

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: P196413

Luminaire Tested: **NAV-AF-03-D-UNV-5MQ-7030-1200**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196413  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24129)  
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-5MQ-7030-1200  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(3) 70 CRI, 3000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V  
MEDIUM OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 20467.5 lumens  
Efficiency: N/A  
Efficacy: 107.2 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')  
IES Classification: Type V - Short - Full Cutoff  
BUG Rating: B4 - U0 - G2

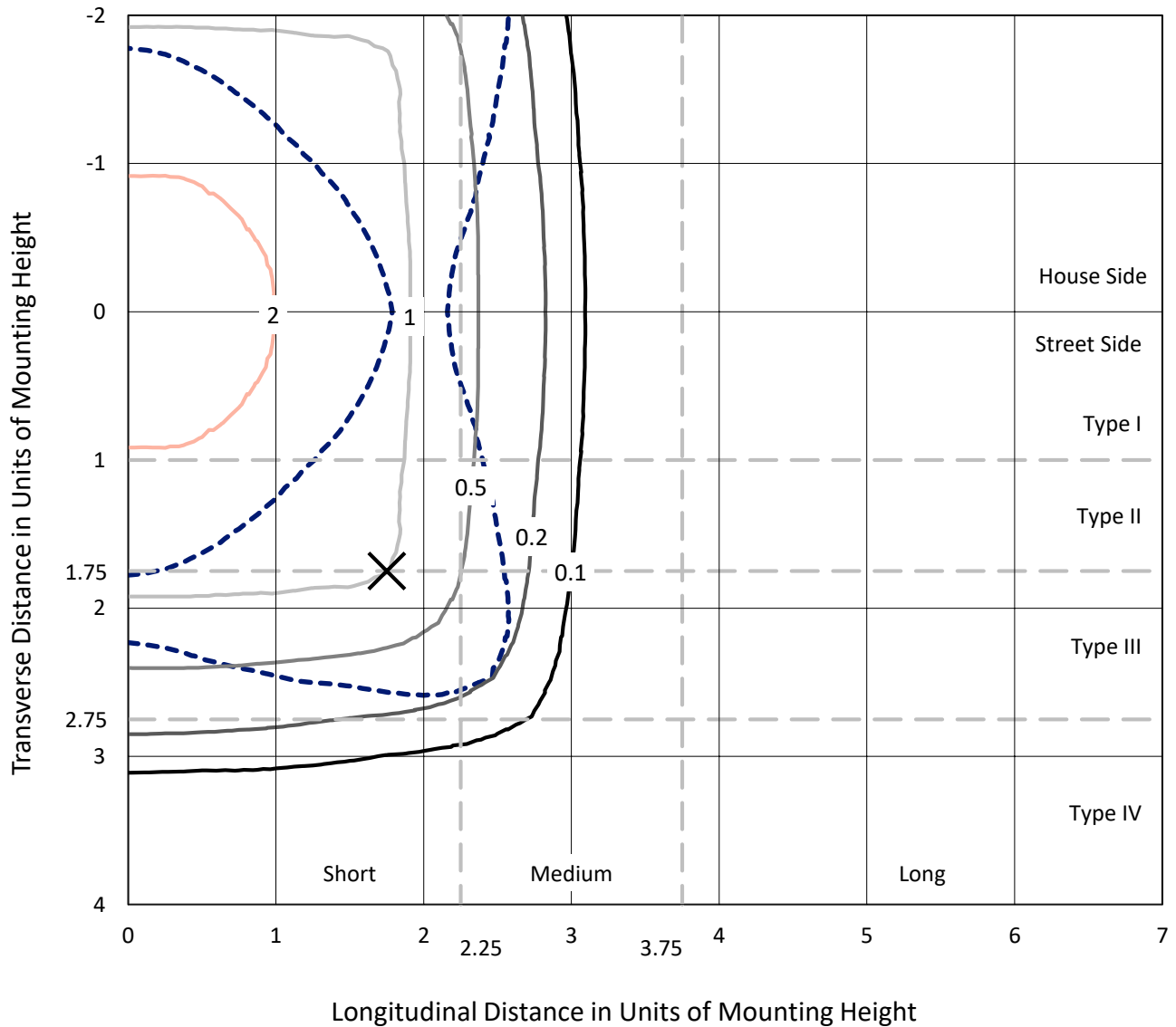
Input Watts (W): 191  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

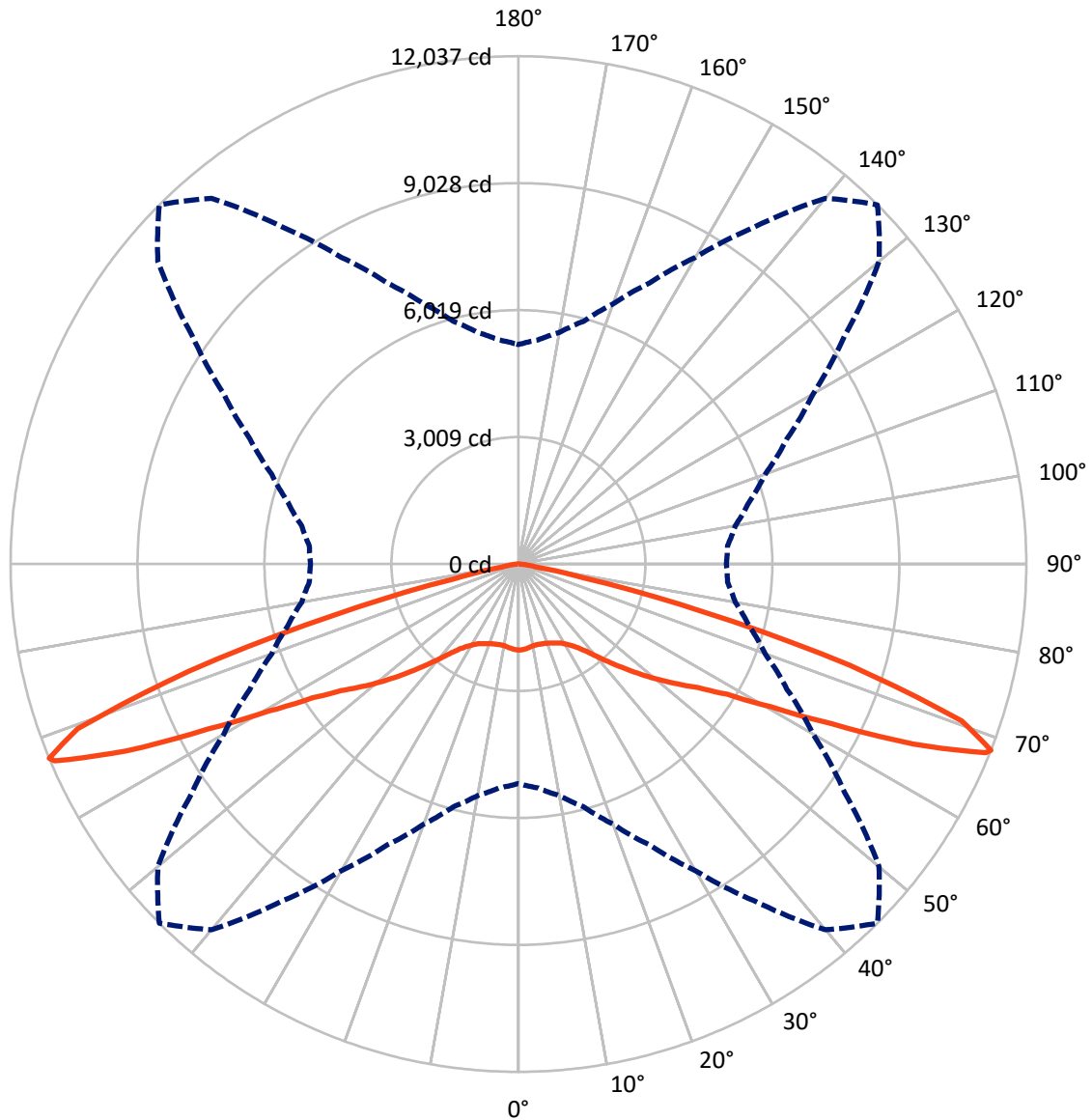
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.3 fc  
 Type V - Short - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral      - - - Horizontal Cone Through 68-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	10233.8	0.0	10233.8
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	10233.8	0.0	10233.8
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	20467.5	0.0	20467.5
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	191.0	0.9
10°-20°	554.1	2.7
20°-30°	942.0	4.6
30°-40°	1541.5	7.5
40°-50°	2754.9	13.5
50°-60°	4652.6	22.7
60°-70°	7214.5	35.2
70°-80°	2480.5	12.1
80°-90°	136.3	0.7
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°	20467.5	100.0
0°-180°	20467.5	100.0



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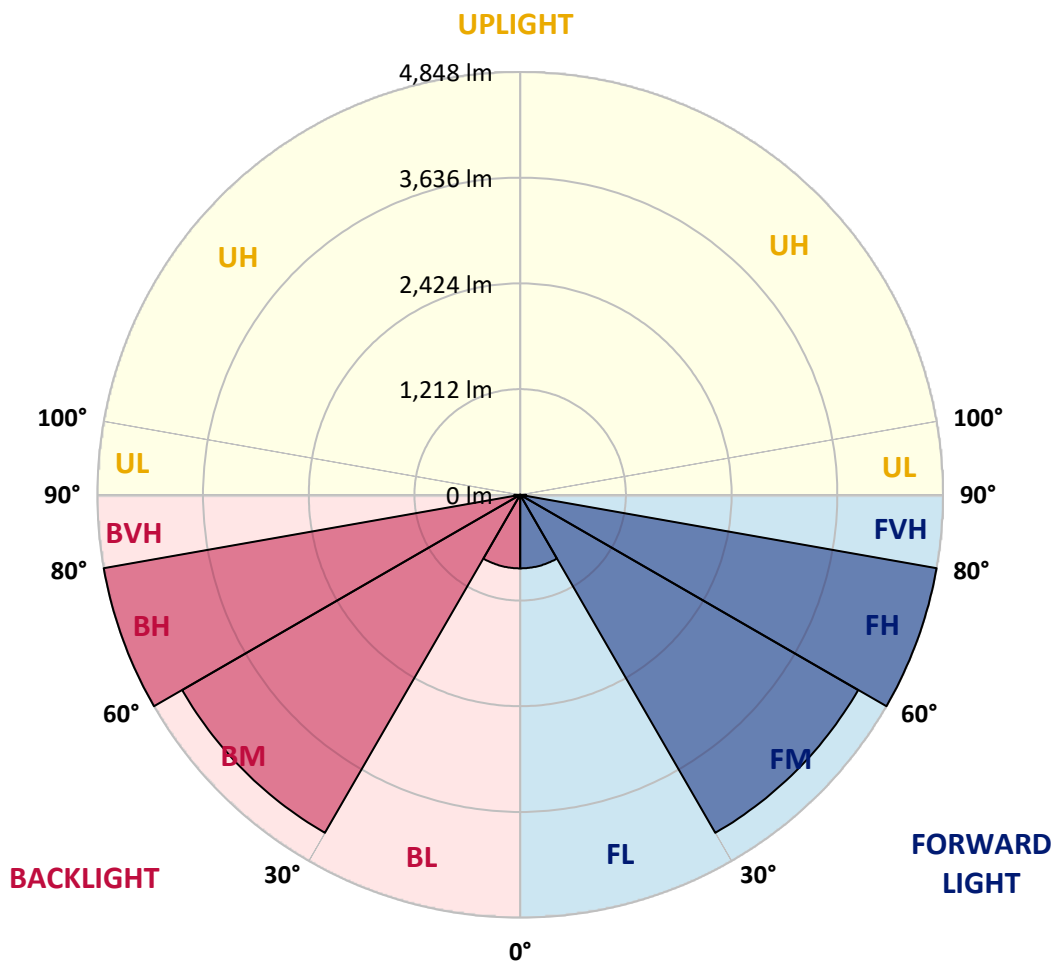
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	843.6	4.1			
FM	(30°-60°)	4474.5	21.9			
FH	(60°-80°)	4847.5	23.7			G2/5000
FVH	(80°-90°)	68.2	0.3			G1/100
BL	(0°-30°)	843.6	4.1	B2/1000		
BM	(30°-60°)	4474.5	21.9	B3/5000		
BH	(60°-80°)	4847.5	23.7	B4/5000		G2/5000
BVH	(80°-90°)	68.2	0.3			G1/100
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°	2041.7	2041.7	2041.7	2041.7	2041.7	2041.7	2041.7	2041.7	2041.7	2041.7	2041.7
2.5°	2050.5	2050.5	2053.0	2051.7	2047.9	2044.2	2040.4	2036.7	2034.2	2031.6	2029.2
5°	2029.2	2029.2	2032.9	2030.4	2028.0	2024.1	2021.7	2017.9	2015.4	2012.9	2014.0
7.5°	2001.6	2004.2	2006.6	2005.4	2000.3	1999.1	1995.3	1994.1	1991.6	1987.8	1989.1
10°	1977.8	1979.0	1981.5	1980.4	1979.0	1975.3	1974.0	1972.7	1971.5	1966.4	1965.2
12.5°	1954.0	1956.5	1959.0	1960.2	1959.0	1960.2	1961.5	1962.8	1961.5	1959.0	1959.0
15°	1935.2	1937.7	1941.4	1945.2	1946.5	1954.0	1959.0	1964.1	1967.8	1969.0	1965.2
17.5°	1925.1	1928.9	1933.9	1941.4	1947.6	1956.5	1965.2	1972.7	1979.0	1980.4	1976.5
20°	1923.8	1927.7	1935.2	1943.9	1955.2	1966.4	1980.4	1991.6	1997.8	2001.6	1997.8
22.5°	1932.7	1937.7	1947.6	1959.0	1972.7	1987.8	2005.4	2017.9	2030.4	2035.4	2031.6
25°	1957.7	1962.8	1974.0	1987.8	2002.8	2021.7	2039.3	2055.5	2068.1	2074.3	2069.3
27.5°	2010.4	2011.6	2024.1	2039.3	2056.7	2073.0	2095.6	2103.1	2113.2	2119.4	2113.2
30°	2084.3	2086.9	2098.1	2122.0	2138.2	2159.5	2172.1	2179.6	2190.8	2197.1	2189.5
32.5°	2197.1	2199.6	2209.7	2232.1	2247.3	2263.6	2278.6	2283.6	2294.9	2302.4	2293.6
35°	2356.2	2361.3	2370.1	2385.1	2397.7	2410.2	2421.5	2417.7	2425.2	2435.3	2426.4
37.5°	2574.3	2573.2	2575.6	2586.9	2599.4	2606.9	2624.5	2615.7	2623.2	2632.0	2627.0
40°	2828.8	2828.8	2827.5	2847.7	2852.6	2860.1	2879.0	2867.6	2877.7	2887.7	2879.0
42.5°	3118.4	3123.2	3129.6	3145.9	3159.7	3162.2	3170.9	3165.9	3178.5	3187.2	3178.5
45°	3451.7	3459.2	3466.8	3504.4	3510.6	3515.6	3521.9	3505.6	3519.3	3526.9	3524.3
47.5°	3797.7	3811.4	3827.7	3866.5	3891.6	3903.0	3907.8	3889.1	3890.4	3901.6	3903.0
50°	4188.7	4203.8	4220.0	4263.9	4287.7	4307.8	4314.0	4292.7	4295.2	4303.9	4306.5
52.5°	4549.7	4567.1	4602.3	4661.2	4695.0	4730.2	4732.7	4706.4	4717.6	4723.9	4718.8
55°	4889.3	4911.9	4958.1	5037.2	5098.6	5167.5	5198.9	5170.0	5170.0	5165.0	5162.5
57.5°	5285.3	5310.4	5358.1	5449.6	5534.7	5633.7	5718.9	5747.8	5800.5	5818.0	5790.4
60°	5882.0	5908.3	5957.2	6077.4	6185.2	6329.4	6469.8	6583.9	6769.2	6869.5	6779.3
62.5°	6427.1	6467.3	6582.6	6793.0	7026.3	7293.2	7602.8	7823.4	8160.6	8328.5	8101.6
65°	6303.0	6384.6	6610.1	6941.0	7422.3	8001.4	8631.8	9237.1	9934.0	10291.2	9829.9
67.5°	5505.9	5574.9	5818.0	6202.7	6803.1	7601.5	8581.7	9835.0	11272.6	11941.8	11126.0
68°	5201.4	5330.4	5572.3	5954.6	6560.0	7344.6	8391.1	9744.8	11313.9	12037.1	11156.0
70°	3988.2	4034.5	4266.3	4609.7	5262.8	6032.3	7089.0	8631.8	10405.3	11149.8	10243.6
72.5°	1895.1	1922.6	2073.0	2411.5	2826.3	3452.9	4385.4	5840.6	7438.6	8213.1	7309.6
75°	694.4	700.6	735.8	815.9	971.4	1207.0	1654.4	2559.3	3788.9	4518.3	3803.9
77.5°	374.8	376.0	389.8	409.8	437.4	468.7	536.5	719.5	1160.6	1579.3	1225.8
80°	235.7	234.4	248.1	264.4	283.3	298.3	304.7	325.9	367.2	429.9	394.8
82.5°	120.3	131.5	162.9	180.5	208.0	213.0	206.8	205.5	218.1	235.7	243.1
85°	66.4	58.9	86.6	115.3	125.3	129.2	130.3	122.8	120.3	117.8	124.1
87.5°	33.9	31.3	37.5	57.7	61.4	50.1	51.4	43.8	30.0	30.0	31.3
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°	2041.7	2041.7	2041.7	2041.7	2041.7	2041.7	2041.7	2041.7
2.5°	2026.6	2028.0	2025.4	2025.4	2025.4	2026.6	2025.4	2024.1
5°	2010.4	2012.9	2012.9	2014.0	2015.4	2015.4	2015.4	2015.4
7.5°	1986.6	1987.8	1990.2	1990.2	1990.2	1990.2	1990.2	1990.2
10°	1964.1	1961.5	1960.2	1957.7	1957.7	1954.0	1955.2	1956.5
12.5°	1952.7	1947.6	1945.2	1941.4	1939.0	1935.2	1935.2	1936.4
15°	1957.7	1950.2	1942.6	1940.2	1937.7	1935.2	1932.7	1933.9
17.5°	1967.8	1959.0	1950.2	1945.2	1940.2	1936.4	1935.2	1936.4
20°	1989.1	1976.5	1962.8	1954.0	1943.9	1941.4	1937.7	1941.4
22.5°	2017.9	2002.8	1985.4	1969.0	1957.7	1952.7	1947.6	1951.5
25°	2053.0	2036.7	2019.1	2000.3	1987.8	1984.0	1977.8	1977.8
27.5°	2101.8	2088.1	2073.0	2055.5	2042.9	2039.3	2029.2	2029.2
30°	2179.6	2165.7	2152.0	2137.0	2124.4	2120.6	2108.1	2108.1
32.5°	2282.3	2267.3	2258.5	2246.1	2236.0	2229.7	2214.6	2213.4
35°	2420.2	2406.4	2405.2	2396.4	2386.3	2387.7	2372.6	2370.1
37.5°	2618.3	2606.9	2610.8	2603.2	2594.5	2601.9	2593.2	2593.2
40°	2871.5	2867.6	2871.5	2866.4	2867.6	2868.9	2861.4	2863.9
42.5°	3177.3	3167.2	3189.8	3187.2	3183.5	3193.5	3175.9	3163.5
45°	3529.4	3525.7	3548.2	3552.0	3544.5	3550.7	3519.3	3518.1
47.5°	3911.7	3911.7	3931.7	3929.2	3921.8	3923.0	3885.4	3861.6
50°	4310.3	4307.8	4327.8	4322.8	4312.8	4311.5	4272.7	4248.9
52.5°	4725.1	4725.1	4754.0	4740.1	4716.2	4705.0	4657.4	4626.1
55°	5183.8	5177.6	5186.3	5141.2	5094.9	5061.0	5002.1	4978.3
57.5°	5764.1	5691.5	5628.8	5571.1	5505.9	5465.8	5396.9	5371.8
60°	6587.6	6393.3	6309.2	6194.0	6086.3	6032.3	5940.9	5892.1
62.5°	7728.1	7406.0	7177.9	6923.4	6677.8	6504.9	6365.8	6304.4
65°	9046.6	8344.7	7764.5	7219.3	6756.8	6389.6	6185.2	6121.4
67.5°	9547.9	8259.6	7258.1	6476.1	5914.5	5477.1	5232.8	5181.3
68°	9441.4	8064.0	7023.7	6222.9	5658.9	5217.6	4974.6	4928.1
70°	8328.5	6803.1	5705.2	4908.2	4381.8	3961.8	3790.1	3716.1
72.5°	5677.6	4369.2	3351.4	2680.9	2287.4	2021.7	1863.8	1809.9
75°	2613.3	1765.9	1179.4	881.0	748.2	684.3	635.5	622.9
77.5°	762.1	554.0	476.3	441.2	414.8	392.3	376.0	374.8
80°	362.2	339.7	329.6	307.0	283.3	261.9	246.9	249.4
82.5°	243.1	236.9	236.9	214.3	176.7	151.7	125.3	112.7
85°	129.2	134.1	141.6	134.1	116.6	86.6	56.4	61.4
87.5°	43.8	50.1	52.7	51.4	46.3	35.1	26.3	26.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)