

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: P196940

Luminaire Tested: **NAV-AF-02-D-UNV-5WQ-8030-1200**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196940  
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-8030-1200  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(2) 80 CRI, 3000K, 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: 11343 lumens  
Efficiency: N/A  
Efficacy: 87.9 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

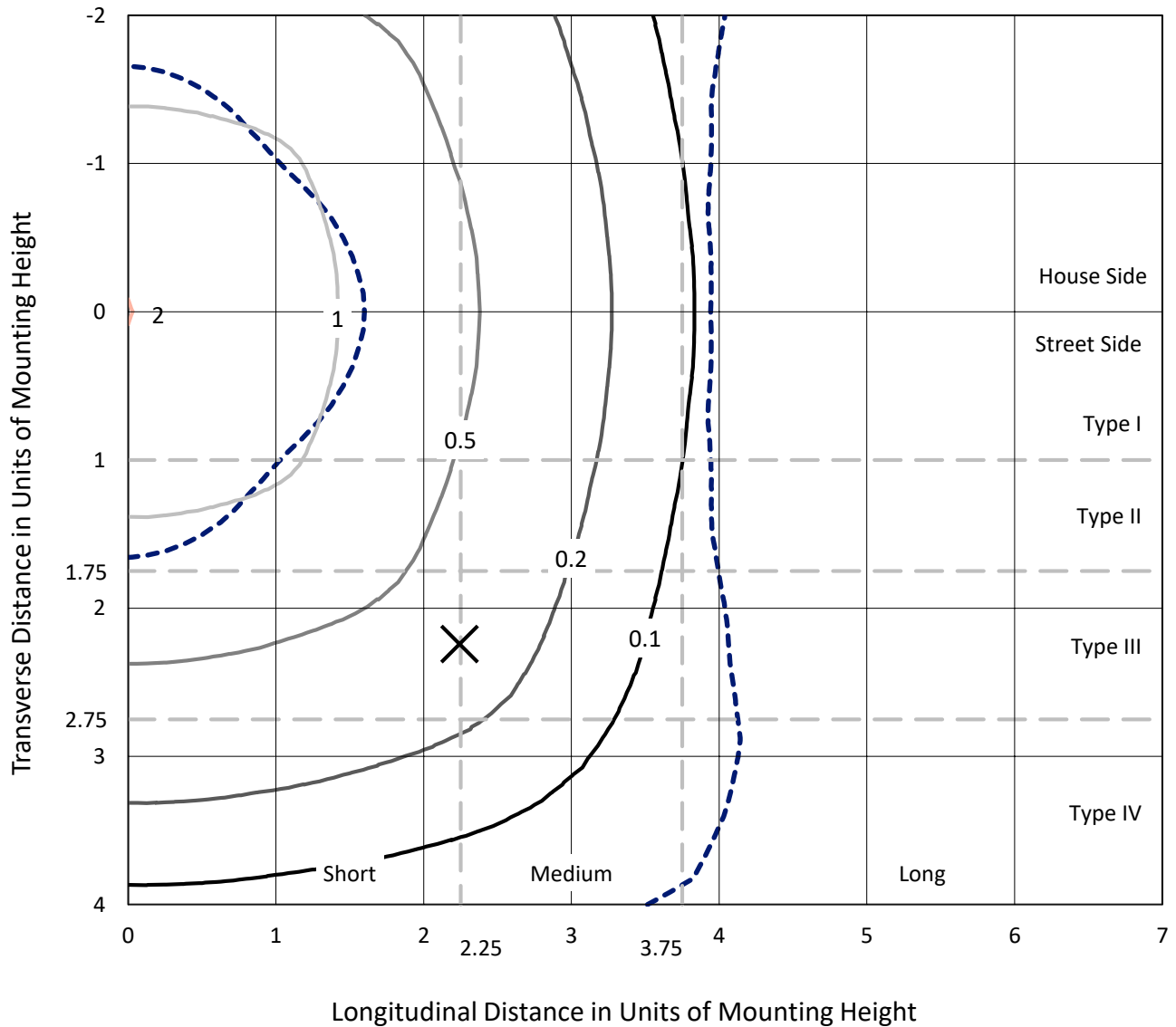
Input Watts (W): 129  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

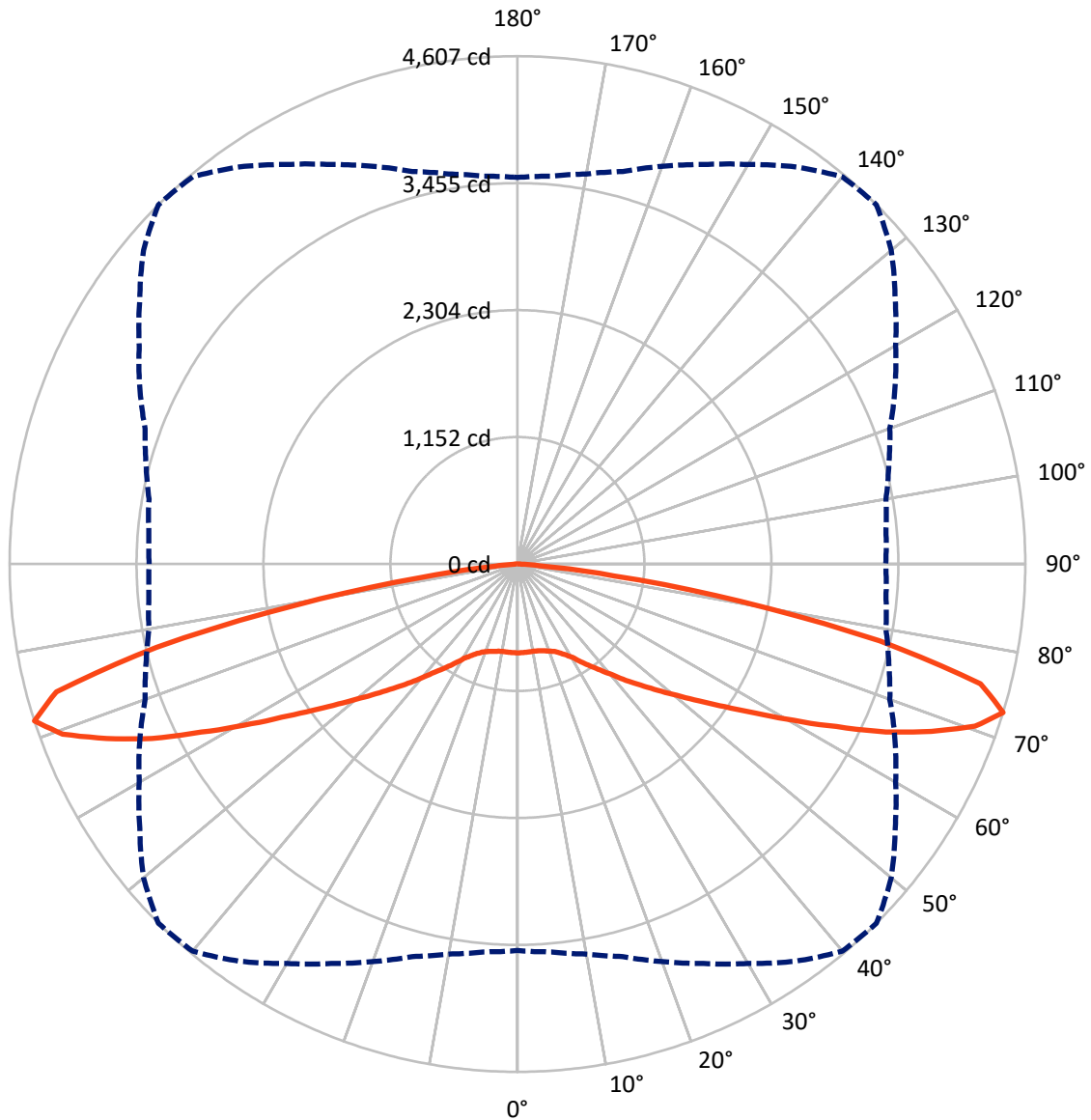
× Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 2 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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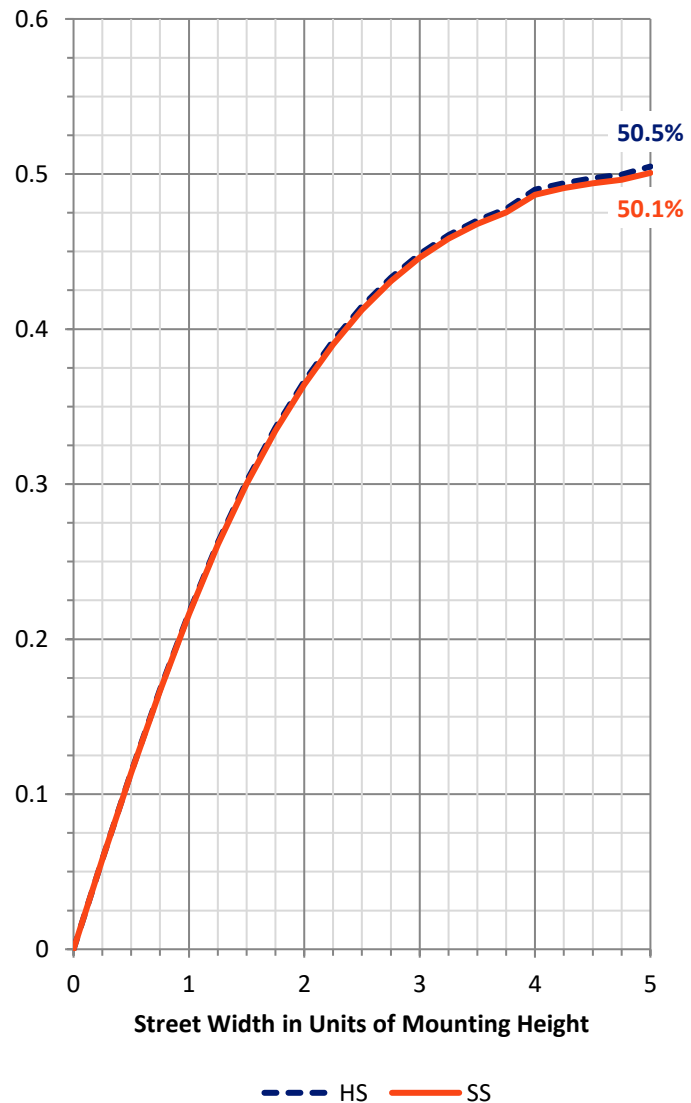
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	5671.5	0.0	5671.5
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	5671.5	0.0	5671.5
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	11343.0	0.0	11343.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	77.0	0.7
10°-20°	232.9	2.1
20°-30°	420.5	3.7
30°-40°	717.3	6.3
40°-50°	1221.2	10.8
50°-60°	1965.4	17.3
60°-70°	3268.5	28.8
70°-80°	3161.9	27.9
80°-90°	278.3	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°	11343.0	100.0
0°-180°	11343.0	100.0



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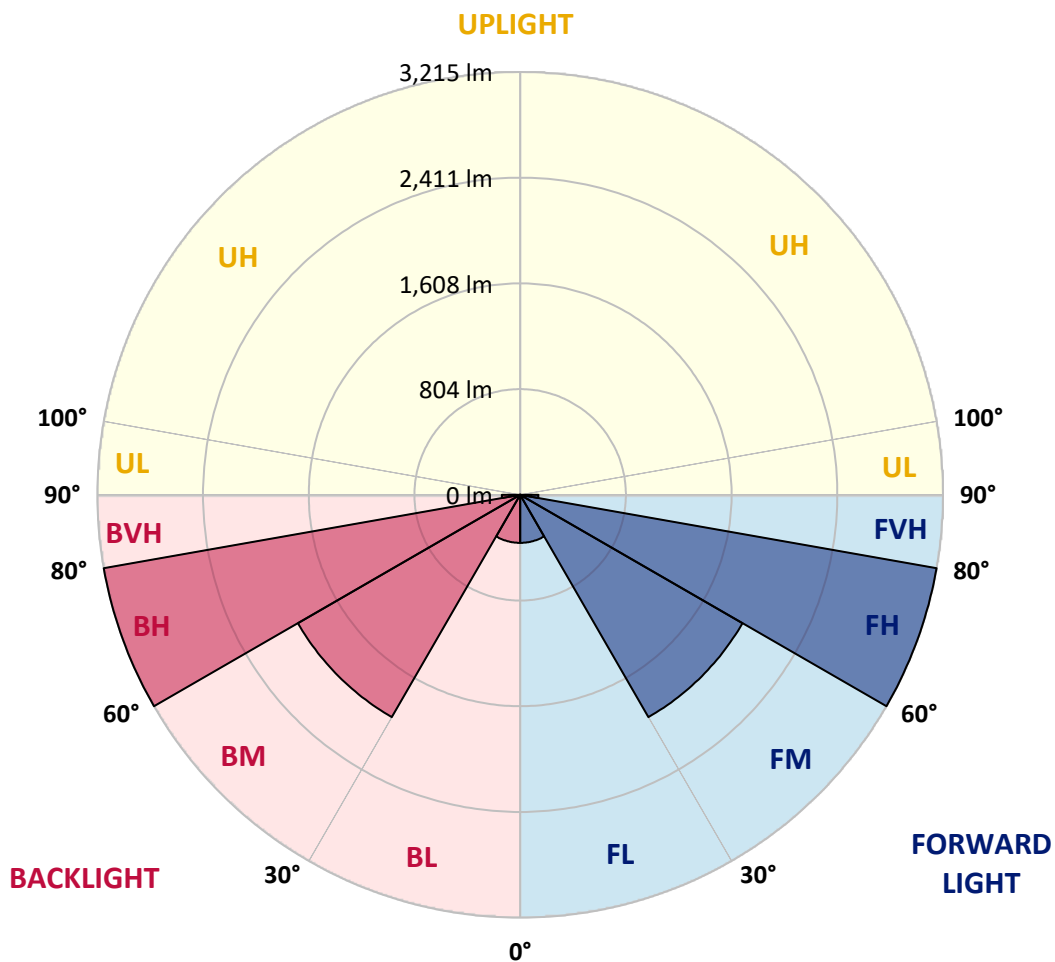
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	365.2	3.2			
FM	(30°-60°)	1952.0	17.2			
FH	(60°-80°)	3215.2	28.3			G2/5000
FVH	(80°-90°)	139.1	1.2			G2/225
BL	(0°-30°)	365.2	3.2	B1/500		
BM	(30°-60°)	1952.0	17.2	B2/2500		
BH	(60°-80°)	3215.2	28.3	B4/5000		G2/5000
BVH	(80°-90°)	139.1	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°	806.4	806.4	806.4	806.4	806.4	806.4	806.4	806.4	806.4	806.4	806.4
2.5°	812.7	812.7	813.4	812.7	811.3	810.6	808.5	807.1	805.7	805.0	803.6
5°	813.4	813.4	814.1	813.4	812.0	810.6	809.2	807.1	805.7	804.3	803.6
7.5°	816.2	816.9	817.6	816.9	814.1	812.7	810.6	808.5	805.7	804.3	802.9
10°	821.8	821.8	821.8	821.1	819.0	816.2	813.4	811.3	807.8	804.3	802.2
12.5°	826.0	826.6	826.6	825.3	822.5	819.0	816.2	814.1	811.3	808.5	806.4
15°	832.2	832.2	831.5	828.7	824.6	821.8	820.4	819.7	819.0	817.6	815.5
17.5°	844.8	844.1	842.0	837.8	832.9	830.8	829.4	829.4	829.4	828.7	827.3
20°	863.0	863.0	860.2	853.2	849.0	846.9	844.8	844.8	844.8	842.7	840.6
22.5°	892.3	893.0	888.8	880.4	874.8	870.6	867.8	865.7	863.7	862.3	858.8
25°	932.1	931.4	926.5	916.0	911.8	907.6	902.1	898.6	895.8	893.7	889.5
27.5°	974.0	973.3	967.7	958.6	955.8	949.5	945.3	940.5	937.0	933.5	929.3
30°	1027.7	1024.2	1020.0	1013.1	1011.7	1006.8	1001.2	994.2	988.6	983.0	978.2
32.5°	1075.9	1075.9	1069.6	1066.1	1068.9	1066.8	1067.5	1063.3	1059.8	1057.7	1052.9
35°	1142.9	1142.9	1140.1	1135.9	1136.6	1131.8	1131.1	1131.8	1134.5	1134.5	1129.0
37.5°	1232.3	1233.7	1224.6	1223.2	1219.7	1212.7	1209.3	1210.7	1216.9	1220.4	1212.7
40°	1343.3	1346.1	1343.3	1334.2	1330.0	1318.2	1311.2	1311.2	1316.1	1319.6	1316.8
42.5°	1452.9	1457.8	1452.9	1445.9	1442.4	1433.4	1429.9	1432.7	1439.0	1443.1	1439.0
45°	1575.1	1578.6	1572.3	1563.9	1559.7	1554.9	1552.8	1554.9	1561.8	1566.0	1564.6
47.5°	1695.2	1700.1	1692.4	1688.9	1688.9	1684.0	1689.6	1695.2	1701.5	1711.2	1707.1
50°	1812.5	1818.8	1813.9	1814.6	1820.2	1829.2	1839.7	1850.9	1862.1	1872.5	1873.9
52.5°	1917.2	1927.0	1927.7	1940.3	1957.7	1971.7	2001.0	2025.4	2052.0	2061.0	2056.8
55°	2027.5	2040.8	2058.2	2077.8	2105.7	2134.3	2183.9	2227.9	2262.8	2284.5	2281.0
57.5°	2185.3	2198.6	2216.7	2248.8	2290.7	2329.8	2397.6	2466.0	2519.0	2551.9	2535.8
60°	2389.9	2403.8	2427.6	2461.8	2516.3	2569.3	2662.2	2760.6	2843.0	2880.7	2851.4
62.5°	2660.8	2674.0	2689.4	2734.8	2795.5	2863.9	2980.5	3106.9	3211.6	3248.0	3206.8
65°	3046.9	3062.9	3067.8	3104.8	3164.2	3227.7	3353.4	3495.8	3615.2	3674.5	3592.2
67.5°	3481.8	3488.1	3507.7	3551.0	3611.7	3669.0	3768.1	3902.8	4017.3	4050.2	3962.2
70°	3736.7	3749.2	3783.5	3843.5	3916.1	4006.2	4114.4	4259.6	4389.5	4404.8	4293.1
72.5°	3506.3	3532.1	3592.9	3686.4	3838.6	3998.5	4184.9	4399.3	4585.7	4607.3	4427.9
75°	2812.3	2841.6	2914.2	3016.9	3197.0	3434.4	3703.9	4025.7	4305.0	4340.6	4103.2
77.5°	1499.0	1535.3	1640.7	1779.0	2035.9	2350.1	2674.7	3042.0	3279.4	3359.7	3188.6
80°	377.7	397.3	448.2	529.2	703.1	956.5	1236.5	1631.7	1926.3	2051.3	1926.3
82.5°	146.6	161.3	175.2	185.0	201.8	236.7	326.7	532.7	717.7	883.9	765.2
85°	56.6	60.0	86.6	98.4	98.4	108.2	124.3	146.6	181.5	198.3	166.2
87.5°	22.3	24.4	30.0	46.1	47.5	41.9	44.7	50.3	38.4	32.1	36.3
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°	806.4	806.4	806.4	806.4	806.4	806.4	806.4	806.4
2.5°	802.9	802.2	800.8	801.5	800.8	800.8	800.8	800.8
5°	802.2	802.2	800.8	800.8	800.8	801.5	800.8	800.8
7.5°	801.5	800.8	799.4	798.7	798.7	798.0	798.0	798.0
10°	800.1	798.7	797.3	796.6	796.6	795.2	795.2	795.2
12.5°	803.6	801.5	800.1	799.4	799.4	799.4	800.1	800.1
15°	813.4	809.2	807.1	806.4	807.1	808.5	809.2	809.9
17.5°	823.9	819.7	816.2	814.8	815.5	817.6	819.7	821.1
20°	837.1	833.6	829.4	828.0	828.0	830.8	832.2	834.3
22.5°	856.0	853.2	849.7	847.6	846.2	849.7	851.8	853.2
25°	886.0	883.2	880.4	878.3	877.6	881.1	882.5	883.2
27.5°	925.8	923.0	921.6	920.9	918.8	920.2	922.3	921.6
30°	977.5	979.6	977.5	977.5	974.0	975.4	974.0	972.6
32.5°	1046.6	1044.5	1038.2	1034.0	1029.1	1029.1	1027.0	1024.9
35°	1115.7	1108.7	1105.2	1107.3	1105.2	1106.6	1103.1	1099.6
37.5°	1197.4	1193.2	1192.5	1198.8	1197.4	1198.8	1198.8	1193.9
40°	1305.6	1302.8	1307.7	1318.2	1322.4	1321.7	1323.1	1316.8
42.5°	1429.9	1425.0	1427.1	1436.2	1441.1	1442.4	1441.7	1436.2
45°	1554.2	1555.6	1555.6	1565.3	1570.2	1573.0	1568.1	1566.0
47.5°	1694.5	1696.6	1691.7	1698.0	1699.4	1704.3	1700.1	1696.6
50°	1856.5	1848.8	1837.6	1839.7	1839.7	1838.3	1833.4	1829.2
52.5°	2037.3	2019.8	1998.9	1991.9	1984.2	1976.6	1966.8	1959.1
55°	2243.3	2213.2	2175.5	2158.1	2143.4	2126.0	2103.6	2095.9
57.5°	2482.0	2430.4	2380.1	2348.7	2311.0	2287.9	2259.3	2257.9
60°	2765.5	2695.7	2607.0	2560.2	2522.5	2495.3	2473.7	2465.3
62.5°	3093.0	2972.9	2877.2	2826.9	2783.0	2766.2	2739.0	2742.5
65°	3428.8	3306.6	3213.7	3173.2	3132.1	3120.9	3095.7	3104.8
67.5°	3792.5	3692.0	3590.1	3552.4	3514.7	3503.5	3477.7	3485.3
70°	4118.6	3990.8	3874.9	3800.9	3736.7	3685.0	3652.2	3638.9
72.5°	4183.5	3962.2	3780.0	3594.9	3488.1	3394.6	3356.2	3341.5
75°	3759.0	3415.5	3155.8	2938.7	2818.6	2682.4	2667.8	2647.5
77.5°	2924.0	2533.0	2218.8	1939.6	1778.3	1612.1	1554.9	1511.6
80°	1744.1	1340.5	1038.9	728.2	594.2	478.3	449.6	419.6
82.5°	624.2	400.1	269.5	210.2	187.8	173.1	162.0	147.3
85°	150.8	127.1	120.1	108.9	107.5	91.5	64.9	57.9
87.5°	48.2	44.0	44.7	42.6	44.7	33.5	27.2	24.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)