

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: P196397

Luminaire Tested: **NAV-AF-05-D-UNV-5MQ-7030-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196397  
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-05-D-UNV-5MQ-7030-600  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(5) 70 CRI, 3000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V MEDIUM OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 20406.4 lumens  
Efficiency: N/A  
Efficacy: 126.0 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')  
IES Classification: Type V - Short - Full Cutoff  
BUG Rating: B4 - U0 - G2

Input Watts (W): 162  
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

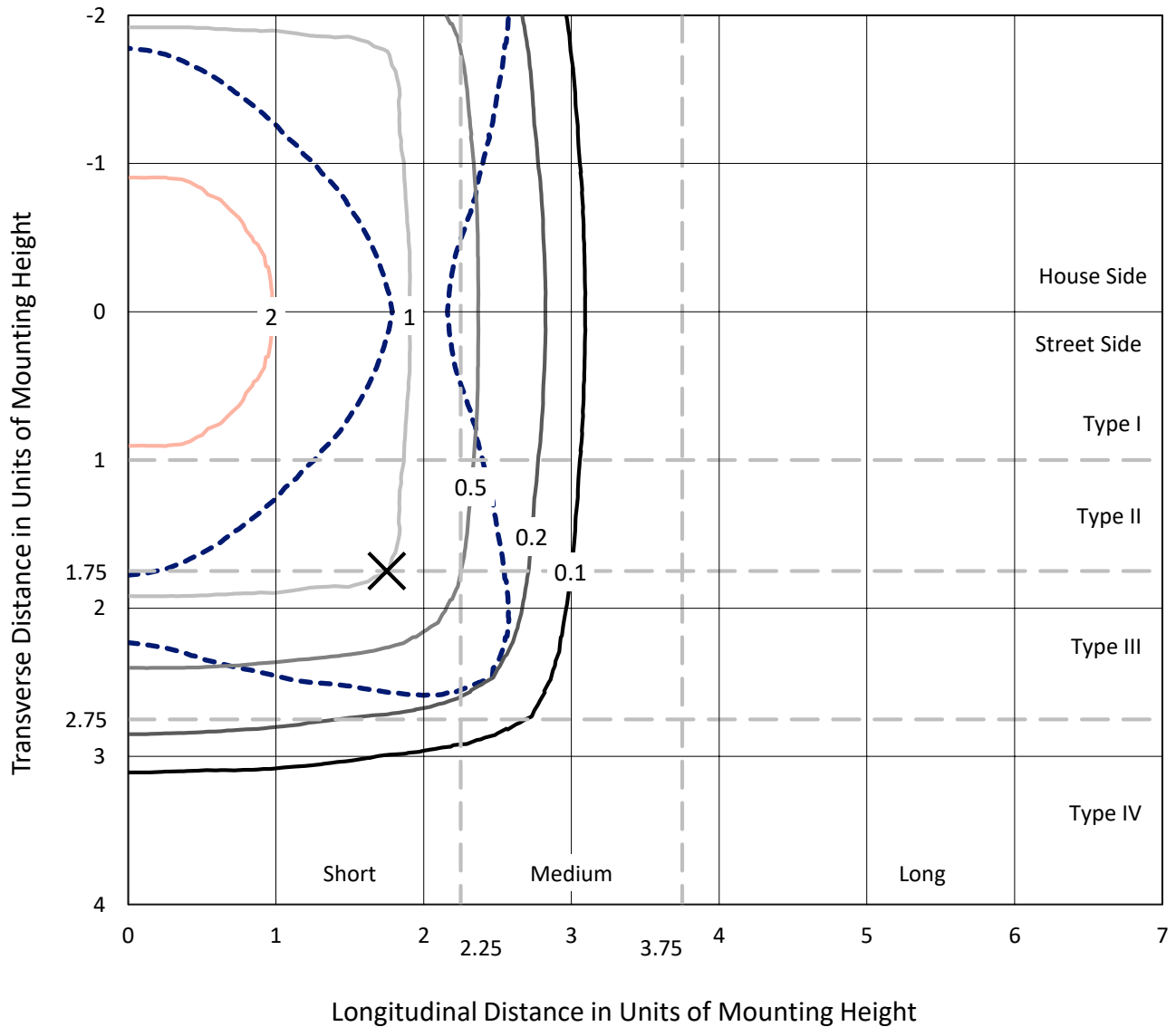


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### Iso-Footcandle Lines of Horizontal Illumination

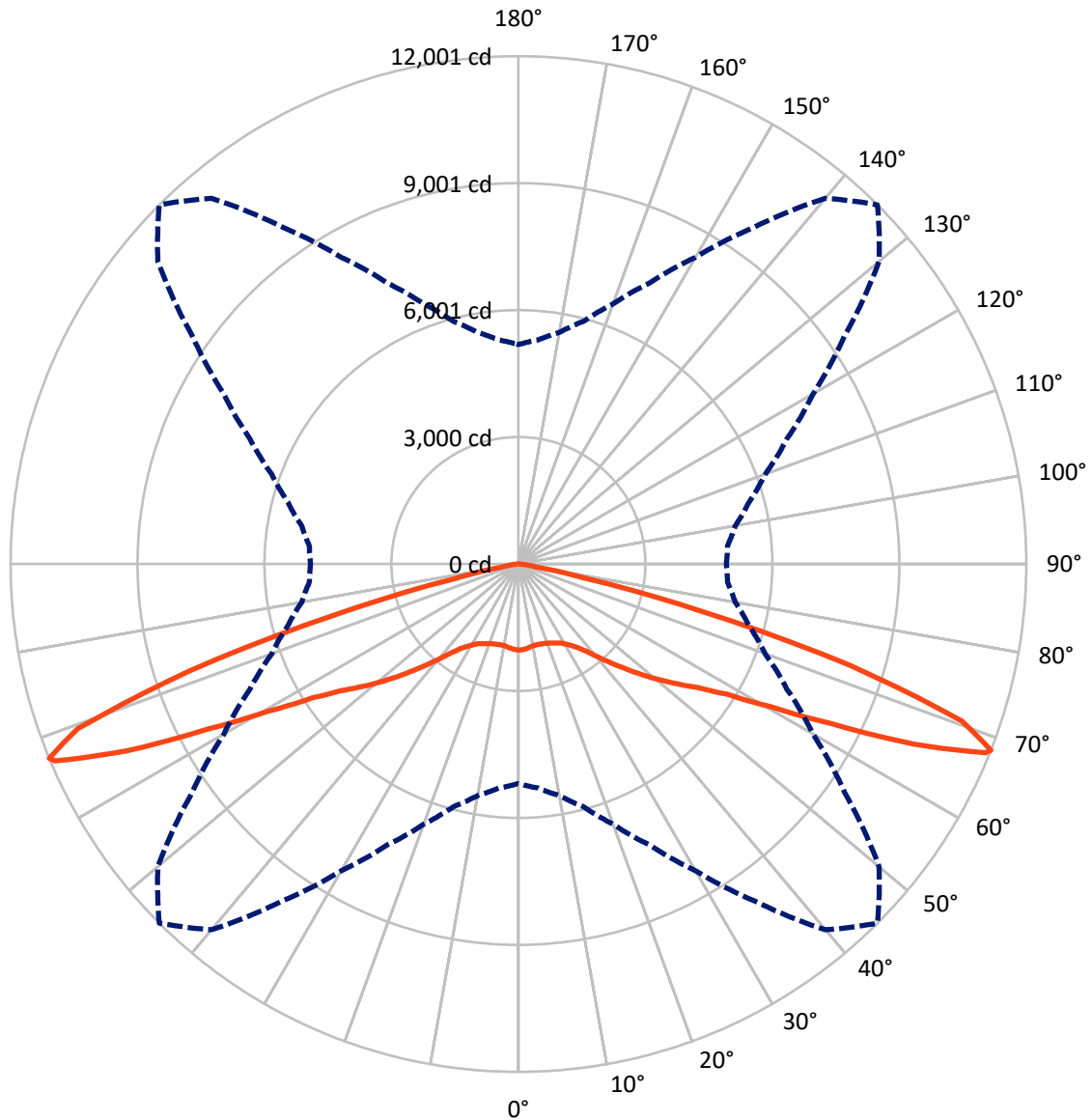
✕ Max cd  
 - - - 1/2 Max cd



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	10203.2	0.0	10203.2
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	10203.2	0.0	10203.2
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	20406.4	0.0	20406.4
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	190.5	0.9
10°-20°	552.4	2.7
20°-30°	939.2	4.6
30°-40°	1536.9	7.5
40°-50°	2746.7	13.5
50°-60°	4638.7	22.7
60°-70°	7193.0	35.2
70°-80°	2473.1	12.1
80°-90°	135.9	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°	20406.4	100.0
0°-180°	20406.4	100.0



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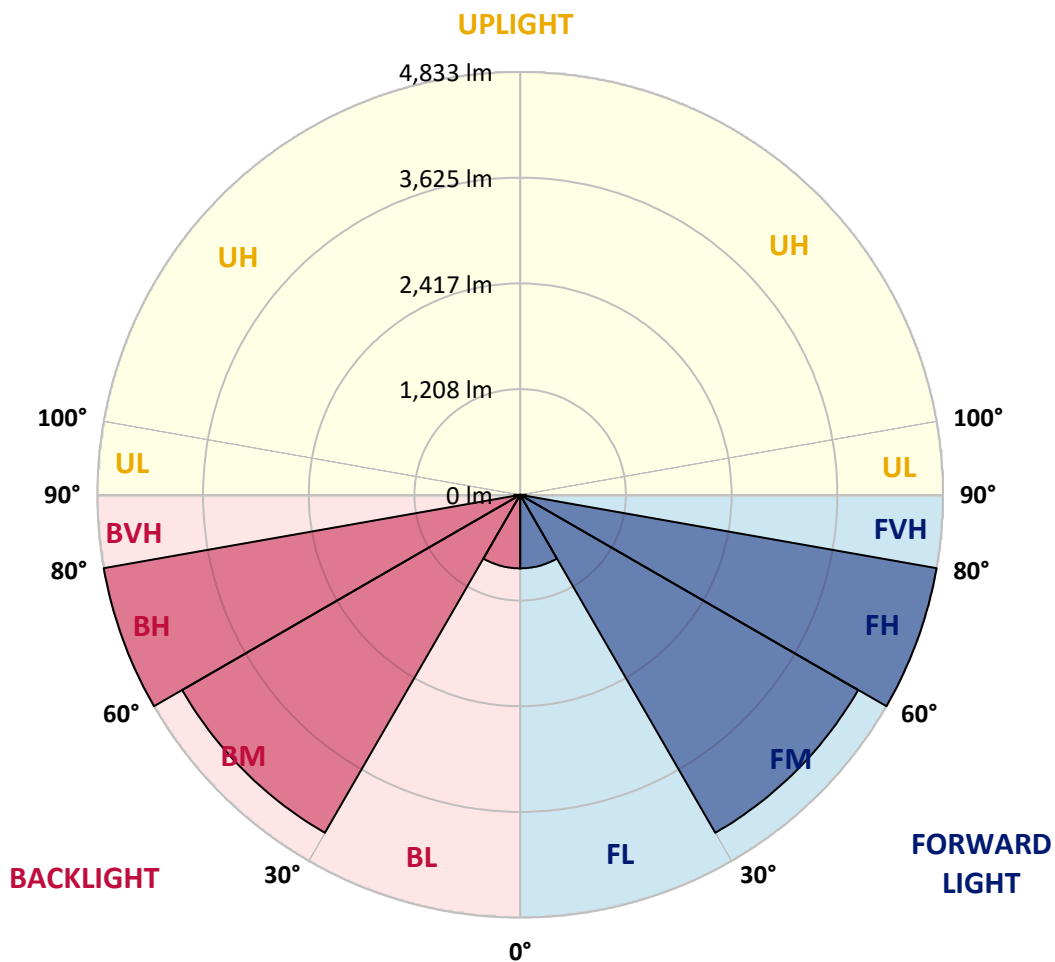
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	841.0	4.1			
FM (30°-60°)	4461.2	21.9			
FH (60°-80°)	4833.0	23.7			G2/5000
FVH (80°-90°)	68.0	0.3			G1/100
BL (0°-30°)	841.0	4.1	B2/1000		
BM (30°-60°)	4461.2	21.9	B3/5000		
BH (60°-80°)	4833.0	23.7	B4/5000		G2/5000
BVH (80°-90°)	68.0	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°	2035.6	2035.6	2035.6	2035.6	2035.6	2035.6	2035.6	2035.6	2035.6	2035.6	2035.6
2.5°	2044.4	2044.4	2046.9	2045.6	2041.8	2038.1	2034.3	2030.6	2028.1	2025.5	2023.1
5°	2023.1	2023.1	2026.9	2024.3	2021.9	2018.1	2015.7	2011.9	2009.4	2006.9	2008.0
7.5°	1995.6	1998.2	2000.6	1999.3	1994.3	1993.1	1989.4	1988.1	1985.6	1981.9	1983.2
10°	1971.9	1973.1	1975.6	1974.4	1973.1	1969.4	1968.1	1966.8	1965.6	1960.6	1959.3
12.5°	1948.1	1950.6	1953.1	1954.3	1953.1	1954.3	1955.6	1956.9	1955.6	1953.1	1953.1
15°	1929.4	1931.9	1935.6	1939.4	1940.7	1948.1	1953.1	1958.2	1961.9	1963.2	1959.3
17.5°	1919.3	1923.2	1928.1	1935.6	1941.9	1950.6	1959.3	1966.8	1973.1	1974.4	1970.6
20°	1918.1	1921.9	1929.4	1938.2	1949.4	1960.6	1974.4	1985.6	1991.9	1995.6	1991.9
22.5°	1926.9	1931.9	1941.9	1953.1	1966.8	1981.9	1999.3	2011.9	2024.3	2029.4	2025.5
25°	1951.9	1956.9	1968.1	1981.9	1996.8	2015.7	2033.1	2049.3	2061.8	2068.1	2063.1
27.5°	2004.4	2005.6	2018.1	2033.1	2050.6	2066.8	2089.4	2096.8	2106.8	2113.1	2106.8
30°	2078.1	2080.7	2091.9	2115.6	2131.8	2153.1	2165.5	2173.0	2184.3	2190.5	2183.0
32.5°	2190.5	2193.1	2203.0	2225.5	2240.6	2256.8	2271.7	2276.8	2288.0	2295.5	2286.8
35°	2349.3	2354.2	2363.0	2378.0	2390.5	2402.9	2414.2	2410.5	2418.0	2428.0	2419.2
37.5°	2566.7	2565.4	2567.9	2579.2	2591.6	2599.2	2616.6	2607.9	2615.4	2624.2	2619.2
40°	2820.3	2820.3	2819.1	2839.1	2844.1	2851.5	2870.3	2859.1	2869.0	2879.1	2870.3
42.5°	3109.0	3114.0	3120.2	3136.5	3150.3	3152.7	3161.5	3156.5	3168.9	3177.7	3168.9
45°	3441.3	3448.9	3456.4	3493.9	3500.1	3505.1	3511.4	3495.1	3508.9	3516.4	3513.9
47.5°	3786.3	3800.0	3816.3	3855.0	3880.1	3891.3	3896.3	3877.5	3878.7	3889.9	3891.3
50°	4176.1	4191.1	4207.3	4251.2	4274.9	4294.9	4301.1	4279.9	4282.4	4291.1	4293.7
52.5°	4536.0	4553.5	4588.6	4647.3	4681.0	4715.9	4718.5	4692.2	4703.5	4709.7	4704.7
55°	4874.7	4897.2	4943.4	5022.1	5083.4	5152.1	5183.4	5154.7	5154.7	5149.6	5147.1
57.5°	5269.6	5294.6	5342.0	5433.3	5518.2	5616.9	5701.9	5730.6	5783.1	5800.7	5773.2
60°	5864.4	5890.6	5939.4	6059.3	6166.8	6310.5	6450.4	6564.2	6749.1	6849.0	6759.1
62.5°	6407.9	6447.9	6562.8	6772.9	7005.2	7271.4	7580.1	7800.0	8136.1	8303.6	8077.4
65°	6284.3	6365.5	6590.4	6920.3	7400.1	7977.4	8606.1	9209.6	9904.4	10260.4	9800.5
67.5°	5489.5	5558.2	5800.7	6184.3	6782.9	7578.8	8556.0	9805.6	11238.9	11906.2	11092.6
68°	5185.9	5314.6	5555.8	5936.8	6540.4	7322.7	8366.1	9715.7	11280.2	12001.1	11122.7
70°	3976.3	4022.5	4253.7	4596.0	5247.0	6014.2	7067.8	8606.1	10374.1	11116.4	10213.0
72.5°	1889.4	1916.9	2066.8	2404.2	2817.8	3442.6	4372.3	5823.1	7416.4	8188.7	7287.7
75°	692.2	698.5	733.5	813.4	968.5	1203.4	1649.5	2551.6	3777.5	4504.8	3792.5
77.5°	373.6	374.9	388.6	408.6	436.2	467.3	534.9	717.3	1157.2	1574.5	1222.1
80°	234.9	233.7	247.5	263.7	282.4	297.4	303.6	324.9	366.1	428.7	393.7
82.5°	119.9	131.2	162.5	180.0	207.5	212.4	206.2	205.0	217.4	234.9	242.4
85°	66.2	58.8	86.2	114.9	125.0	128.7	129.9	122.5	119.9	117.5	123.7
87.5°	33.8	31.2	37.4	57.5	61.1	49.9	51.3	43.7	29.9	29.9	31.2
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°	2035.6	2035.6	2035.6	2035.6	2035.6	2035.6	2035.6	2035.6
2.5°	2020.6	2021.9	2019.3	2019.3	2019.3	2020.6	2019.3	2018.1
5°	2004.4	2006.9	2006.9	2008.0	2009.4	2009.4	2009.4	2009.4
7.5°	1980.7	1981.9	1984.3	1984.3	1984.3	1984.3	1984.3	1984.3
10°	1958.2	1955.6	1954.3	1951.9	1951.9	1948.1	1949.4	1950.6
12.5°	1946.9	1941.9	1939.4	1935.6	1933.2	1929.4	1929.4	1930.6
15°	1951.9	1944.4	1936.8	1934.3	1931.9	1929.4	1926.9	1928.1
17.5°	1961.9	1953.1	1944.4	1939.4	1934.3	1930.6	1929.4	1930.6
20°	1983.2	1970.6	1956.9	1948.1	1938.2	1935.6	1931.9	1935.6
22.5°	2011.9	1996.8	1979.3	1963.2	1951.9	1946.9	1941.9	1945.6
25°	2046.9	2030.6	2013.1	1994.3	1981.9	1978.1	1971.9	1971.9
27.5°	2095.6	2081.8	2066.8	2049.3	2036.8	2033.1	2023.1	2023.1
30°	2173.0	2159.3	2145.6	2130.5	2118.1	2114.2	2101.8	2101.8
32.5°	2275.6	2260.6	2251.8	2239.3	2229.3	2223.0	2208.0	2206.8
35°	2413.0	2399.3	2398.0	2389.3	2379.2	2380.4	2365.5	2363.0
37.5°	2610.4	2599.2	2602.9	2595.5	2586.7	2594.2	2585.4	2585.4
40°	2862.8	2859.1	2862.8	2857.7	2859.1	2860.3	2852.9	2855.4
42.5°	3167.8	3157.7	3180.2	3177.7	3174.0	3184.0	3166.5	3154.0
45°	3518.9	3515.1	3537.6	3541.3	3533.9	3540.1	3508.9	3507.7
47.5°	3900.0	3900.0	3920.0	3917.5	3910.0	3911.3	3873.8	3850.0
50°	4297.3	4294.9	4314.8	4309.8	4299.9	4298.6	4259.9	4236.1
52.5°	4710.9	4710.9	4739.7	4726.0	4702.2	4690.9	4643.5	4612.3
55°	5168.3	5162.1	5170.8	5125.9	5079.6	5045.9	4987.1	4963.4
57.5°	5746.9	5674.4	5612.0	5554.4	5489.5	5449.6	5380.8	5355.8
60°	6567.9	6374.1	6290.5	6175.6	6068.0	6014.2	5923.1	5874.4
62.5°	7705.1	7383.8	7156.5	6902.8	6657.8	6485.4	6346.7	6285.4
65°	9019.6	8319.9	7741.2	7197.7	6736.6	6370.5	6166.8	6103.0
67.5°	9519.4	8234.9	7236.5	6456.6	5896.8	5460.8	5217.0	5165.9
68°	9413.2	8040.0	7002.8	6204.3	5641.9	5202.1	4959.6	4913.4
70°	8303.6	6782.9	5688.1	4893.4	4368.6	3949.9	3778.7	3705.1
72.5°	5660.7	4356.0	3341.4	2672.9	2280.6	2015.7	1858.2	1804.4
75°	2605.4	1760.7	1175.8	878.5	746.0	682.4	633.6	621.0
77.5°	759.8	552.3	474.8	439.9	413.6	391.1	374.9	373.6
80°	361.1	338.6	328.7	306.2	282.4	261.1	246.2	248.7
82.5°	242.4	236.2	236.2	213.7	176.2	151.3	125.0	112.4
85°	128.7	133.8	141.2	133.8	116.3	86.2	56.3	61.1
87.5°	43.7	49.9	52.5	51.3	46.2	35.0	26.2	26.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)