3506.2	3650.9	3803.1	3980.3	4184.1	4361.5	4382.0	4211.4
75°	2674.9	2702.7	2771.7	2869.4	3040.8	3266.4	3522.9	3828.9	4094.6	4128.4	3902.6
77.5°	1425.7	1460.3	1560.5	1692.0	1936.3	2235.3	2544.0	2893.4	3119.1	3195.5	3032.7
80°	359.2	377.8	426.3	503.3	668.7	909.8	1176.1	1551.9	1832.2	1950.9	1832.2
82.5°	139.4	153.4	166.6	176.0	191.9	225.1	310.8	506.6	682.6	840.6	727.7
85°	53.8	57.1	82.4	93.7	93.7	102.9	118.1	139.4	172.7	188.6	158.0
87.5°	21.3	23.3	28.6	43.8	45.2	39.9	42.5	47.8	36.6	30.5	34.6
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°	767.0	767.0	767.0	767.0	767.0	767.0	767.0	767.0
2.5°	763.6	763.0	761.7	762.3	761.7	761.7	761.7	761.7
5°	763.0	763.0	761.7	761.7	761.7	762.3	761.7	761.7
7.5°	762.3	761.7	760.3	759.6	759.6	759.0	759.0	759.0
10°	761.0	759.6	758.3	757.7	757.7	756.4	756.4	756.4
12.5°	764.3	762.3	761.0	760.3	760.3	760.3	761.0	761.0
15°	773.6	769.7	767.6	767.0	767.6	768.9	769.7	770.2
17.5°	783.6	779.5	776.2	775.0	775.5	777.7	779.5	780.9
20°	796.2	792.8	788.9	787.5	787.5	790.1	791.5	793.6
22.5°	814.1	811.4	808.1	806.1	804.8	808.1	810.1	811.4
25°	842.7	840.0	837.4	835.3	834.7	837.9	839.3	840.0
27.5°	880.5	877.9	876.6	875.8	874.0	875.2	877.3	876.6
30°	929.7	931.6	929.7	929.7	926.3	927.7	926.3	925.1
32.5°	995.4	993.4	987.4	983.5	978.9	978.9	976.7	974.8
35°	1061.2	1054.5	1051.1	1053.3	1051.1	1052.5	1049.2	1045.8
37.5°	1138.8	1134.9	1134.2	1140.2	1138.8	1140.2	1140.2	1135.5
40°	1241.7	1239.1	1243.8	1253.8	1257.6	1257.1	1258.3	1252.3
42.5°	1359.9	1355.4	1357.2	1366.0	1370.6	1371.9	1371.3	1366.0
45°	1478.3	1479.5	1479.5	1488.9	1493.4	1496.0	1491.5	1489.5
47.5°	1611.6	1613.6	1609.0	1615.0	1616.3	1620.9	1616.9	1613.6
50°	1765.7	1758.4	1747.8	1749.8	1749.8	1748.5	1743.8	1739.7
52.5°	1937.7	1921.0	1901.2	1894.5	1887.2	1880.0	1870.6	1863.4
55°	2133.6	2105.1	2069.2	2052.5	2038.7	2022.1	2000.7	1993.5
57.5°	2360.7	2311.6	2263.8	2233.8	2198.1	2176.1	2148.8	2147.6
60°	2630.2	2563.9	2479.5	2435.0	2399.3	2373.3	2352.8	2344.8
62.5°	2941.7	2827.5	2736.5	2688.7	2646.9	2631.0	2605.1	2608.4
65°	3261.1	3145.0	3056.7	3018.1	2978.9	2968.3	2944.5	2953.0
67.5°	3607.1	3511.5	3414.5	3378.6	3342.9	3332.3	3307.6	3314.9
70°	3917.1	3795.7	3685.4	3615.0	3554.1	3504.8	3473.7	3461.0
72.5°	3979.0	3768.5	3595.1	3419.2	3317.6	3228.6	3192.0	3178.2
75°	3575.3	3248.5	3001.4	2794.9	2680.7	2551.2	2537.4	2518.0
77.5°	2781.1	2409.2	2110.4	1844.7	1691.2	1533.2	1478.8	1437.6
80°	1658.8	1275.0	988.0	692.7	565.2	454.9	427.7	399.0
82.5°	593.7	380.5	256.3	200.0	178.7	164.7	154.1	140.1
85°	143.4	120.8	114.3	103.6	102.2	87.0	61.8	55.2
87.5°	45.9	41.9	42.5	40.6	42.5	31.9	26.0	23.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)