

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: P195969

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

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P195969  
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-800  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(3) 70 CRI, 4000K, 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: 15575.5 lumens  
Efficiency: N/A  
Efficacy: 125.6 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

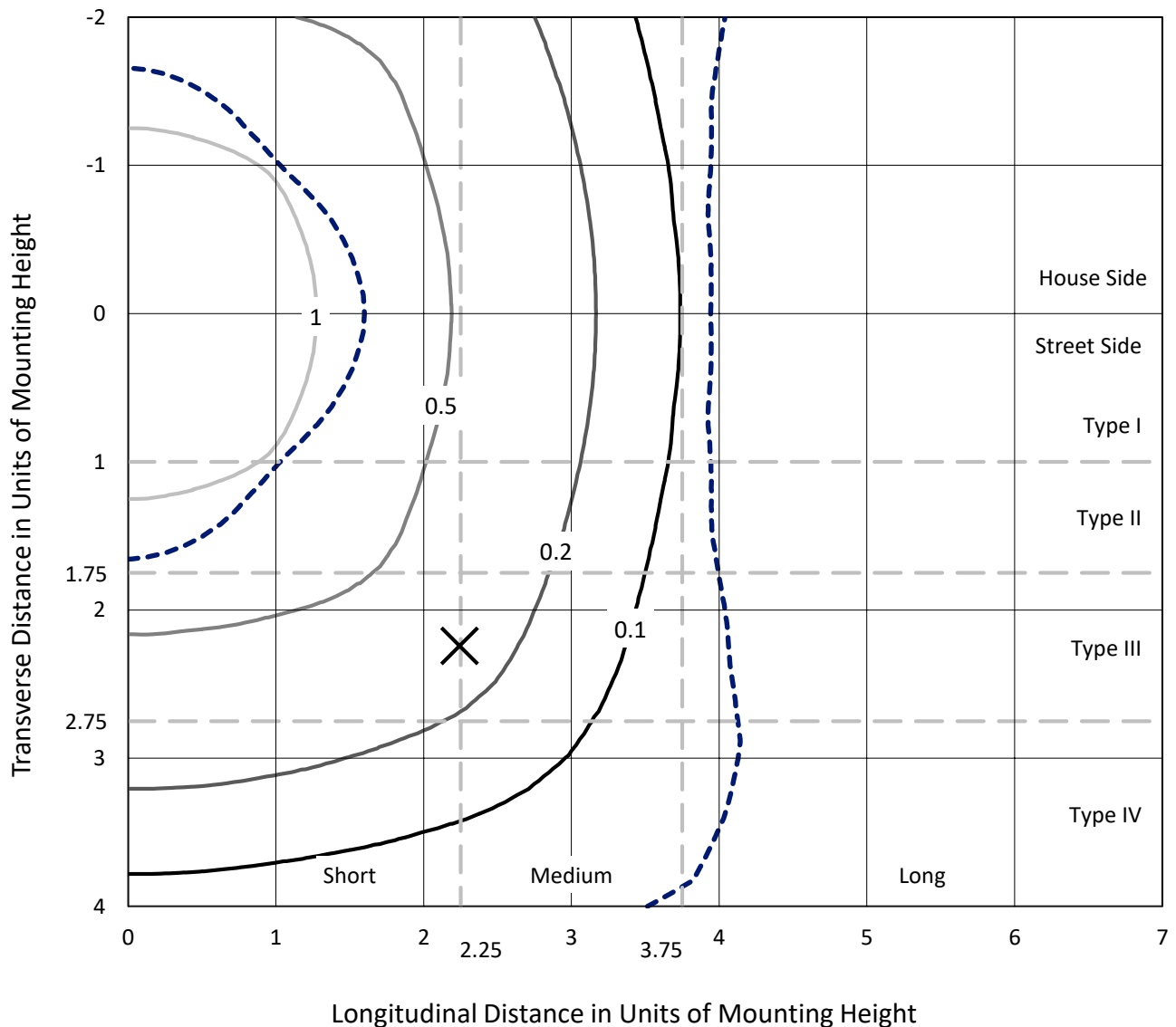


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### Iso-Footcandle Lines of Horizontal Illumination

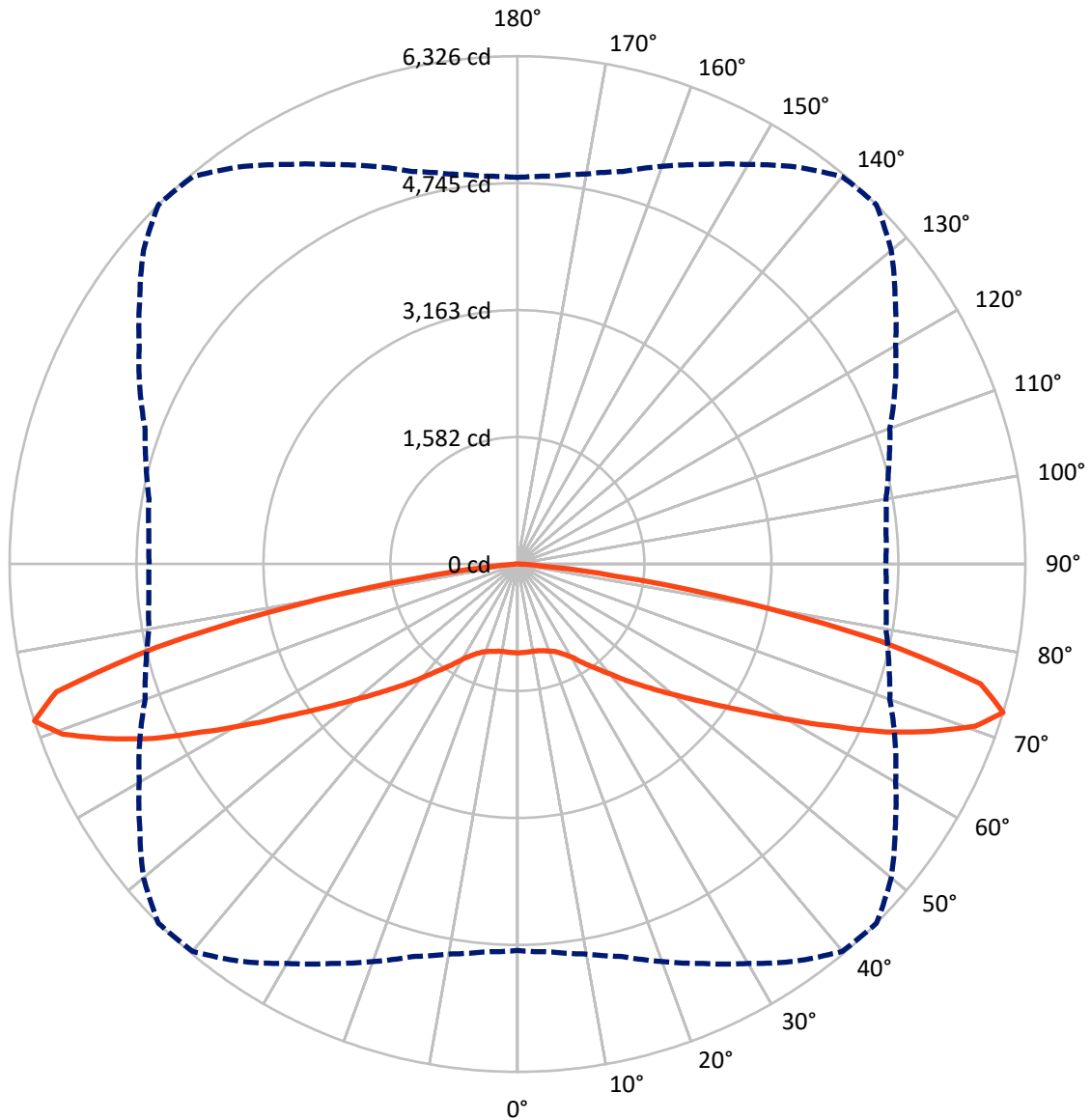
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.8 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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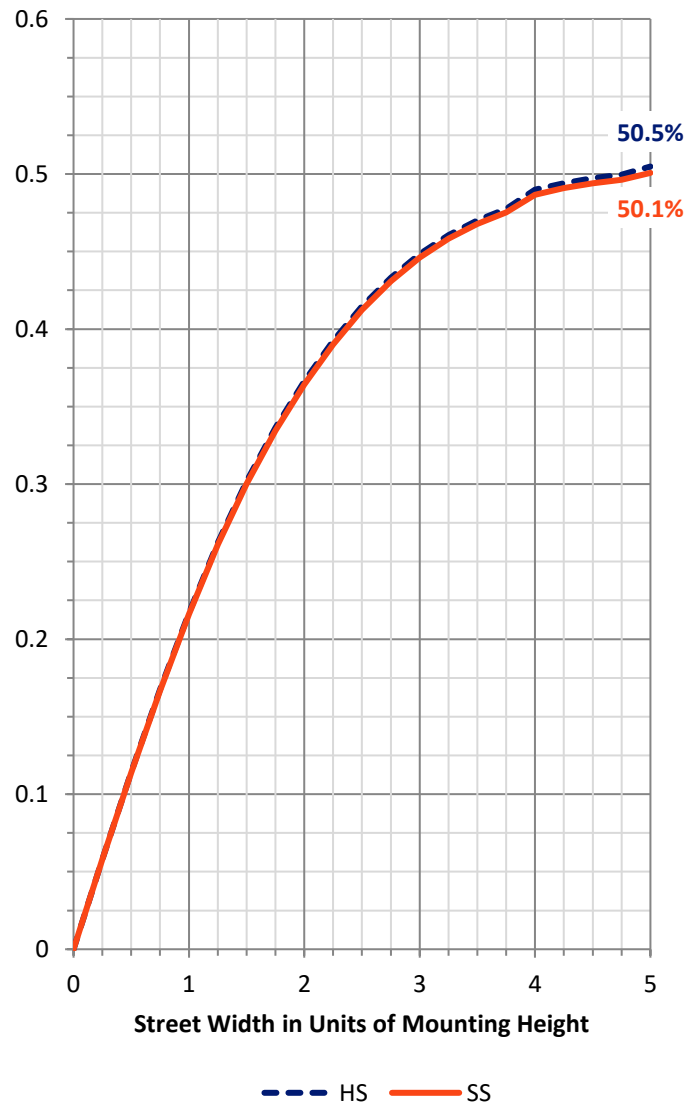
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	7787.7	0.0	7787.7
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	7787.7	0.0	7787.7
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	15575.5	0.0	15575.5
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	105.7	0.7
10°-20°	319.9	2.1
20°-30°	577.4	3.7
30°-40°	985.0	6.3
40°-50°	1676.9	10.8
50°-60°	2698.7	17.3
60°-70°	4488.1	28.8
70°-80°	4341.7	27.9
80°-90°	382.1	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°	15575.5	100.0
0°-180°	15575.5	100.0



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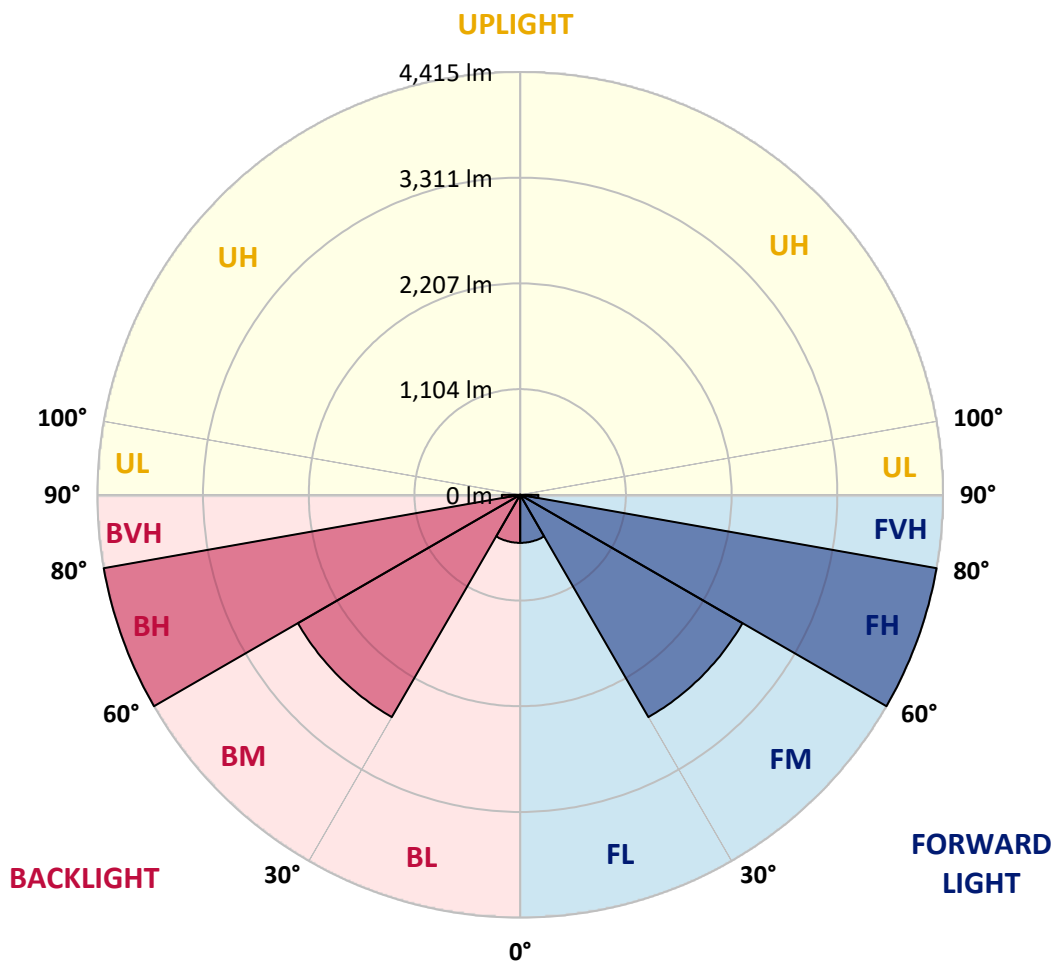
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	501.5	3.2			
FM	(30°-60°)	2680.3	17.2			
FH	(60°-80°)	4414.9	28.3			G2/5000
FVH	(80°-90°)	191.1	1.2			G2/225
BL	(0°-30°)	501.5	3.2	B2/1000		
BM	(30°-60°)	2680.3	17.2	B3/5000		
BH	(60°-80°)	4414.9	28.3	B4/5000		G2/5000
BVH	(80°-90°)	191.1	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°	1107.3	1107.3	1107.3	1107.3	1107.3	1107.3	1107.3	1107.3	1107.3	1107.3	1107.3
2.5°	1115.9	1115.9	1116.9	1115.9	1114.0	1113.1	1110.2	1108.3	1106.3	1105.4	1103.5
5°	1116.9	1116.9	1117.9	1116.9	1115.0	1113.1	1111.1	1108.3	1106.3	1104.4	1103.5
7.5°	1120.7	1121.7	1122.6	1121.7	1117.9	1115.9	1113.1	1110.2	1106.3	1104.4	1102.5
10°	1128.4	1128.4	1128.4	1127.4	1124.5	1120.7	1116.9	1114.0	1109.2	1104.4	1101.5
12.5°	1134.1	1135.1	1135.1	1133.2	1129.3	1124.5	1120.7	1117.9	1114.0	1110.2	1107.3
15°	1142.7	1142.7	1141.8	1137.9	1132.2	1128.4	1126.5	1125.6	1124.5	1122.6	1119.7
17.5°	1160.0	1159.1	1156.2	1150.4	1143.8	1140.9	1139.0	1139.0	1139.0	1137.9	1136.1
20°	1185.0	1185.0	1181.1	1171.5	1165.8	1162.9	1160.0	1160.0	1160.0	1157.2	1154.3
22.5°	1225.2	1226.2	1220.4	1208.9	1201.3	1195.5	1191.6	1188.8	1185.9	1184.0	1179.2
25°	1279.8	1278.9	1272.2	1257.8	1252.1	1246.3	1238.6	1233.9	1230.0	1227.1	1221.4
27.5°	1337.4	1336.4	1328.7	1316.3	1312.4	1303.9	1298.1	1291.4	1286.6	1281.8	1276.0
30°	1411.2	1406.5	1400.6	1391.1	1389.2	1382.4	1374.7	1365.2	1357.6	1349.9	1343.1
32.5°	1477.3	1477.3	1468.8	1463.9	1467.7	1464.9	1465.9	1460.1	1455.4	1452.4	1445.7
35°	1569.4	1569.4	1565.5	1559.8	1560.7	1554.1	1553.0	1554.1	1557.9	1557.9	1550.2
37.5°	1692.1	1694.0	1681.5	1679.7	1674.9	1665.3	1660.5	1662.4	1671.0	1675.8	1665.3
40°	1844.6	1848.4	1844.6	1832.1	1826.3	1810.0	1800.4	1800.4	1807.1	1812.0	1808.1
42.5°	1995.1	2001.8	1995.1	1985.4	1980.6	1968.3	1963.5	1967.2	1975.8	1981.7	1975.8
45°	2162.8	2167.6	2159.0	2147.5	2141.8	2135.0	2132.1	2135.0	2144.6	2150.3	2148.4
47.5°	2327.7	2334.5	2323.8	2319.1	2319.1	2312.4	2320.1	2327.7	2336.3	2349.8	2344.0
50°	2488.7	2497.4	2490.7	2491.7	2499.4	2511.8	2526.2	2541.5	2556.9	2571.2	2573.1
52.5°	2632.6	2646.0	2647.0	2664.3	2688.2	2707.3	2747.6	2781.2	2817.6	2830.1	2824.4
55°	2784.1	2802.3	2826.2	2853.1	2891.5	2930.8	2998.8	3059.2	3107.1	3136.9	3132.1
57.5°	3000.7	3018.9	3043.9	3088.0	3145.5	3199.2	3292.2	3386.2	3459.0	3504.0	3482.0
60°	3281.6	3300.8	3333.4	3380.3	3455.1	3528.1	3655.5	3790.6	3903.8	3955.5	3915.3
62.5°	3653.6	3671.8	3693.0	3755.3	3838.6	3932.6	4092.7	4266.2	4410.0	4459.9	4403.3
65°	4183.8	4205.9	4212.5	4263.4	4344.8	4432.0	4604.6	4800.2	4964.2	5045.6	4932.5
67.5°	4781.1	4789.7	4816.5	4875.9	4959.4	5037.9	5174.1	5359.1	5516.4	5561.4	5440.7
70°	5130.9	5148.2	5195.2	5277.6	5377.3	5501.0	5649.7	5849.0	6027.3	6048.4	5895.1
72.5°	4814.6	4850.0	4933.5	5062.0	5271.0	5490.5	5746.4	6040.7	6296.8	6326.4	6080.1
75°	3861.6	3901.9	4001.6	4142.5	4389.9	4715.8	5085.9	5527.8	5911.3	5960.2	5634.3
77.5°	2058.3	2108.2	2252.9	2442.8	2795.5	3227.0	3672.8	4177.0	4503.0	4613.3	4378.3
80°	518.6	545.5	615.5	726.7	965.5	1313.5	1697.9	2240.5	2645.0	2816.7	2645.0
82.5°	201.3	221.5	240.6	254.1	277.0	325.0	448.7	731.5	985.5	1213.7	1050.8
85°	77.6	82.4	118.9	135.1	135.1	148.6	170.6	201.3	249.3	272.3	228.2
87.5°	30.7	33.6	41.2	63.3	65.2	57.5	61.4	69.0	52.7	44.1	49.8
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°	1107.3	1107.3	1107.3	1107.3	1107.3	1107.3	1107.3	1107.3
2.5°	1102.5	1101.5	1099.7	1100.6	1099.7	1099.7	1099.7	1099.7
5°	1101.5	1101.5	1099.7	1099.7	1099.7	1100.6	1099.7	1099.7
7.5°	1100.6	1099.7	1097.7	1096.7	1096.7	1095.8	1095.8	1095.8
10°	1098.6	1096.7	1094.9	1093.8	1093.8	1092.0	1092.0	1092.0
12.5°	1103.5	1100.6	1098.6	1097.7	1097.7	1097.7	1098.6	1098.6
15°	1116.9	1111.1	1108.3	1107.3	1108.3	1110.2	1111.1	1112.0
17.5°	1131.3	1125.6	1120.7	1118.8	1119.7	1122.6	1125.6	1127.4
20°	1149.5	1144.7	1139.0	1137.0	1137.0	1140.9	1142.7	1145.6
22.5°	1175.4	1171.5	1166.8	1163.8	1162.0	1166.8	1169.6	1171.5
25°	1216.6	1212.7	1208.9	1206.1	1205.0	1209.8	1211.8	1212.7
27.5°	1271.2	1267.4	1265.5	1264.6	1261.6	1263.5	1266.4	1265.5
30°	1342.2	1345.1	1342.2	1342.2	1337.4	1339.3	1337.4	1335.5
32.5°	1437.0	1434.2	1425.6	1419.9	1413.1	1413.1	1410.2	1407.4
35°	1532.0	1522.5	1517.6	1520.5	1517.6	1519.5	1514.8	1510.0
37.5°	1644.2	1638.5	1637.4	1646.1	1644.2	1646.1	1646.1	1639.4
40°	1792.7	1788.9	1795.7	1810.0	1815.7	1814.8	1816.8	1808.1
42.5°	1963.5	1956.7	1959.6	1972.0	1978.8	1980.6	1979.7	1972.0
45°	2134.1	2136.0	2136.0	2149.4	2156.1	2160.0	2153.2	2150.3
47.5°	2326.8	2329.7	2322.9	2331.5	2333.5	2340.2	2334.5	2329.7
50°	2549.2	2538.7	2523.3	2526.2	2526.2	2524.2	2517.6	2511.8
52.5°	2797.5	2773.5	2744.8	2735.2	2724.6	2714.1	2700.7	2690.2
55°	3080.3	3039.1	2987.3	2963.4	2943.2	2919.2	2888.6	2878.0
57.5°	3408.2	3337.3	3268.2	3225.1	3173.3	3141.7	3102.3	3100.5
60°	3797.4	3701.5	3579.8	3515.6	3463.8	3426.4	3396.7	3385.1
62.5°	4247.1	4082.2	3950.8	3881.8	3821.3	3798.3	3761.0	3765.8
65°	4708.1	4540.4	4412.9	4357.3	4300.7	4285.3	4250.9	4263.4
67.5°	5207.6	5069.6	4929.6	4877.8	4826.1	4810.7	4775.2	4785.9
70°	5655.4	5479.9	5320.8	5219.2	5130.9	5060.0	5014.9	4996.7
72.5°	5744.5	5440.7	5190.4	4936.4	4789.7	4661.2	4608.5	4588.3
75°	5161.6	4689.9	4333.3	4035.1	3870.2	3683.3	3663.2	3635.4
77.5°	4015.1	3478.1	3046.8	2663.3	2441.8	2213.7	2135.0	2075.6
80°	2394.8	1840.7	1426.5	999.9	815.8	656.7	617.5	576.2
82.5°	857.0	549.3	370.1	288.6	257.9	237.7	222.4	202.2
85°	207.0	174.5	164.9	149.6	147.6	125.6	89.2	79.6
87.5°	66.2	60.4	61.4	58.5	61.4	46.0	37.4	33.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)