

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: P196901

Luminaire Tested: **NAV-AF-05-D-UNV-5NQ-8030-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196901  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24130)  
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-5NQ-8030-600  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(5) 80 CRI, 3000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V NARROW OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 16619 lumens  
Efficiency: N/A  
Efficacy: 102.6 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

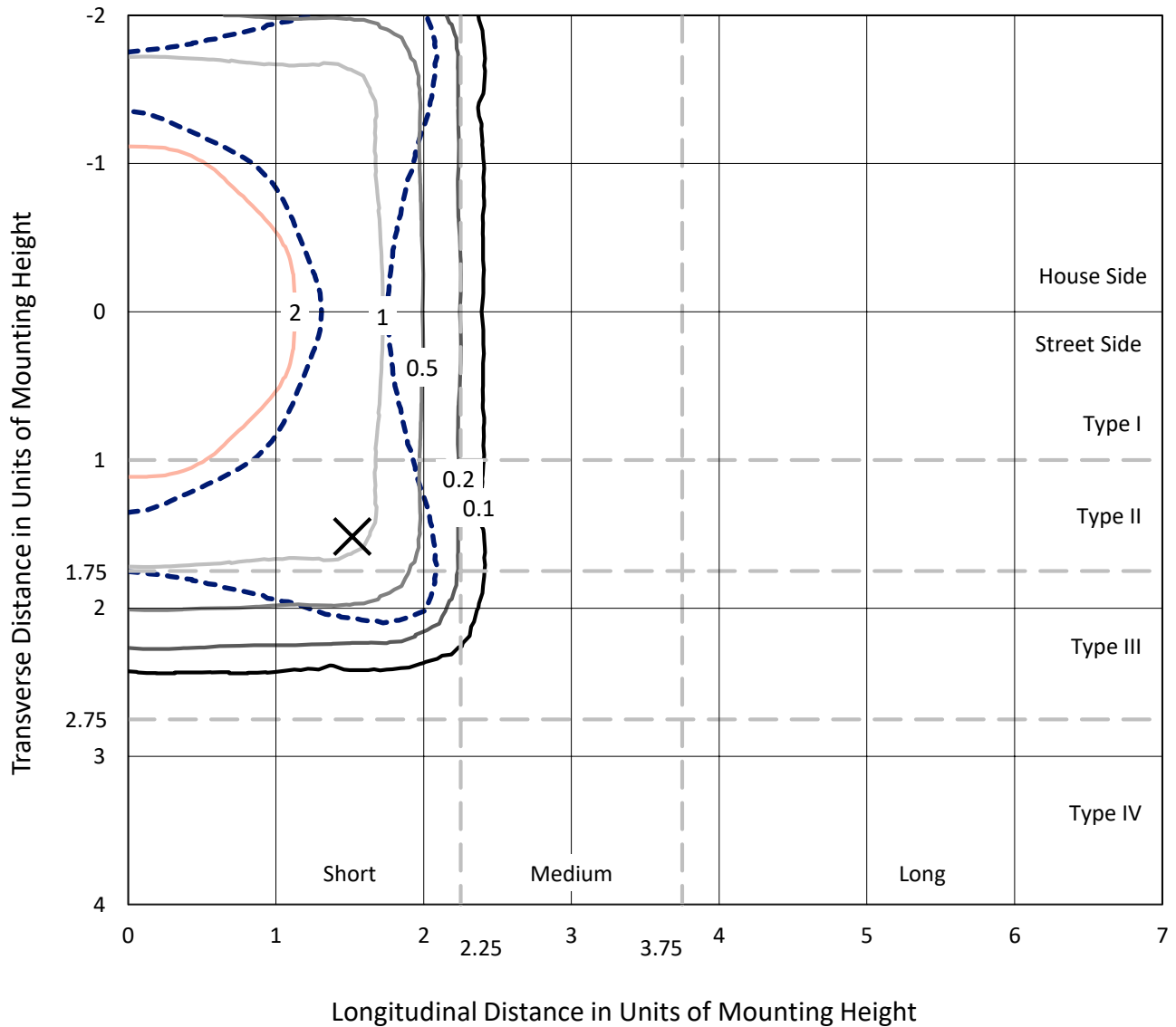
Input Watts (W): 162  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

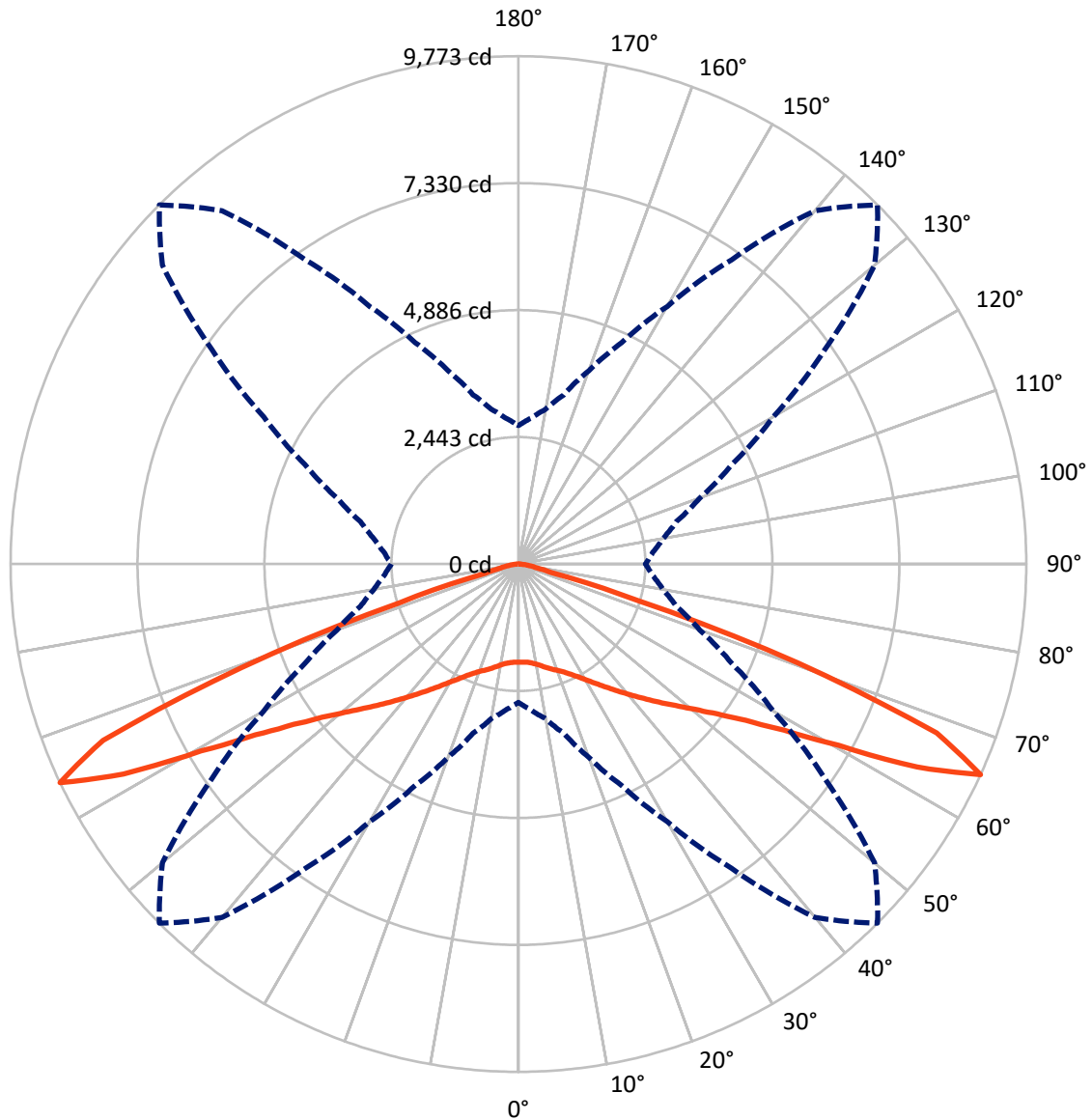
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3 fc  
 Type V - Short - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral      - - - Horizontal Cone Through 65-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	8309.5	0.0	8309.5
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	8309.5	0.0	8309.5
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	16619.0	0.0	16619.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	184.1	1.1
10°-20°	590.0	3.6
20°-30°	1100.6	6.6
30°-40°	1855.9	11.2
40°-50°	3014.5	18.1
50°-60°	4723.1	28.4
60°-70°	4458.4	26.8
70°-80°	600.9	3.6
80°-90°	91.5	0.6
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°	16619.0	100.0
0°-180°	16619.0	100.0

**Coefficient of Utilization**



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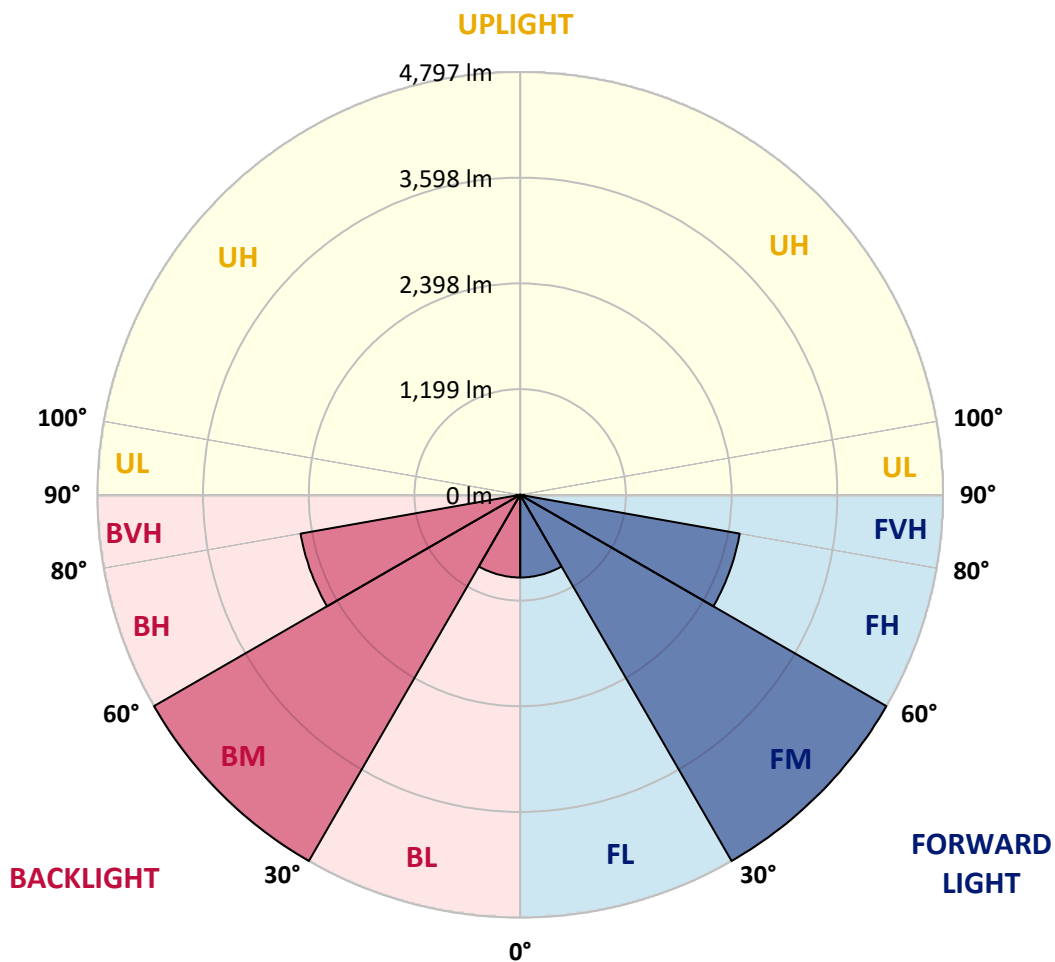
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	937.4	5.6			
FM (30°-60°)	4796.7	28.9			
FH (60°-80°)	2529.6	15.2			G2/5000
FVH (80°-90°)	45.8	0.3			G1/100
BL (0°-30°)	937.4	5.6	B2/1000		
BM (30°-60°)	4796.7	28.9	B3/5000		
BH (60°-80°)	2529.6	15.2	B4/5000		G2/5000
BVH (80°-90°)	45.8	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°	1890.4	1890.4	1890.4	1890.4	1890.4	1890.4	1890.4	1890.4	1890.4	1890.4	1890.4
2.5°	1905.9	1905.9	1909.0	1908.0	1903.8	1900.7	1897.6	1893.5	1891.4	1889.4	1888.3
5°	1916.3	1916.3	1919.4	1918.3	1915.2	1911.1	1909.0	1905.9	1902.8	1900.7	1901.8
7.5°	1942.2	1943.2	1944.2	1943.2	1940.1	1937.0	1932.8	1931.8	1927.7	1924.6	1926.6
10°	1981.5	1981.5	1982.5	1983.6	1981.5	1974.2	1974.2	1972.2	1968.0	1963.9	1964.9
12.5°	2025.0	2025.0	2026.0	2026.0	2026.0	2021.9	2022.9	2021.9	2016.7	2014.6	2016.7
15°	2067.4	2068.5	2068.5	2070.5	2070.5	2071.6	2075.7	2075.7	2073.6	2072.6	2072.6
17.5°	2117.1	2119.2	2120.2	2123.3	2124.4	2126.4	2130.6	2131.6	2132.6	2129.5	2130.6
20°	2183.4	2184.4	2187.5	2188.5	2192.7	2192.7	2194.8	2193.7	2191.7	2187.5	2187.5
22.5°	2257.9	2260.0	2266.2	2266.2	2271.4	2268.3	2269.3	2266.2	2261.0	2258.9	2256.9
25°	2355.2	2358.3	2363.5	2361.4	2363.5	2358.3	2358.3	2358.3	2355.2	2352.1	2351.1
27.5°	2478.4	2473.2	2478.4	2474.3	2473.2	2469.1	2470.1	2468.1	2465.0	2463.9	2459.8
30°	2606.8	2600.6	2603.7	2604.7	2602.7	2601.6	2597.5	2594.4	2589.2	2590.2	2587.1
32.5°	2753.8	2747.6	2750.7	2751.7	2749.7	2751.7	2750.7	2743.4	2737.2	2741.4	2741.4
35°	2928.8	2924.6	2932.9	2936.0	2929.8	2926.7	2922.5	2914.3	2904.9	2911.2	2912.2
37.5°	3138.9	3133.7	3140.0	3148.2	3136.8	3130.6	3114.1	3101.6	3095.4	3098.5	3102.7
40°	3357.4	3358.4	3376.0	3378.1	3365.6	3358.4	3341.8	3323.2	3305.6	3305.6	3310.8
42.5°	3587.2	3590.3	3611.0	3618.2	3614.1	3600.6	3577.9	3555.1	3532.3	3536.5	3542.7
45°	3847.0	3842.9	3864.6	3882.2	3879.1	3875.0	3853.3	3811.8	3791.1	3790.1	3800.5
47.5°	4120.3	4128.6	4151.4	4181.4	4180.4	4170.0	4142.1	4103.8	4065.5	4068.6	4081.0
50°	4439.2	4450.6	4488.9	4518.9	4523.1	4520.0	4486.8	4442.3	4388.5	4391.6	4408.2
52.5°	4724.9	4741.5	4786.0	4848.1	4886.4	4904.0	4882.3	4840.9	4786.0	4789.1	4806.7
55°	4983.8	5009.6	5075.9	5160.8	5237.4	5308.8	5340.9	5339.9	5299.5	5308.8	5331.6
57.5°	5146.3	5182.5	5283.0	5419.6	5571.8	5715.7	5839.9	5956.9	5982.8	6031.4	6031.4
60°	4927.9	5012.7	5146.3	5380.3	5679.5	6002.5	6352.4	6693.0	6912.5	7085.3	6992.2
62.5°	4115.2	4240.4	4427.8	4736.3	5202.2	5778.8	6481.8	7273.8	8099.9	8605.1	8234.5
65°	2662.7	2820.1	3024.0	3370.8	3957.8	4700.1	5724.0	7147.5	8876.4	9772.9	8944.7
67.5°	1054.9	1161.6	1285.8	1532.2	2041.5	2770.4	3919.5	5675.3	7838.0	8683.8	7755.2
70°	504.2	521.8	545.6	598.4	725.7	979.4	1574.6	2796.2	4806.7	5698.1	4691.8
72.5°	364.4	367.5	378.9	396.5	433.8	485.5	590.1	855.1	1657.5	2410.1	1659.5
75°	276.4	280.6	286.8	296.1	315.8	340.6	379.9	455.5	567.3	654.3	566.3
77.5°	210.2	214.3	219.5	228.8	239.1	256.7	271.2	301.3	348.9	367.5	365.4
80°	153.2	160.5	168.7	177.0	184.3	192.6	193.6	208.1	235.0	252.6	247.4
82.5°	97.3	103.5	125.3	134.6	135.6	137.7	136.7	137.7	152.2	164.6	160.5
85°	62.1	66.3	77.6	88.0	85.9	90.1	90.1	88.0	81.8	70.4	83.9
87.5°	31.1	32.1	37.3	46.6	44.5	39.3	38.3	38.3	28.0	23.8	25.9
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°	1890.4	1890.4	1890.4	1890.4	1890.4	1890.4	1890.4	1890.4
2.5°	1885.2	1887.3	1884.2	1884.2	1883.1	1885.2	1882.1	1882.1
5°	1899.7	1902.8	1901.8	1901.8	1903.8	1905.9	1904.9	1903.8
7.5°	1925.6	1927.7	1929.7	1930.8	1932.8	1931.8	1933.9	1932.8
10°	1964.9	1962.9	1966.0	1962.9	1963.9	1961.8	1962.9	1962.9
12.5°	2014.6	2011.5	2009.4	2007.4	2007.4	2003.2	2003.2	2004.3
15°	2071.6	2066.4	2062.2	2060.2	2058.1	2058.1	2055.0	2057.1
17.5°	2127.5	2122.3	2115.0	2115.0	2111.9	2109.9	2107.8	2113.0
20°	2186.5	2181.3	2177.2	2176.1	2169.9	2167.8	2168.9	2175.1
22.5°	2254.8	2251.7	2251.7	2249.6	2245.5	2242.4	2242.4	2249.6
25°	2346.9	2340.7	2341.8	2342.8	2340.7	2340.7	2338.7	2343.8
27.5°	2459.8	2454.6	2457.7	2459.8	2457.7	2460.8	2457.7	2461.9
30°	2592.3	2589.2	2592.3	2595.4	2590.2	2590.2	2588.2	2591.3
32.5°	2750.7	2746.6	2748.6	2748.6	2741.4	2735.2	2726.9	2733.1
35°	2924.6	2919.4	2923.6	2926.7	2918.4	2912.2	2899.8	2904.9
37.5°	3116.1	3118.2	3123.4	3136.8	3134.8	3124.4	3115.1	3119.2
40°	3330.4	3340.8	3363.6	3372.9	3370.8	3360.5	3348.0	3350.1
42.5°	3572.7	3586.2	3610.0	3625.5	3618.2	3603.8	3588.2	3594.4
45°	3836.7	3857.4	3888.5	3904.0	3894.7	3879.1	3857.4	3868.8
47.5°	4116.2	4157.6	4199.0	4219.7	4216.6	4194.9	4166.9	4170.0
50°	4450.6	4505.5	4558.3	4579.0	4563.4	4530.3	4491.0	4489.9
52.5°	4866.8	4925.8	4969.3	4964.1	4925.8	4874.0	4829.5	4827.4
55°	5386.5	5406.1	5399.9	5355.4	5288.1	5207.4	5150.4	5141.1
57.5°	6014.9	5948.6	5851.3	5716.7	5565.6	5412.4	5308.8	5270.5
60°	6783.0	6483.9	6136.0	5769.5	5435.1	5184.6	5026.2	4929.9
62.5°	7417.7	6551.1	5773.7	5137.0	4616.2	4306.7	4090.3	3956.8
65°	7200.3	5659.8	4533.4	3712.5	3144.1	2824.2	2595.4	2443.2
67.5°	5562.5	3781.8	2631.6	1824.1	1383.1	1170.9	1022.8	926.6
70°	2804.5	1450.4	878.9	620.1	530.1	492.8	467.9	453.4
72.5°	823.0	549.7	456.6	403.8	371.7	348.9	334.4	327.1
75°	455.5	371.7	328.2	298.2	277.5	261.9	252.6	246.4
77.5°	313.7	270.2	248.5	228.8	212.2	200.8	193.6	187.4
80°	219.5	197.7	188.4	178.1	165.6	156.3	146.0	141.8
82.5°	146.0	136.7	134.6	126.3	119.1	108.7	90.1	83.9
85°	85.9	84.9	84.9	81.8	76.6	67.3	53.8	53.8
87.5°	30.0	31.1	32.1	34.2	33.1	28.0	22.8	21.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)