

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: P195009

Luminaire Tested: **NAV-AF-03-D-UNV-5WQ-7060-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195009
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-7060-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 5700K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 15226 lumens
Efficiency: N/A
Efficacy: 122.8 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): 124
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

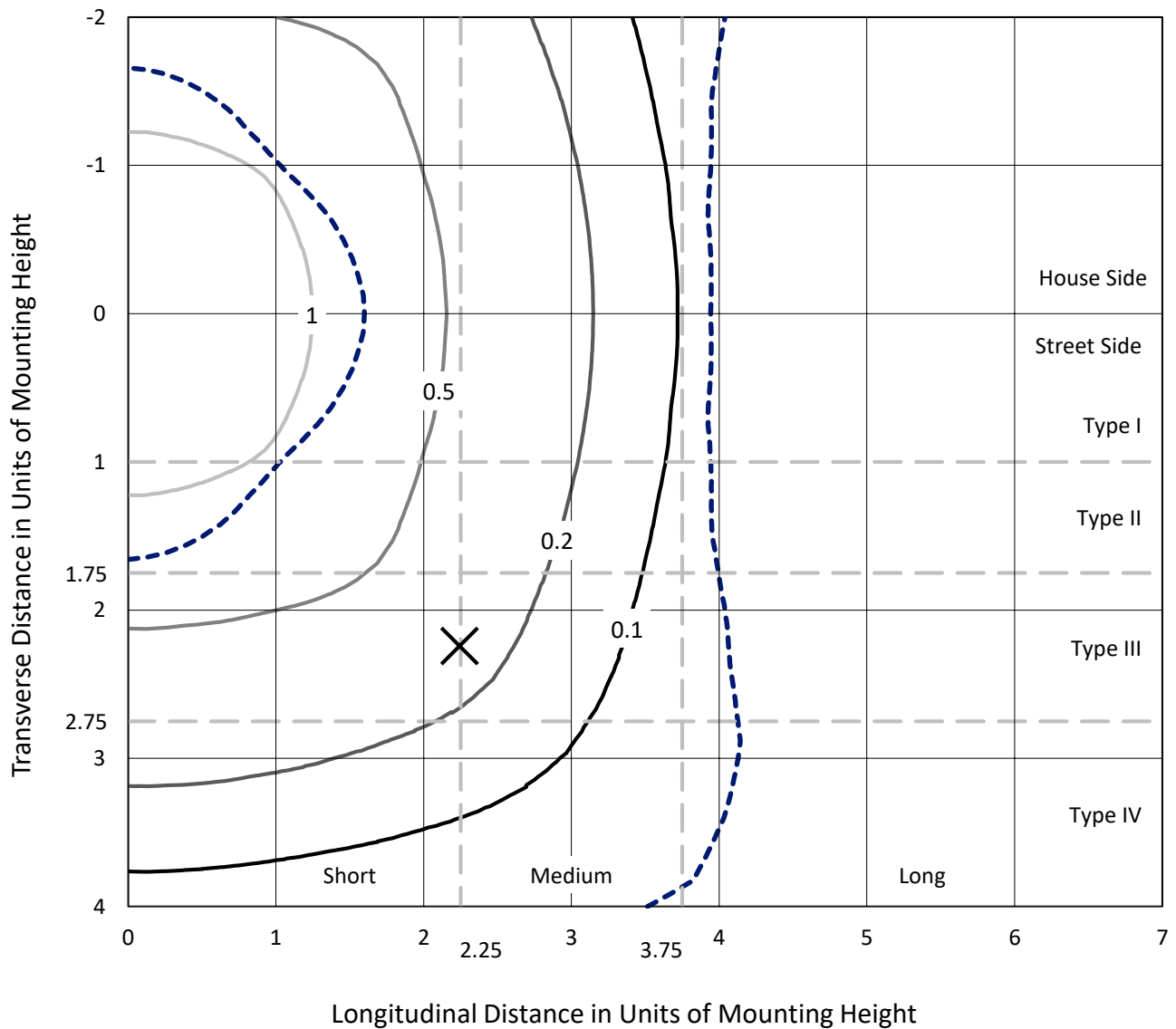


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Iso-Footcandle Lines of Horizontal Illumination

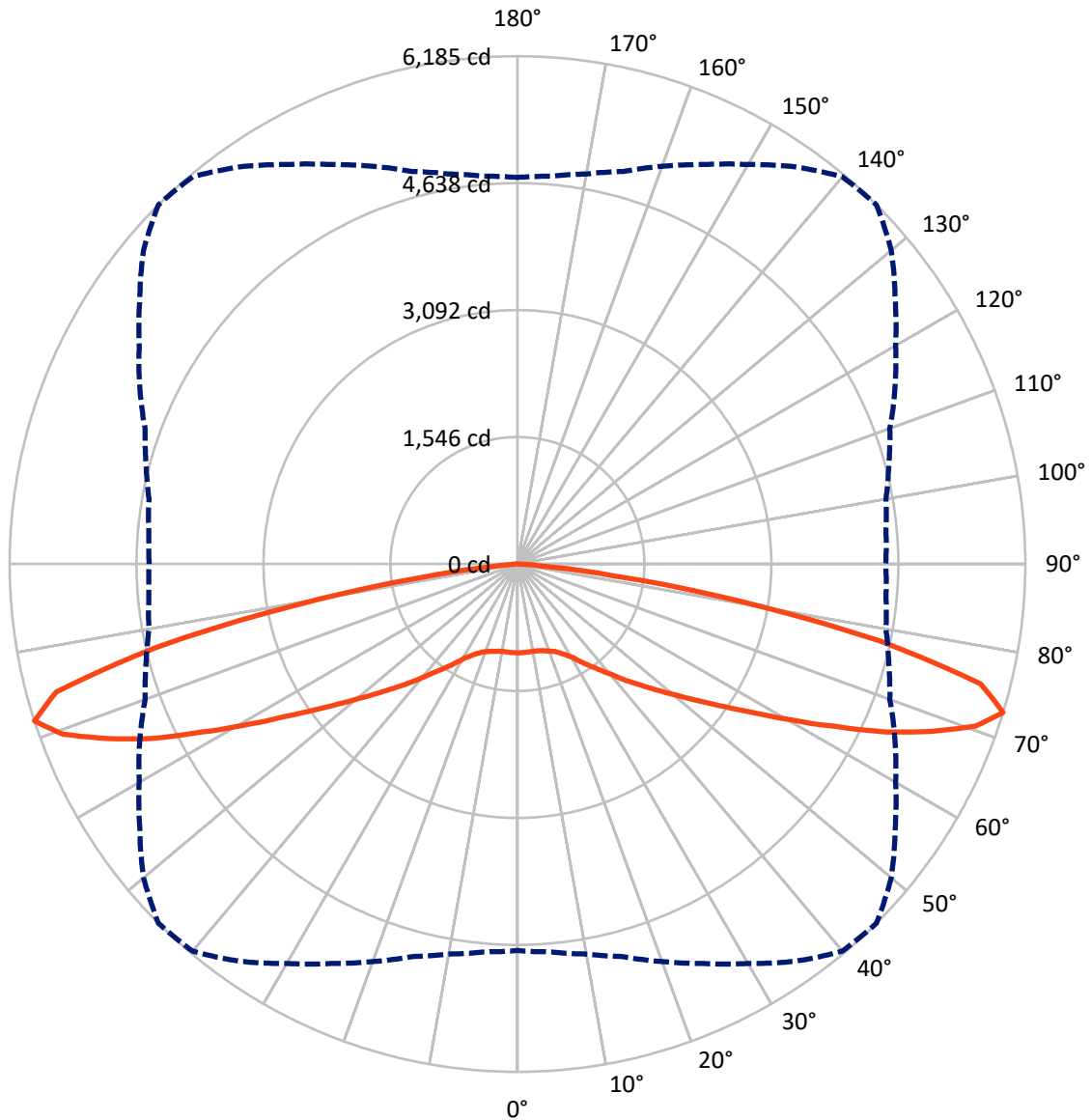
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.7 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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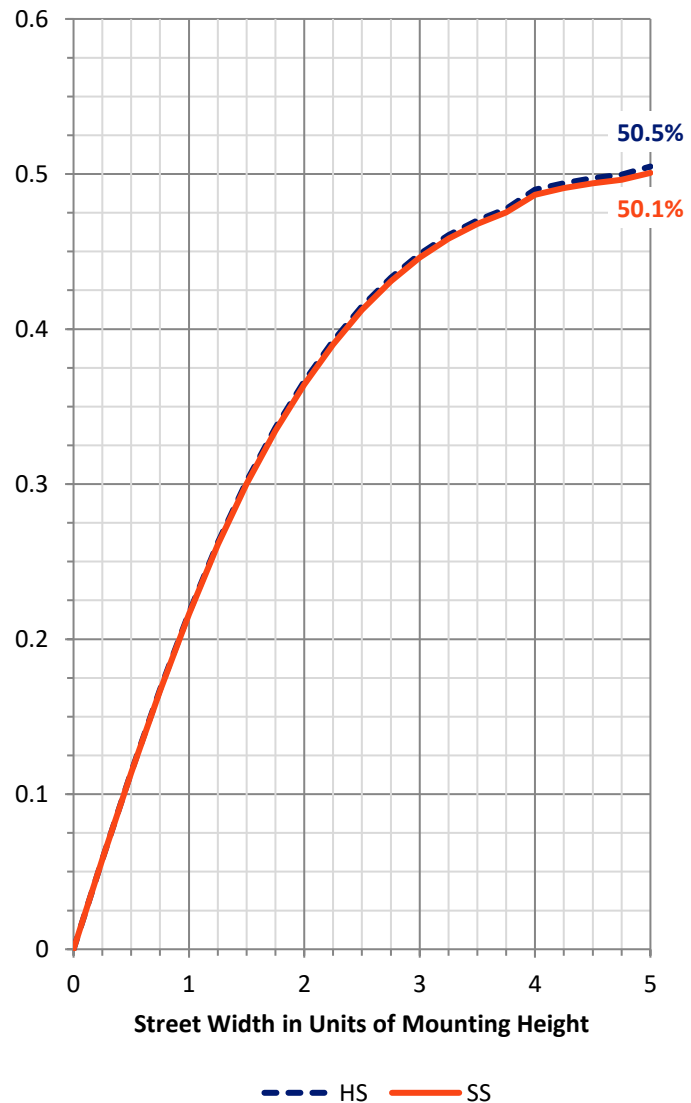
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	7613.0	0.0	7613.0
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	7613.0	0.0	7613.0
	% Fixture	50.0	0.0	50.0
Total	Lumens	15226.0	0.0	15226.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	103.3	0.7
10°-20°	312.7	2.1
20°-30°	564.5	3.7
30°-40°	962.9	6.3
40°-50°	1639.3	10.8
50°-60°	2638.2	17.3
60°-70°	4387.4	28.8
70°-80°	4244.3	27.9
80°-90°	373.6	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°	15226.0	100.0
0°-180°	15226.0	100.0



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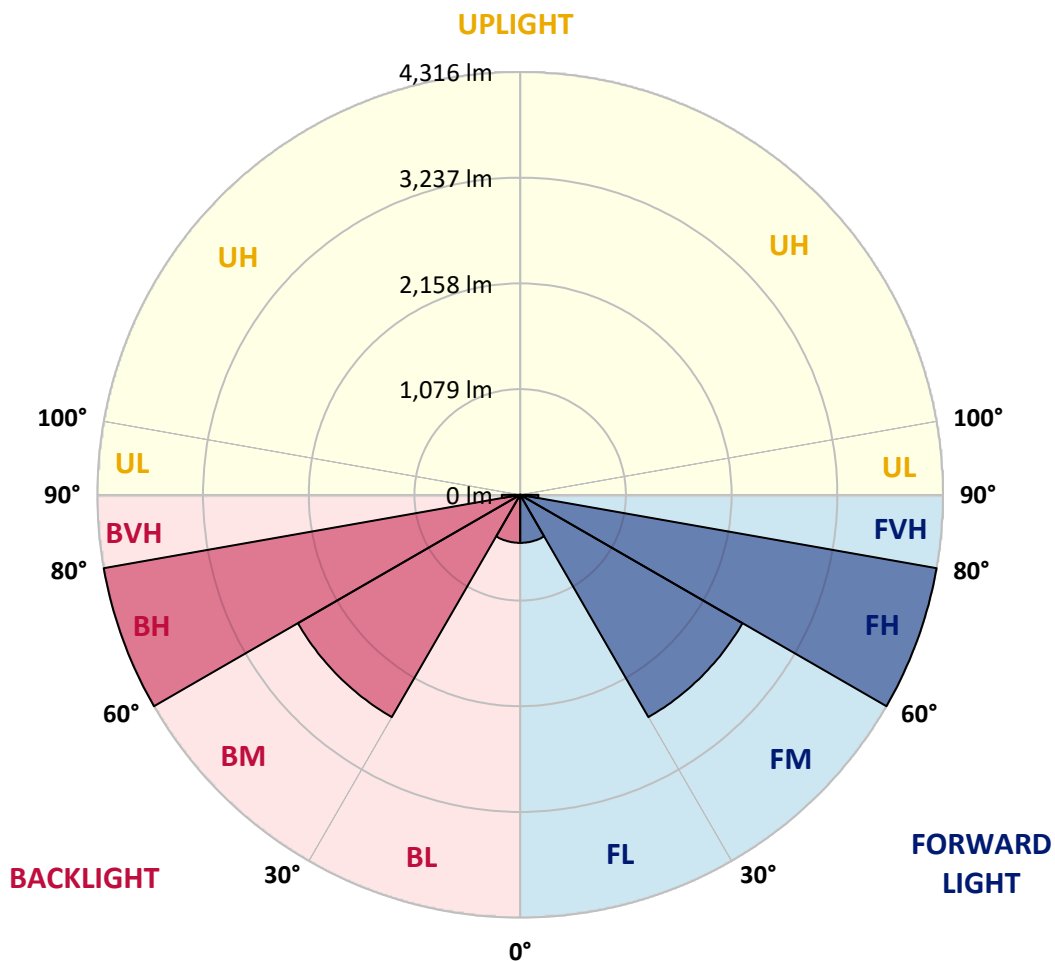
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	490.2	3.2			
FM	(30°-60°)	2620.2	17.2			
FH	(60°-80°)	4315.8	28.3			G2/5000
FVH	(80°-90°)	186.8	1.2			G2/225
BL	(0°-30°)	490.2	3.2	B1/500		
BM	(30°-60°)	2620.2	17.2	B3/5000		
BH	(60°-80°)	4315.8	28.3	B4/5000		G2/5000
BVH	(80°-90°)	186.8	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°	1082.5	1082.5	1082.5	1082.5	1082.5	1082.5	1082.5	1082.5	1082.5	1082.5	1082.5
2.5°	1090.9	1090.9	1091.8	1090.9	1089.0	1088.1	1085.3	1083.4	1081.5	1080.6	1078.7
5°	1091.8	1091.8	1092.8	1091.8	1090.0	1088.1	1086.2	1083.4	1081.5	1079.6	1078.7
7.5°	1095.6	1096.5	1097.4	1096.5	1092.8	1090.9	1088.1	1085.3	1081.5	1079.6	1077.8
10°	1103.1	1103.1	1103.1	1102.1	1099.3	1095.6	1091.8	1089.0	1084.3	1079.6	1076.8
12.5°	1108.7	1109.6	1109.6	1107.8	1104.0	1099.3	1095.6	1092.8	1089.0	1085.3	1082.5
15°	1117.1	1117.1	1116.2	1112.4	1106.8	1103.1	1101.2	1100.3	1099.3	1097.4	1094.6
17.5°	1134.0	1133.1	1130.3	1124.6	1118.1	1115.3	1113.4	1113.4	1113.4	1112.4	1110.6
20°	1158.4	1158.4	1154.6	1145.2	1139.6	1136.8	1134.0	1134.0	1134.0	1131.2	1128.4
22.5°	1197.7	1198.7	1193.0	1181.8	1174.3	1168.7	1164.9	1162.1	1159.3	1157.4	1152.7
25°	1251.1	1250.2	1243.7	1229.6	1224.0	1218.3	1210.8	1206.2	1202.4	1199.6	1194.0
27.5°	1307.4	1306.4	1298.9	1286.8	1283.0	1274.6	1269.0	1262.4	1257.7	1253.0	1247.4
30°	1379.5	1374.9	1369.2	1359.9	1358.0	1351.4	1343.9	1334.6	1327.1	1319.6	1313.0
32.5°	1444.2	1444.2	1435.8	1431.1	1434.8	1432.0	1433.0	1427.3	1422.7	1419.8	1413.3
35°	1534.2	1534.2	1530.4	1524.8	1525.7	1519.2	1518.2	1519.2	1522.9	1522.9	1515.4
37.5°	1654.1	1656.0	1643.8	1642.0	1637.3	1627.9	1623.2	1625.1	1633.5	1638.2	1627.9
40°	1803.2	1806.9	1803.2	1791.0	1785.3	1769.4	1760.0	1760.0	1766.6	1771.3	1767.5
42.5°	1950.3	1956.9	1950.3	1940.9	1936.2	1924.1	1919.4	1923.1	1931.5	1937.2	1931.5
45°	2114.3	2119.0	2110.6	2099.3	2093.7	2087.1	2084.3	2087.1	2096.5	2102.1	2100.2
47.5°	2275.5	2282.1	2271.7	2267.1	2267.1	2260.5	2268.0	2275.5	2283.9	2297.1	2291.4
50°	2432.9	2441.4	2434.8	2435.8	2443.3	2455.4	2469.5	2484.5	2499.5	2513.5	2515.4
52.5°	2573.5	2586.6	2587.6	2604.5	2627.9	2646.6	2686.0	2718.8	2754.4	2766.6	2761.0
55°	2721.6	2739.4	2762.8	2789.1	2826.6	2865.0	2931.5	2990.6	3037.4	3066.5	3061.8
57.5°	2933.4	2951.2	2975.6	3018.7	3074.9	3127.4	3218.3	3310.2	3381.4	3425.4	3403.9
60°	3208.0	3226.7	3258.6	3304.5	3377.6	3448.9	3573.5	3705.6	3816.2	3866.8	3827.5
62.5°	3571.6	3589.4	3610.1	3671.0	3752.5	3844.4	4000.9	4170.5	4311.1	4359.8	4304.5
65°	4089.9	4111.5	4118.0	4167.7	4247.3	4332.6	4501.3	4692.5	4852.8	4932.4	4821.8
67.5°	4673.8	4682.2	4708.4	4766.5	4848.1	4924.9	5058.0	5238.9	5392.6	5436.6	5318.6
70°	5015.8	5032.7	5078.6	5159.2	5256.7	5377.6	5522.9	5717.8	5892.1	5912.7	5762.8
72.5°	4706.6	4741.2	4822.8	4948.4	5152.7	5367.3	5617.5	5905.2	6155.5	6184.5	5943.7
75°	3775.0	3814.4	3911.8	4049.6	4291.4	4610.0	4971.8	5403.8	5778.7	5826.5	5507.9
77.5°	2012.1	2060.9	2202.4	2388.0	2732.8	3154.6	3590.4	4083.3	4402.0	4509.8	4280.1
80°	507.0	533.3	601.7	710.4	943.8	1284.0	1659.8	2190.2	2585.7	2753.5	2585.7
82.5°	196.8	216.5	235.2	248.4	270.8	317.7	438.6	715.1	963.4	1186.5	1027.2
85°	75.9	80.6	116.2	132.1	132.1	145.3	166.8	196.8	243.7	266.2	223.1
87.5°	30.0	32.8	40.3	61.9	63.7	56.2	60.0	67.5	51.5	43.1	48.7
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°	1082.5	1082.5	1082.5	1082.5	1082.5	1082.5	1082.5	1082.5
2.5°	1077.8	1076.8	1075.0	1075.9	1075.0	1075.0	1075.0	1075.0
5°	1076.8	1076.8	1075.0	1075.0	1075.0	1075.9	1075.0	1075.0
7.5°	1075.9	1075.0	1073.1	1072.1	1072.1	1071.2	1071.2	1071.2
10°	1074.0	1072.1	1070.3	1069.3	1069.3	1067.5	1067.5	1067.5
12.5°	1078.7	1075.9	1074.0	1073.1	1073.1	1073.1	1074.0	1074.0
15°	1091.8	1086.2	1083.4	1082.5	1083.4	1085.3	1086.2	1087.1
17.5°	1105.9	1100.3	1095.6	1093.7	1094.6	1097.4	1100.3	1102.1
20°	1123.7	1119.0	1113.4	1111.5	1111.5	1115.3	1117.1	1119.9
22.5°	1149.0	1145.2	1140.6	1137.7	1135.9	1140.6	1143.4	1145.2
25°	1189.3	1185.5	1181.8	1179.0	1178.0	1182.7	1184.6	1185.5
27.5°	1242.7	1239.0	1237.1	1236.2	1233.3	1235.2	1238.0	1237.1
30°	1312.1	1314.9	1312.1	1312.1	1307.4	1309.3	1307.4	1305.5
32.5°	1404.8	1402.0	1393.6	1388.0	1381.4	1381.4	1378.6	1375.8
35°	1497.6	1488.3	1483.6	1486.4	1483.6	1485.4	1480.8	1476.1
37.5°	1607.3	1601.7	1600.7	1609.2	1607.3	1609.2	1609.2	1602.6
40°	1752.5	1748.8	1755.4	1769.4	1775.0	1774.1	1776.0	1767.5
42.5°	1919.4	1912.8	1915.6	1927.8	1934.4	1936.2	1935.3	1927.8
45°	2086.2	2088.1	2088.1	2101.2	2107.7	2111.5	2104.9	2102.1
47.5°	2274.6	2277.4	2270.8	2279.2	2281.1	2287.7	2282.1	2277.4
50°	2492.0	2481.7	2466.7	2469.5	2469.5	2467.6	2461.1	2455.4
52.5°	2734.7	2711.3	2683.2	2673.8	2663.5	2653.2	2640.1	2629.8
55°	3011.2	2970.9	2920.3	2896.9	2877.2	2853.7	2823.8	2813.4
57.5°	3331.7	3262.4	3194.9	3152.7	3102.1	3071.2	3032.7	3030.9
60°	3712.2	3618.5	3499.5	3436.7	3386.1	3349.5	3320.5	3309.2
62.5°	4151.8	3990.6	3862.2	3794.7	3735.6	3713.1	3676.6	3681.3
65°	4602.5	4438.5	4313.9	4259.5	4204.2	4189.2	4155.5	4167.7
67.5°	5090.8	4955.9	4819.0	4768.4	4717.8	4702.8	4668.1	4678.5
70°	5528.5	5357.0	5201.4	5102.1	5015.8	4946.5	4902.4	4884.6
72.5°	5615.6	5318.6	5073.9	4825.6	4682.2	4556.6	4505.1	4485.4
75°	5045.8	4584.7	4236.1	3944.6	3783.4	3600.7	3581.0	3553.8
77.5°	3925.0	3400.1	2978.4	2603.5	2387.0	2164.0	2087.1	2029.0
80°	2341.1	1799.4	1394.5	977.5	797.5	642.0	603.6	563.3
82.5°	837.8	537.0	361.8	282.1	252.1	232.4	217.4	197.7
85°	202.4	170.6	161.2	146.2	144.3	122.8	87.2	77.8
87.5°	64.7	59.0	60.0	57.2	60.0	45.0	36.6	32.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)