

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: P195980

Luminaire Tested: **NAV-AF-02-D-UNV-5WQ-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195980
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-02-D-UNV-5WQ-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 4000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14220.1 lumens
Efficiency: N/A
Efficacy: 110.2 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type V - Short - Semi-Cutoff
BUG Rating: B4 - U0 - G2

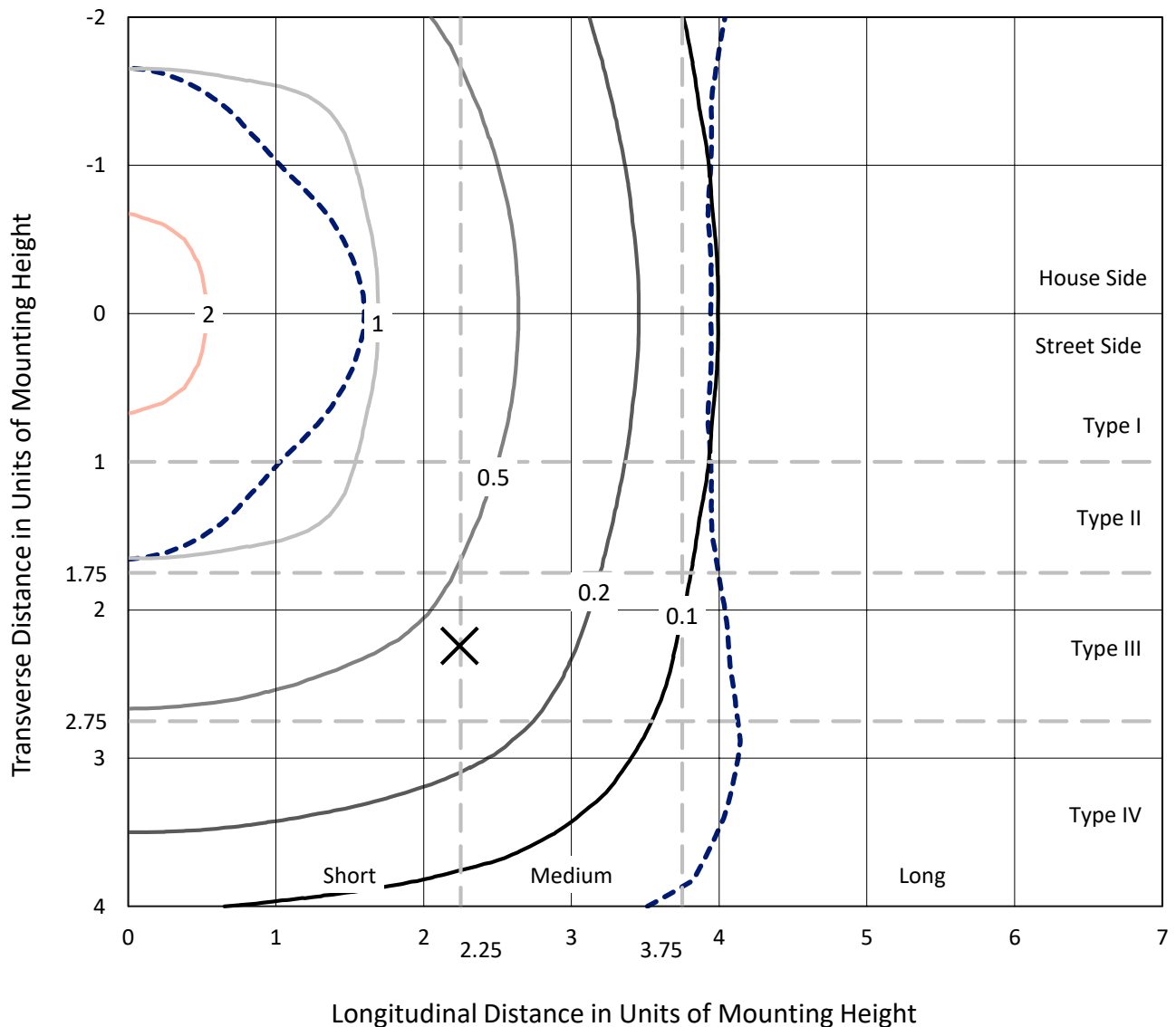
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P195980
 CATALOG NUMBER: NAV-AF-02-D-UNV-5WQ-1200

Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

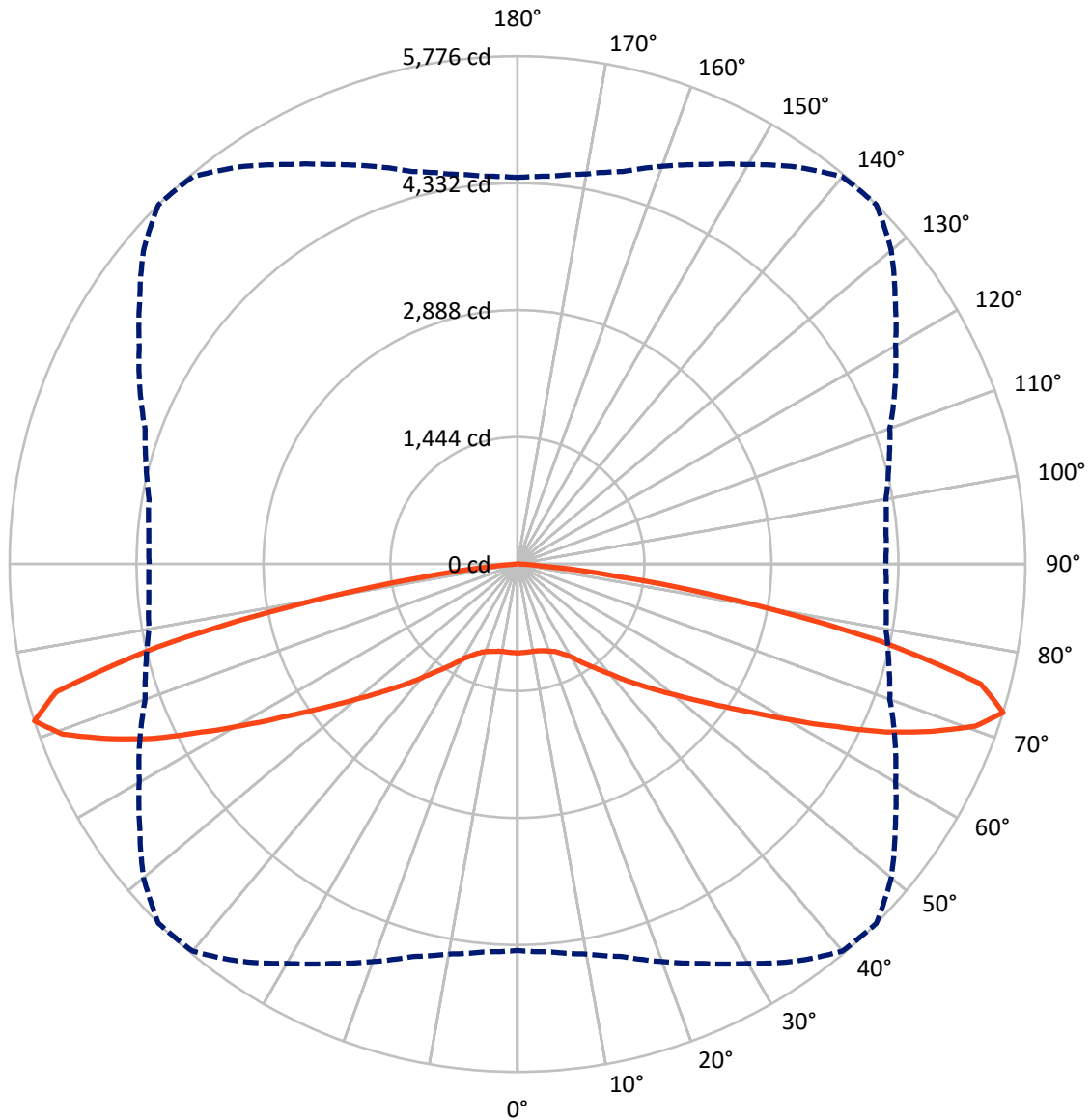


Based on 20 foot mounting height. Maximum calculated value = 2.5 fc
 Type V - Short - Semi-Cutoff

REPORT NUMBER: P195980

CATALOG NUMBER: NAV-AF-02-D-UNV-5WQ-1200

Luminous Intensity Polar Plot



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

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CATALOG NUMBER: NAV-AF-02-D-UNV-5WQ-1200

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	7110.0	0.0	7110.0
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	7110.0	0.0	7110.0
	% Fixture	50.0	0.0	50.0
Total	Lumens	14220.1	0.0	14220.1
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	96.5	0.7
10°-20°	292.0	2.1
20°-30°	527.2	3.7
30°-40°	899.2	6.3
40°-50°	1531.0	10.8
50°-60°	2463.9	17.3
60°-70°	4097.5	28.8
70°-80°	3963.9	27.9
80°-90°	348.9	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°	14220.1	100.0
0°-180°	14220.1	100.0



REPORT NUMBER: P195980

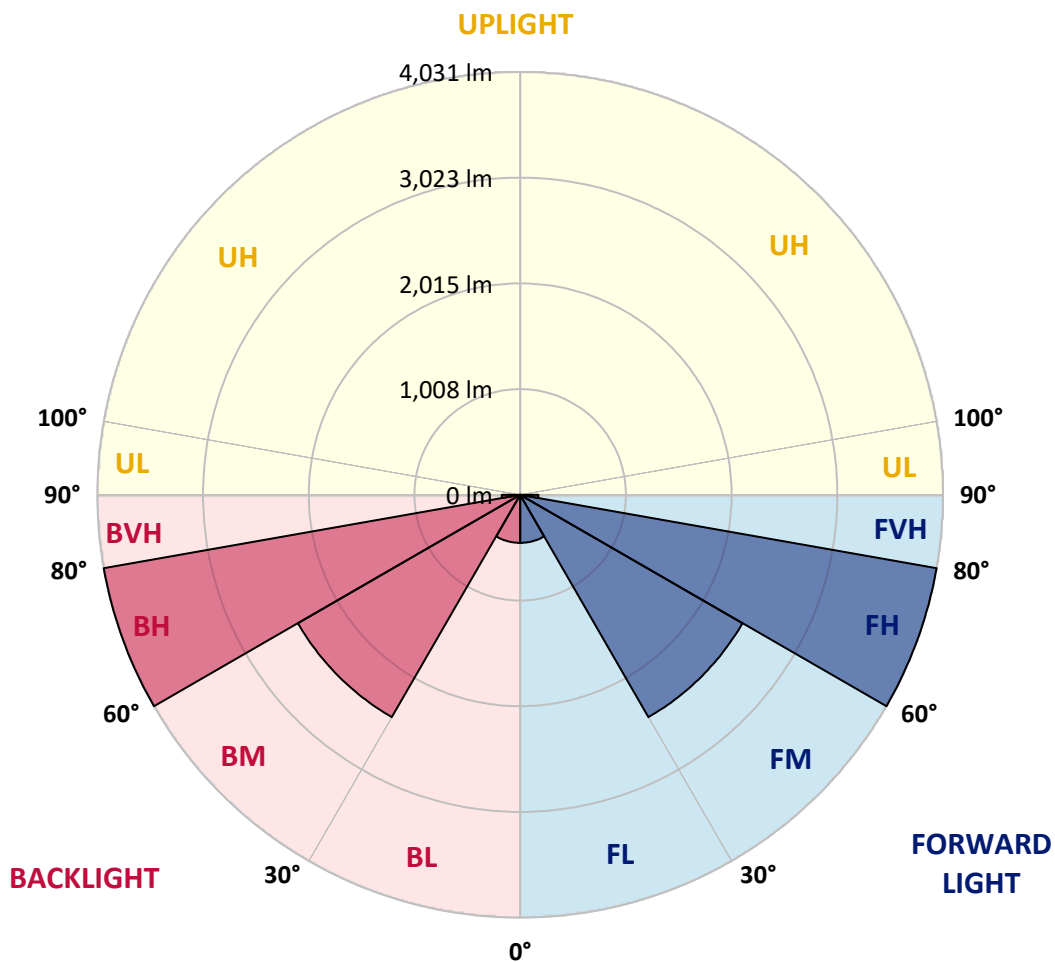
CATALOG NUMBER: NAV-AF-02-D-UNV-5WQ-1200

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	457.9	3.2			
FM	(30°-60°)	2447.1	17.2			
FH	(60°-80°)	4030.7	28.3			G2/5000
FVH	(80°-90°)	174.4	1.2			G2/225
BL	(0°-30°)	457.9	3.2	B1/500		
BM	(30°-60°)	2447.1	17.2	B2/2500		
BH	(60°-80°)	4030.7	28.3	B4/5000		G2/5000
BVH	(80°-90°)	174.4	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





REPORT NUMBER: P195980

CATALOG NUMBER: NAV-AF-02-D-UNV-5WQ-1200

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1011.0	1011.0	1011.0	1011.0	1011.0	1011.0	1011.0	1011.0	1011.0	1011.0	1011.0
2.5°	1018.9	1018.9	1019.7	1018.9	1017.0	1016.2	1013.5	1011.8	1010.1	1009.1	1007.4
5°	1019.7	1019.7	1020.6	1019.7	1017.9	1016.2	1014.5	1011.8	1010.1	1008.3	1007.4
7.5°	1023.2	1024.1	1024.9	1024.1	1020.6	1018.9	1016.2	1013.5	1010.1	1008.3	1006.6
10°	1030.2	1030.2	1030.2	1029.3	1026.7	1023.2	1019.7	1017.0	1012.7	1008.3	1005.7
12.5°	1035.4	1036.4	1036.4	1034.6	1031.0	1026.7	1023.2	1020.6	1017.0	1013.5	1011.0
15°	1043.3	1043.3	1042.5	1038.9	1033.7	1030.2	1028.5	1027.6	1026.7	1024.9	1022.3
17.5°	1059.1	1058.2	1055.6	1050.4	1044.2	1041.6	1039.8	1039.8	1039.8	1038.9	1037.2
20°	1081.9	1081.9	1078.3	1069.6	1064.4	1061.7	1059.1	1059.1	1059.1	1056.4	1053.8
22.5°	1118.6	1119.5	1114.2	1103.8	1096.7	1091.5	1088.0	1085.4	1082.7	1081.0	1076.6
25°	1168.5	1167.6	1161.5	1148.4	1143.1	1137.8	1130.9	1126.5	1123.0	1120.3	1115.1
27.5°	1221.0	1220.2	1213.1	1201.8	1198.3	1190.4	1185.1	1179.0	1174.7	1170.3	1164.9
30°	1288.4	1284.0	1278.8	1270.0	1268.3	1262.1	1255.2	1246.4	1239.4	1232.3	1226.2
32.5°	1348.8	1348.8	1340.9	1336.6	1340.1	1337.4	1338.3	1333.0	1328.7	1326.1	1319.9
35°	1432.8	1432.8	1429.3	1424.0	1425.0	1418.8	1417.9	1418.8	1422.3	1422.3	1415.4
37.5°	1544.9	1546.6	1535.2	1533.5	1529.1	1520.3	1516.0	1517.8	1525.6	1529.9	1520.3
40°	1684.0	1687.6	1684.0	1672.6	1667.4	1652.5	1643.8	1643.8	1649.9	1654.2	1650.7
42.5°	1821.5	1827.6	1821.5	1812.7	1808.3	1796.9	1792.5	1796.1	1804.0	1809.2	1804.0
45°	1974.6	1979.0	1971.1	1960.6	1955.4	1949.2	1946.6	1949.2	1958.0	1963.2	1961.5
47.5°	2125.2	2131.3	2121.7	2117.3	2117.3	2111.2	2118.1	2125.2	2133.1	2145.3	2140.0
50°	2272.2	2280.1	2273.9	2274.8	2281.8	2293.3	2306.3	2320.4	2334.4	2347.5	2349.2
52.5°	2403.5	2415.7	2416.6	2432.4	2454.3	2471.8	2508.5	2539.2	2572.4	2583.8	2578.6
55°	2541.8	2558.4	2580.3	2604.8	2639.8	2675.7	2737.8	2793.0	2836.7	2863.9	2859.6
57.5°	2739.6	2756.2	2778.9	2819.3	2871.7	2920.7	3005.6	3091.5	3158.0	3199.1	3179.0
60°	2996.0	3013.5	3043.3	3086.2	3154.5	3221.0	3337.4	3460.8	3564.1	3611.3	3574.6
62.5°	3335.6	3352.3	3371.5	3428.4	3504.6	3590.4	3736.5	3895.0	4026.2	4071.8	4020.1
65°	3819.7	3839.9	3846.0	3892.3	3966.7	4046.4	4203.9	4382.5	4532.2	4606.6	4503.2
67.5°	4364.9	4372.8	4397.4	4451.7	4527.8	4599.6	4723.9	4892.8	5036.3	5077.4	4967.1
70°	4684.5	4700.3	4743.1	4818.4	4909.3	5022.3	5157.9	5340.0	5502.9	5522.1	5382.1
72.5°	4395.6	4428.0	4504.2	4621.4	4812.3	5012.7	5246.4	5515.0	5748.8	5775.9	5550.9
75°	3525.6	3562.3	3653.4	3782.1	4007.8	4305.5	4643.3	5046.8	5396.9	5441.6	5144.0
77.5°	1879.2	1924.7	2056.8	2230.2	2552.3	2946.2	3353.1	3813.6	4111.1	4211.8	3997.4
80°	473.5	498.1	561.9	663.5	881.4	1199.1	1550.1	2045.5	2414.9	2571.6	2414.9
82.5°	183.8	202.2	219.7	231.9	253.0	296.8	409.6	667.8	899.8	1108.1	959.3
85°	70.9	75.3	108.5	123.4	123.4	135.6	155.8	183.8	227.6	248.6	208.3
87.5°	28.0	30.6	37.6	57.8	59.5	52.5	56.1	63.0	48.2	40.3	45.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P195980

CATALOG NUMBER: NAV-AF-02-D-UNV-5WQ-1200

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1011.0	1011.0	1011.0	1011.0	1011.0	1011.0	1011.0	1011.0
2.5°	1006.6	1005.7	1003.9	1004.8	1003.9	1003.9	1003.9	1003.9
5°	1005.7	1005.7	1003.9	1003.9	1003.9	1004.8	1003.9	1003.9
7.5°	1004.8	1003.9	1002.2	1001.3	1001.3	1000.4	1000.4	1000.4
10°	1003.1	1001.3	999.5	998.7	998.7	997.0	997.0	997.0
12.5°	1007.4	1004.8	1003.1	1002.2	1002.2	1002.2	1003.1	1003.1
15°	1019.7	1014.5	1011.8	1011.0	1011.8	1013.5	1014.5	1015.3
17.5°	1032.8	1027.6	1023.2	1021.4	1022.3	1024.9	1027.6	1029.3
20°	1049.4	1045.0	1039.8	1038.1	1038.1	1041.6	1043.3	1046.0
22.5°	1073.1	1069.6	1065.2	1062.5	1060.8	1065.2	1067.9	1069.6
25°	1110.7	1107.2	1103.8	1101.1	1100.2	1104.6	1106.3	1107.2
27.5°	1160.6	1157.1	1155.3	1154.5	1151.8	1153.6	1156.2	1155.3
30°	1225.4	1228.1	1225.4	1225.4	1221.0	1222.7	1221.0	1219.3
32.5°	1312.0	1309.4	1301.5	1296.3	1290.1	1290.1	1287.5	1284.9
35°	1398.7	1389.9	1385.6	1388.1	1385.6	1387.3	1382.9	1378.5
37.5°	1501.1	1495.9	1494.9	1502.8	1501.1	1502.8	1502.8	1496.7
40°	1636.7	1633.2	1639.4	1652.5	1657.8	1656.9	1658.6	1650.7
42.5°	1792.5	1786.4	1789.0	1800.4	1806.5	1808.3	1807.5	1800.4
45°	1948.3	1950.2	1950.2	1962.3	1968.5	1971.9	1965.9	1963.2
47.5°	2124.3	2126.9	2120.8	2128.7	2130.4	2136.5	2131.3	2126.9
50°	2327.3	2317.7	2303.7	2306.3	2306.3	2304.6	2298.5	2293.3
52.5°	2554.0	2532.1	2505.9	2497.1	2487.5	2477.9	2465.6	2456.0
55°	2812.3	2774.7	2727.4	2705.5	2687.1	2665.2	2637.2	2627.6
57.5°	3111.6	3046.9	2983.8	2944.5	2897.1	2868.3	2832.3	2830.6
60°	3467.0	3379.4	3268.2	3209.6	3162.4	3128.2	3101.1	3090.5
62.5°	3877.5	3726.9	3607.0	3544.0	3488.9	3467.8	3433.7	3438.0
65°	4298.4	4145.3	4028.9	3978.2	3926.5	3912.5	3881.0	3892.3
67.5°	4754.5	4628.4	4500.7	4453.4	4406.2	4392.1	4359.7	4369.3
70°	5163.2	5003.0	4857.8	4765.0	4684.5	4619.6	4578.5	4562.0
72.5°	5244.7	4967.1	4738.7	4506.8	4372.8	4255.6	4207.4	4189.1
75°	4712.4	4281.9	3956.3	3684.1	3533.5	3362.7	3344.4	3319.1
77.5°	3665.6	3175.4	2781.6	2431.6	2229.3	2021.0	1949.2	1894.9
80°	2186.5	1680.5	1302.4	912.9	744.8	599.6	563.6	526.0
82.5°	782.5	501.6	337.9	263.4	235.5	217.1	203.1	184.6
85°	189.0	159.3	150.6	136.6	134.8	114.7	81.4	72.6
87.5°	60.4	55.1	56.1	53.4	56.1	42.0	34.2	30.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)