

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: P196402

Luminaire Tested: **NAV-AF-04-D-UNV-5MQ-7030-800**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196402  
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-04-D-UNV-5MQ-7030-800  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(4) 70 CRI, 3000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V MEDIUM OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 20302.6 lumens  
Efficiency: N/A  
Efficacy: 118.7 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type V - Short - Full Cutoff  
BUG Rating: B4 - U0 - G2

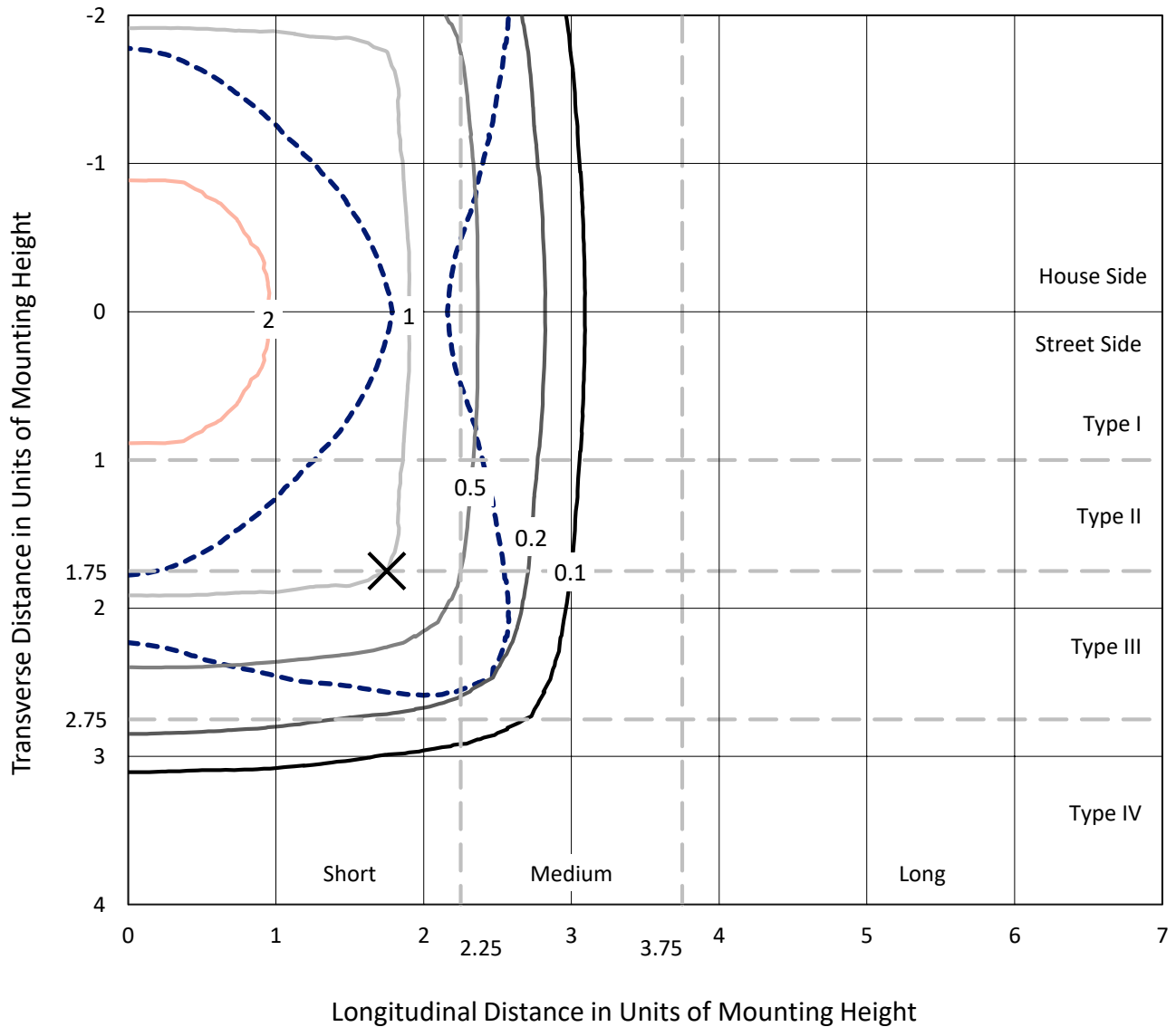
Input Watts (W): 171  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

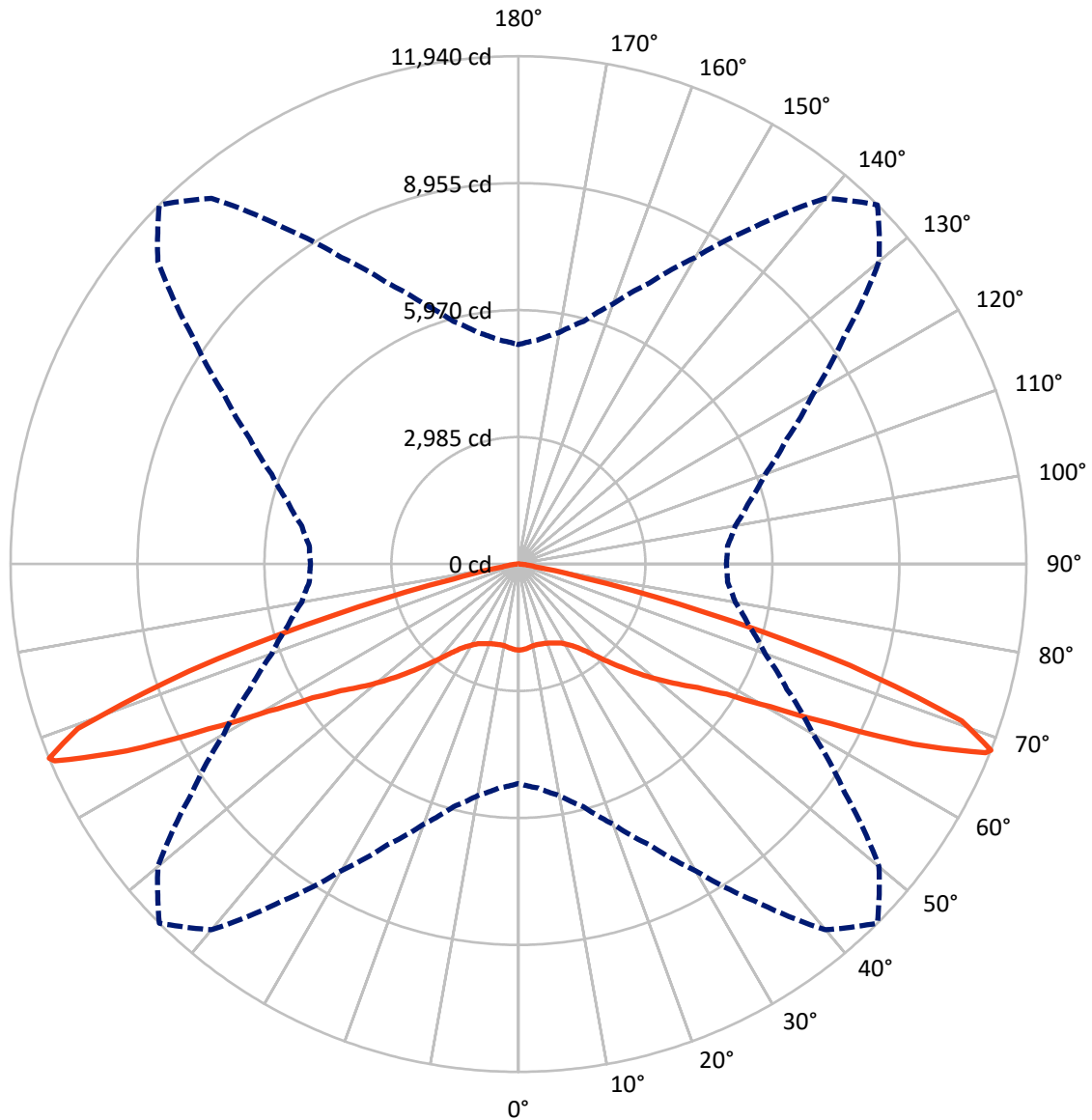
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.2 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	10151.3	0.0	10151.3
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	10151.3	0.0	10151.3
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	20302.6	0.0	20302.6
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	189.5	0.9
10°-20°	549.6	2.7
20°-30°	934.4	4.6
30°-40°	1529.1	7.5
40°-50°	2732.7	13.5
50°-60°	4615.1	22.7
60°-70°	7156.4	35.2
70°-80°	2460.5	12.1
80°-90°	135.2	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°	20302.6	100.0
0°-180°	20302.6	100.0



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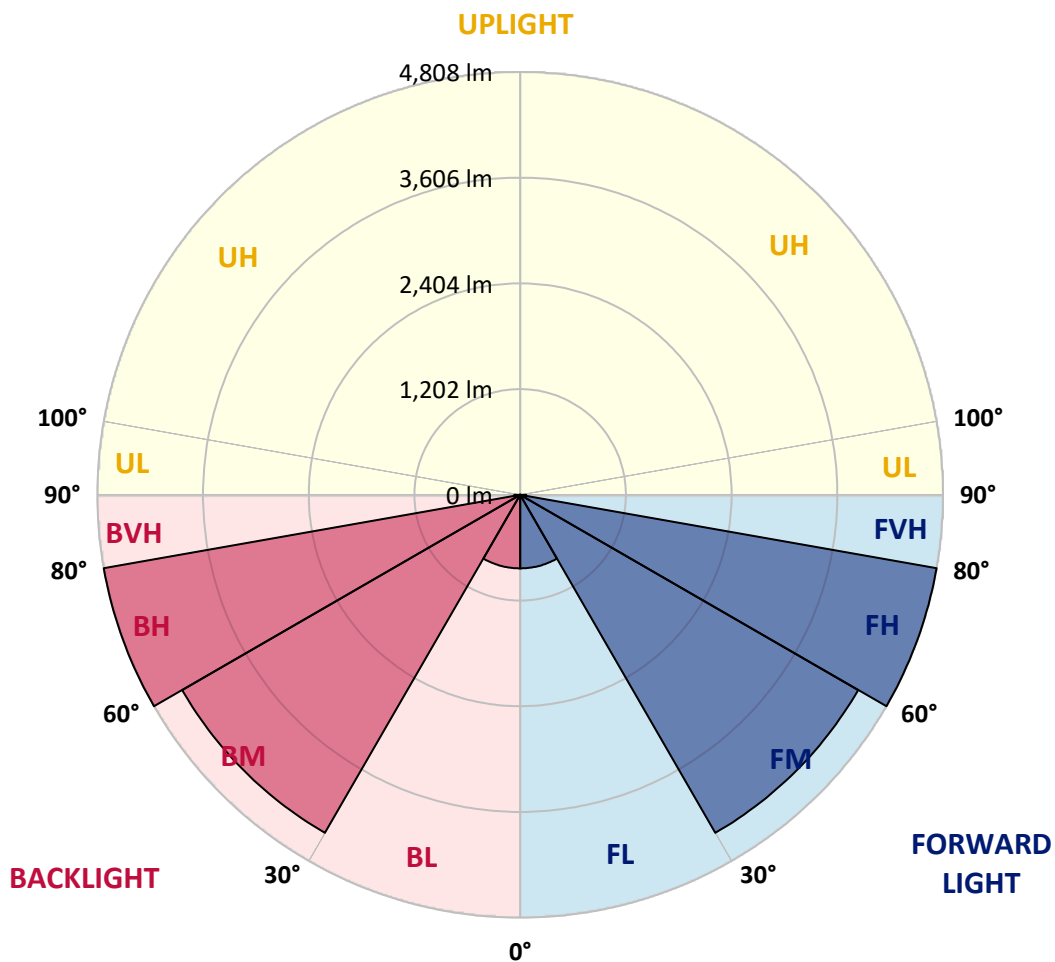
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	836.8	4.1			
FM	(30°-60°)	4438.5	21.9			
FH	(60°-80°)	4808.4	23.7			G2/5000
FVH	(80°-90°)	67.6	0.3			G1/100
BL	(0°-30°)	836.8	4.1	B2/1000		
BM	(30°-60°)	4438.5	21.9	B3/5000		
BH	(60°-80°)	4808.4	23.7	B4/5000		G2/5000
BVH	(80°-90°)	67.6	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°	2025.2	2025.2	2025.2	2025.2	2025.2	2025.2	2025.2	2025.2	2025.2	2025.2	2025.2
2.5°	2034.0	2034.0	2036.5	2035.2	2031.4	2027.8	2024.0	2020.3	2017.8	2015.3	2012.8
5°	2012.8	2012.8	2016.5	2014.0	2011.6	2007.8	2005.4	2001.6	1999.1	1996.6	1998.0
7.5°	1985.5	1988.0	1990.3	1989.2	1984.2	1982.9	1979.2	1978.0	1975.5	1971.8	1973.0
10°	1961.9	1963.1	1965.6	1964.4	1963.1	1959.3	1958.2	1956.9	1955.6	1950.6	1949.4
12.5°	1938.3	1940.7	1943.1	1944.4	1943.1	1944.4	1945.7	1946.9	1945.7	1943.1	1943.1
15°	1919.5	1922.1	1925.8	1929.5	1930.7	1938.3	1943.1	1948.2	1951.9	1953.1	1949.4
17.5°	1909.7	1913.3	1918.4	1925.8	1932.0	1940.7	1949.4	1956.9	1963.1	1964.4	1960.5
20°	1908.3	1912.1	1919.5	1928.3	1939.5	1950.6	1964.4	1975.5	1981.8	1985.5	1981.8
22.5°	1917.1	1922.1	1932.0	1943.1	1956.9	1971.8	1989.2	2001.6	2014.0	2019.0	2015.3
25°	1942.0	1946.9	1958.2	1971.8	1986.7	2005.4	2022.7	2038.9	2051.4	2057.6	2052.6
27.5°	1994.2	1995.4	2007.8	2022.7	2040.2	2056.4	2078.6	2086.2	2096.1	2102.3	2096.1
30°	2067.5	2070.0	2081.2	2104.8	2120.9	2142.1	2154.5	2162.0	2173.1	2179.4	2172.0
32.5°	2179.4	2181.9	2191.8	2214.2	2229.1	2245.3	2260.2	2265.2	2276.4	2283.8	2275.1
35°	2337.3	2342.3	2350.9	2365.9	2378.3	2390.7	2401.9	2398.2	2405.7	2415.6	2406.9
37.5°	2553.6	2552.4	2554.8	2566.1	2578.5	2585.9	2603.3	2594.7	2602.1	2610.9	2605.9
40°	2806.0	2806.0	2804.8	2824.7	2829.6	2837.0	2855.7	2844.6	2854.5	2864.4	2855.7
42.5°	3093.2	3098.1	3104.4	3120.6	3134.2	3136.8	3145.3	3140.4	3152.9	3161.5	3152.9
45°	3423.8	3431.4	3438.8	3476.1	3482.3	3487.3	3493.4	3477.4	3491.1	3498.5	3496.0
47.5°	3767.0	3780.7	3796.9	3835.4	3860.2	3871.5	3876.4	3857.7	3859.0	3870.2	3871.5
50°	4154.9	4169.9	4185.9	4229.5	4253.1	4273.0	4279.2	4258.1	4260.6	4269.3	4271.8
52.5°	4513.0	4530.3	4565.2	4623.7	4657.1	4692.0	4694.5	4668.3	4679.6	4685.8	4680.7
55°	4849.9	4872.3	4918.3	4996.5	5057.5	5125.9	5156.9	5128.4	5128.4	5123.3	5120.9
57.5°	5242.7	5267.6	5314.8	5405.6	5490.2	5588.4	5673.0	5701.4	5753.7	5771.1	5743.8
60°	5834.6	5860.6	5909.2	6028.5	6135.4	6278.4	6417.6	6530.8	6714.7	6814.2	6724.7
62.5°	6375.4	6415.1	6529.6	6738.3	6969.6	7234.4	7541.5	7760.3	8094.7	8261.3	8036.3
65°	6252.3	6333.1	6556.8	6885.1	7362.4	7936.8	8562.2	9162.7	9854.0	10208.2	9750.8
67.5°	5461.6	5529.9	5771.1	6152.8	6748.3	7540.3	8512.5	9755.8	11181.7	11845.6	11036.3
68°	5159.4	5287.5	5527.4	5906.7	6507.2	7285.4	8323.5	9666.1	11222.8	11940.1	11066.1
70°	3956.0	4001.9	4232.0	4572.6	5220.4	5983.7	7031.8	8562.2	10321.4	11059.9	10161.0
72.5°	1879.8	1907.1	2056.4	2392.0	2803.5	3425.2	4350.0	5793.5	7378.6	8146.9	7250.6
75°	688.8	695.0	729.8	809.4	963.5	1197.3	1641.1	2538.7	3758.3	4482.0	3773.3
77.5°	371.7	373.0	386.7	406.6	433.9	465.0	532.1	713.6	1151.3	1566.4	1215.8
80°	233.7	232.5	246.2	262.3	281.1	295.9	302.1	323.2	364.3	426.4	391.5
82.5°	119.3	130.6	161.6	179.0	206.4	211.3	205.2	203.9	216.4	233.7	241.1
85°	65.9	58.5	85.8	114.4	124.3	128.1	129.3	121.9	119.3	116.9	123.1
87.5°	33.6	31.0	37.2	57.2	60.9	49.7	51.1	43.4	29.8	29.8	31.0
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°	2025.2	2025.2	2025.2	2025.2	2025.2	2025.2	2025.2	2025.2
2.5°	2010.4	2011.6	2009.1	2009.1	2009.1	2010.4	2009.1	2007.8
5°	1994.2	1996.6	1996.6	1998.0	1999.1	1999.1	1999.1	1999.1
7.5°	1970.5	1971.8	1974.4	1974.4	1974.4	1974.4	1974.4	1974.4
10°	1948.2	1945.7	1944.4	1942.0	1942.0	1938.3	1939.5	1940.7
12.5°	1936.9	1932.0	1929.5	1925.8	1923.3	1919.5	1919.5	1920.8
15°	1942.0	1934.4	1927.0	1924.5	1922.1	1919.5	1917.1	1918.4
17.5°	1951.9	1943.1	1934.4	1929.5	1924.5	1920.8	1919.5	1920.8
20°	1973.0	1960.5	1946.9	1938.3	1928.3	1925.8	1922.1	1925.8
22.5°	2001.6	1986.7	1969.3	1953.1	1942.0	1936.9	1932.0	1935.7
25°	2036.5	2020.3	2002.8	1984.2	1971.8	1968.1	1961.9	1961.9
27.5°	2084.8	2071.2	2056.4	2038.9	2026.4	2022.7	2012.8	2012.8
30°	2162.0	2148.4	2134.6	2119.7	2107.3	2103.6	2091.1	2091.1
32.5°	2264.0	2249.0	2240.4	2227.9	2218.0	2211.7	2196.7	2195.6
35°	2400.8	2387.0	2385.7	2377.1	2367.1	2368.4	2353.5	2350.9
37.5°	2597.1	2585.9	2589.7	2582.3	2573.5	2580.9	2572.3	2572.3
40°	2848.3	2844.6	2848.3	2843.3	2844.6	2845.7	2838.3	2840.8
42.5°	3151.6	3141.6	3164.0	3161.5	3157.8	3167.8	3150.4	3137.9
45°	3501.0	3497.3	3519.6	3523.4	3515.9	3522.1	3491.1	3489.7
47.5°	3880.2	3880.2	3900.0	3897.6	3890.0	3891.4	3854.0	3830.4
50°	4275.6	4273.0	4292.9	4288.0	4278.0	4276.7	4238.1	4214.5
52.5°	4687.0	4687.0	4715.6	4702.0	4678.4	4667.1	4619.9	4588.8
55°	5142.1	5135.8	5144.6	5099.7	5053.8	5020.3	4961.8	4938.2
57.5°	5717.6	5645.5	5583.3	5526.3	5461.6	5421.8	5353.3	5328.6
60°	6534.5	6341.7	6258.5	6144.0	6037.2	5983.7	5893.0	5844.5
62.5°	7665.8	7346.3	7120.1	6867.7	6624.0	6452.5	6314.4	6253.5
65°	8973.7	8277.5	7701.9	7161.1	6702.3	6338.0	6135.4	6072.0
67.5°	9471.0	8193.0	7199.6	6423.8	5866.9	5432.9	5190.6	5139.5
68°	9365.3	7999.0	6967.1	6172.7	5613.2	5175.6	4934.4	4888.5
70°	8261.3	6748.3	5659.2	4868.5	4346.4	3929.8	3759.6	3686.2
72.5°	5631.9	4334.0	3324.4	2659.3	2268.9	2005.4	1848.6	1795.2
75°	2592.1	1751.8	1169.8	874.0	742.2	678.8	630.3	617.9
77.5°	755.8	549.5	472.4	437.6	411.5	389.2	373.0	371.7
80°	359.3	336.9	327.0	304.7	281.1	259.8	245.0	247.4
82.5°	241.1	235.0	235.0	212.6	175.3	150.4	124.3	111.9
85°	128.1	133.1	140.5	133.1	115.6	85.8	55.9	60.9
87.5°	43.4	49.7	52.2	51.1	46.0	34.9	26.1	26.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)