

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: P196937

Luminaire Tested: **NAV-AF-05-D-UNV-5WQ-8030**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196937  
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-05-D-UNV-5WQ-8030  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(5) 80 CRI, 3000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V WIDE OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 25528 lumens  
Efficiency: N/A  
Efficacy: 91.5 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')  
IES Classification: Type V - Short - Semi-Cutoff  
BUG Rating: B5 - U0 - G3

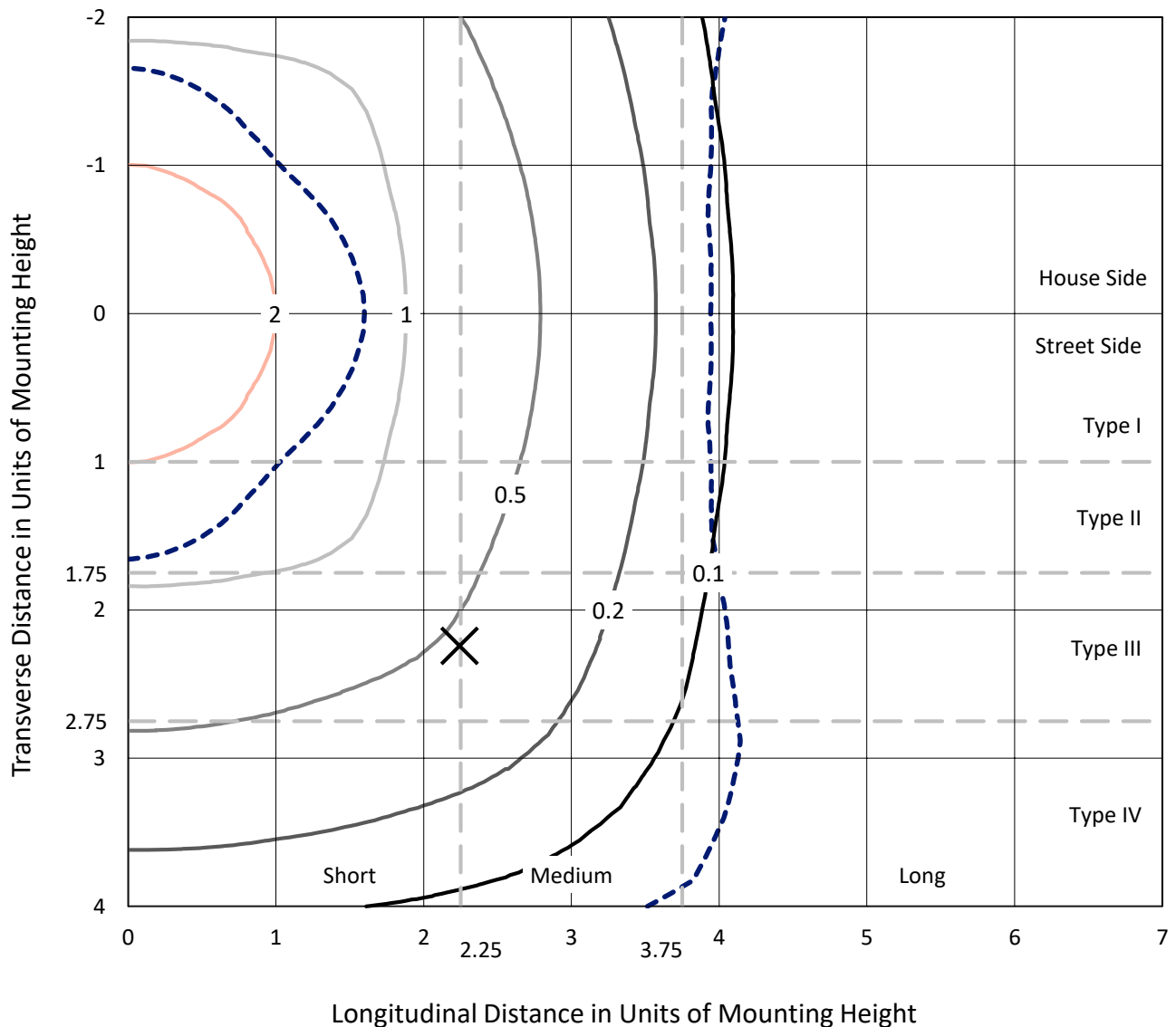
Input Watts (W): 279  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

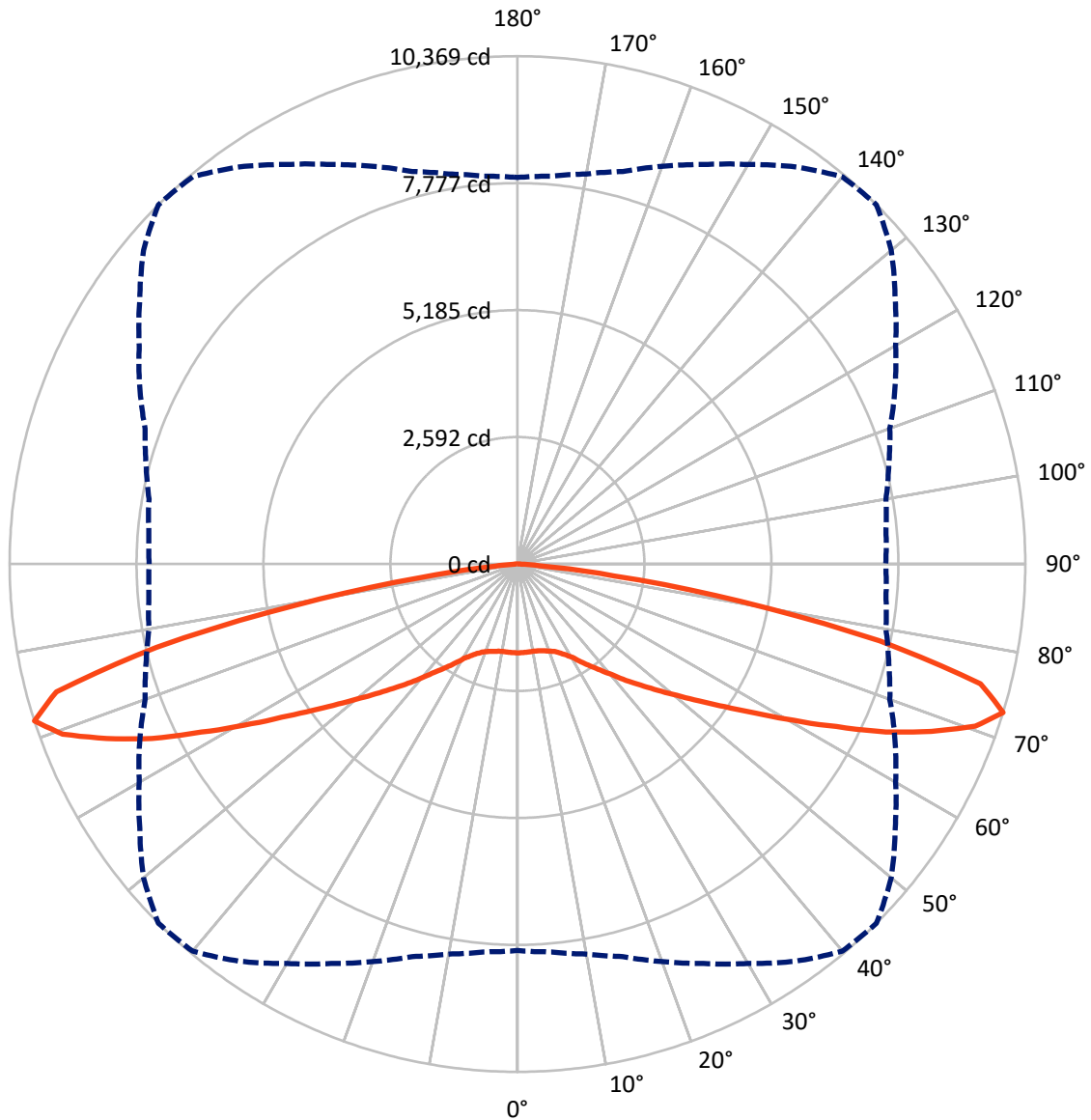


Based on 25 foot mounting height. Maximum calculated value = 2.9 fc  
 Type V - Short - Semi-Cutoff

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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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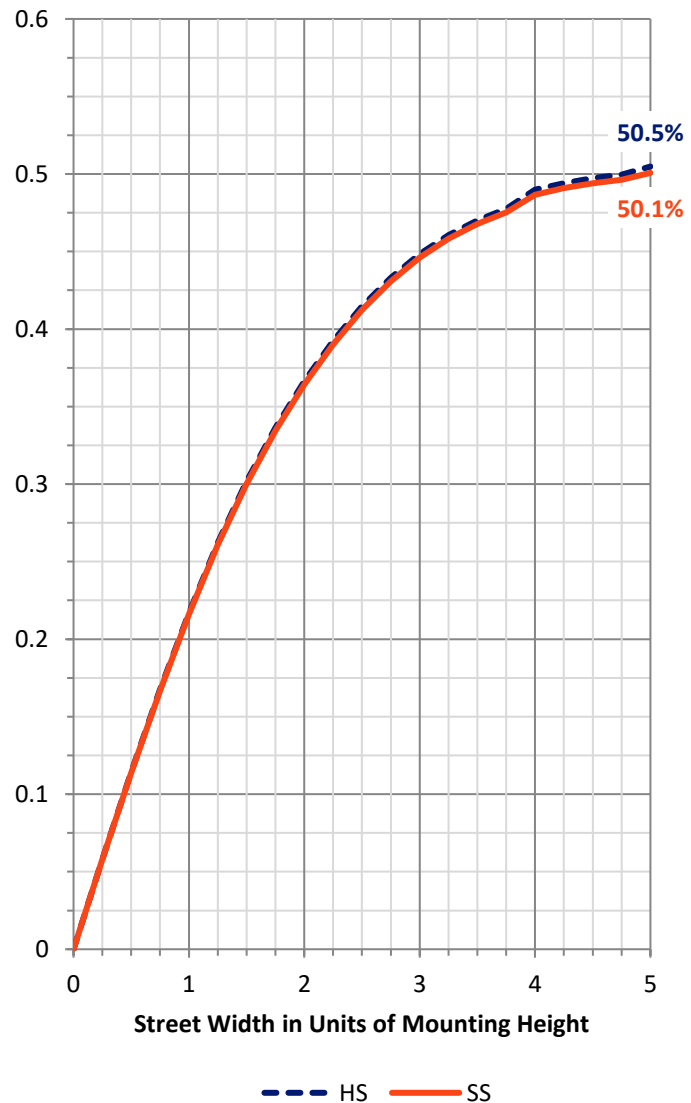
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	12764.0	0.0	12764.0
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	12764.0	0.0	12764.0
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	25528.0	0.0	25528.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	173.2	0.7
10°-20°	524.2	2.1
20°-30°	946.4	3.7
30°-40°	1614.3	6.3
40°-50°	2748.4	10.8
50°-60°	4423.2	17.3
60°-70°	7355.9	28.8
70°-80°	7116.0	27.9
80°-90°	626.3	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°	25528.0	100.0
0°-180°	25528.0	100.0



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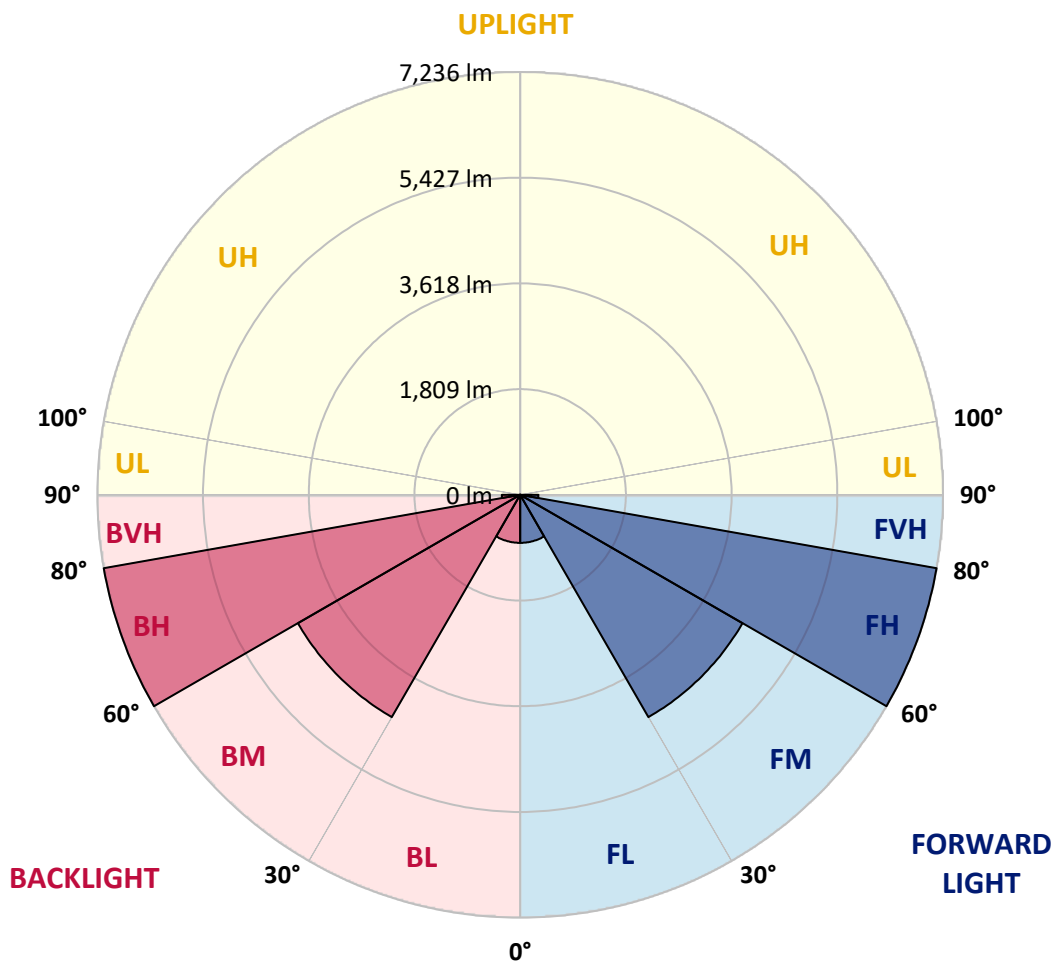
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	821.9	3.2			
FM	(30°-60°)	4393.0	17.2			
FH	(60°-80°)	7235.9	28.3			G3/7500
FVH	(80°-90°)	313.2	1.2			G3/500
BL	(0°-30°)	821.9	3.2	B2/1000		
BM	(30°-60°)	4393.0	17.2	B3/5000		
BH	(60°-80°)	7235.9	28.3	B5		G3/7500
BVH	(80°-90°)	313.2	1.2			G3/500
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B5-U0-G3**

Type V Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1814.8	1814.8	1814.8	1814.8	1814.8	1814.8	1814.8	1814.8	1814.8	1814.8	1814.8
2.5°	1829.0	1829.0	1830.6	1829.0	1825.8	1824.3	1819.6	1816.4	1813.3	1811.7	1808.6
5°	1830.6	1830.6	1832.1	1830.6	1827.4	1824.3	1821.1	1816.4	1813.3	1810.1	1808.6
7.5°	1836.8	1838.4	1840.0	1838.4	1832.1	1829.0	1824.3	1819.6	1813.3	1810.1	1807.0
10°	1849.4	1849.4	1849.4	1847.8	1843.1	1836.8	1830.6	1825.8	1818.0	1810.1	1805.4
12.5°	1858.8	1860.4	1860.4	1857.3	1851.0	1843.1	1836.8	1832.1	1825.8	1819.6	1814.8
15°	1873.0	1873.0	1871.4	1865.1	1855.7	1849.4	1846.3	1844.7	1843.1	1840.0	1835.3
17.5°	1901.3	1899.7	1895.0	1885.6	1874.6	1869.8	1866.7	1866.7	1866.7	1865.1	1862.0
20°	1942.1	1942.1	1935.8	1920.1	1910.7	1906.0	1901.3	1901.3	1901.3	1896.6	1891.8
22.5°	2008.1	2009.7	2000.3	1981.4	1968.8	1959.4	1953.1	1948.4	1943.7	1940.6	1932.7
25°	2097.7	2096.1	2085.1	2061.5	2052.1	2042.7	2030.1	2022.3	2016.0	2011.3	2001.8
27.5°	2192.0	2190.4	2177.8	2157.4	2151.1	2137.0	2127.5	2116.5	2108.7	2100.8	2091.4
30°	2313.0	2305.1	2295.7	2280.0	2276.8	2265.8	2253.2	2237.5	2225.0	2212.4	2201.4
32.5°	2421.4	2421.4	2407.2	2399.4	2405.7	2400.9	2402.5	2393.1	2385.2	2380.5	2369.5
35°	2572.2	2572.2	2565.9	2556.5	2558.1	2547.1	2545.5	2547.1	2553.4	2553.4	2540.8
37.5°	2773.3	2776.5	2756.1	2752.9	2745.1	2729.3	2721.5	2724.6	2738.8	2746.6	2729.3
40°	3023.2	3029.5	3023.2	3002.8	2993.3	2966.6	2950.9	2950.9	2961.9	2969.8	2963.5
42.5°	3269.9	3280.9	3269.9	3254.2	3246.3	3225.9	3218.0	3224.3	3238.4	3247.9	3238.4
45°	3544.8	3552.7	3538.6	3519.7	3510.3	3499.3	3494.6	3499.3	3515.0	3524.4	3521.3
47.5°	3815.1	3826.1	3808.8	3801.0	3801.0	3790.0	3802.5	3815.1	3829.3	3851.3	3841.8
50°	4079.1	4093.2	4082.2	4083.8	4096.4	4116.8	4140.4	4165.5	4190.7	4214.2	4217.4
52.5°	4314.8	4336.8	4338.4	4366.6	4405.9	4437.3	4503.3	4558.3	4618.0	4638.5	4629.0
55°	4563.0	4592.9	4632.2	4676.2	4739.0	4803.5	4915.0	5014.0	5092.6	5141.3	5133.4
57.5°	4918.2	4948.0	4988.9	5061.2	5155.4	5243.4	5395.8	5549.8	5669.2	5743.1	5707.0
60°	5378.6	5410.0	5463.4	5540.4	5663.0	5782.4	5991.4	6212.9	6398.3	6483.2	6417.2
62.5°	5988.2	6018.1	6052.6	6154.8	6291.5	6445.5	6707.9	6992.3	7228.0	7309.7	7217.0
65°	6857.1	6893.3	6904.3	6987.6	7121.1	7264.1	7546.9	7867.5	8136.2	8269.7	8084.3
67.5°	7836.1	7850.2	7894.2	7991.6	8128.3	8257.2	8480.3	8783.6	9041.2	9115.1	8917.1
70°	8409.6	8437.9	8514.9	8650.0	8813.4	9016.1	9259.7	9586.5	9878.8	9913.3	9661.9
72.5°	7891.1	7949.2	8085.9	8296.5	8639.0	8998.8	9418.4	9900.7	10320.3	10369.0	9965.2
75°	6329.2	6395.2	6558.6	6789.6	7195.0	7729.2	8335.7	9060.1	9688.6	9768.8	9234.5
77.5°	3373.6	3455.3	3692.6	4003.7	4581.9	5289.0	6019.6	6846.1	7380.4	7561.1	7176.1
80°	850.1	894.1	1008.8	1191.0	1582.3	2152.7	2782.8	3672.1	4335.2	4616.5	4335.2
82.5°	330.0	363.0	394.4	416.4	454.1	532.7	735.4	1198.9	1615.3	1989.3	1722.1
85°	127.3	135.1	194.8	221.6	221.6	243.6	279.7	330.0	408.5	446.2	374.0
87.5°	50.3	55.0	67.6	103.7	106.8	94.3	100.6	113.1	86.4	72.3	81.7
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°	1814.8	1814.8	1814.8	1814.8	1814.8	1814.8	1814.8	1814.8
2.5°	1807.0	1805.4	1802.3	1803.9	1802.3	1802.3	1802.3	1802.3
5°	1805.4	1805.4	1802.3	1802.3	1802.3	1803.9	1802.3	1802.3
7.5°	1803.9	1802.3	1799.1	1797.6	1797.6	1796.0	1796.0	1796.0
10°	1800.7	1797.6	1794.4	1792.9	1792.9	1789.7	1789.7	1789.7
12.5°	1808.6	1803.9	1800.7	1799.1	1799.1	1799.1	1800.7	1800.7
15°	1830.6	1821.1	1816.4	1814.8	1816.4	1819.6	1821.1	1822.7
17.5°	1854.1	1844.7	1836.8	1833.7	1835.3	1840.0	1844.7	1847.8
20°	1884.0	1876.1	1866.7	1863.6	1863.6	1869.8	1873.0	1877.7
22.5°	1926.4	1920.1	1912.3	1907.6	1904.4	1912.3	1917.0	1920.1
25°	1994.0	1987.7	1981.4	1976.7	1975.1	1983.0	1986.1	1987.7
27.5°	2083.5	2077.3	2074.1	2072.5	2067.8	2071.0	2075.7	2074.1
30°	2199.8	2204.5	2199.8	2199.8	2192.0	2195.1	2192.0	2188.8
32.5°	2355.4	2350.7	2336.5	2327.1	2316.1	2316.1	2311.4	2306.7
35°	2510.9	2495.2	2487.4	2492.1	2487.4	2490.5	2482.7	2474.8
37.5°	2694.8	2685.3	2683.8	2697.9	2694.8	2697.9	2697.9	2686.9
40°	2938.3	2932.0	2943.0	2966.6	2976.0	2974.5	2977.6	2963.5
42.5°	3218.0	3207.0	3211.7	3232.2	3243.2	3246.3	3244.7	3232.2
45°	3497.7	3500.9	3500.9	3522.9	3533.8	3540.1	3529.1	3524.4
47.5°	3813.5	3818.3	3807.3	3821.4	3824.5	3835.5	3826.1	3818.3
50°	4178.1	4160.8	4135.7	4140.4	4140.4	4137.2	4126.2	4116.8
52.5°	4585.0	4545.8	4498.6	4482.9	4465.6	4448.3	4426.3	4409.1
55°	5048.6	4981.0	4896.2	4856.9	4823.9	4784.6	4734.3	4717.0
57.5°	5586.0	5469.7	5356.6	5285.8	5201.0	5149.1	5084.7	5081.6
60°	6223.9	6066.8	5867.2	5761.9	5677.1	5615.8	5567.1	5548.3
62.5°	6960.9	6690.6	6475.3	6362.2	6263.2	6225.5	6164.2	6172.1
65°	7716.6	7441.7	7232.7	7141.5	7048.8	7023.7	6967.1	6987.6
67.5°	8535.3	8309.0	8079.6	7994.8	7909.9	7884.8	7826.6	7843.9
70°	9269.1	8981.5	8720.7	8554.1	8409.6	8293.3	8219.5	8189.6
72.5°	9415.2	8917.1	8507.0	8090.6	7850.2	7639.7	7553.2	7520.2
75°	8459.9	7686.8	7102.3	6613.6	6343.3	6036.9	6003.9	5958.4
77.5°	6580.6	5700.7	4993.6	4365.1	4002.1	3628.1	3499.3	3401.9
80°	3925.1	3016.9	2338.1	1638.9	1337.2	1076.3	1011.9	944.4
82.5°	1404.7	900.4	606.5	473.0	422.7	389.7	364.5	331.5
85°	339.4	286.0	270.3	245.1	242.0	205.8	146.1	130.4
87.5°	108.4	99.0	100.6	95.8	100.6	75.4	61.3	55.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)