

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: P196420

Luminaire Tested: **NAV-AF-04-D-UNV-5NQ-7030-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196420  
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-04-D-UNV-5NQ-7030-600  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(4) 70 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: 15982.4 lumens  
Efficiency: N/A  
Efficacy: 123.9 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type V - Short - Full Cutoff  
BUG Rating: B3 - U0 - G2

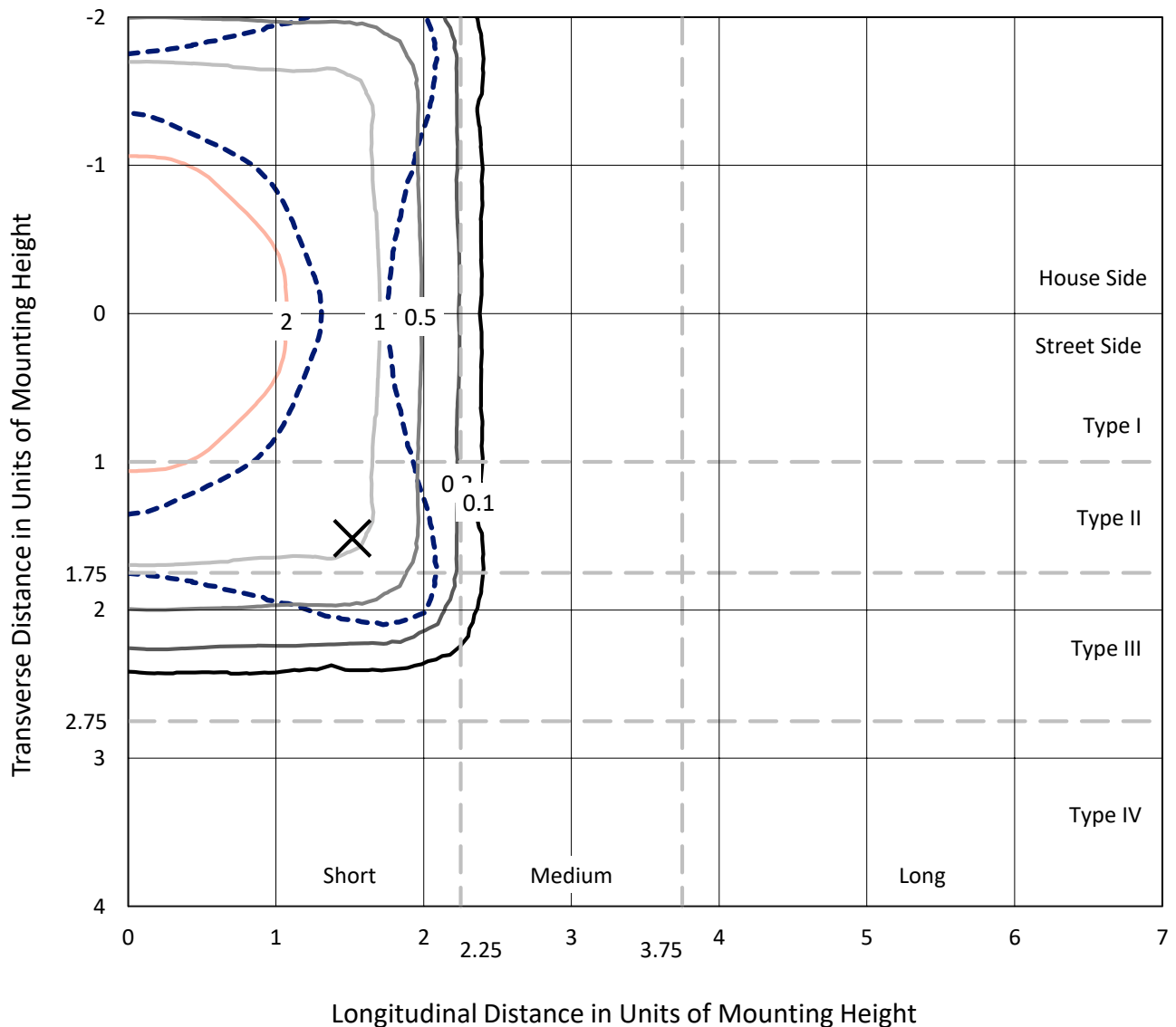
Input Watts (W): 129  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

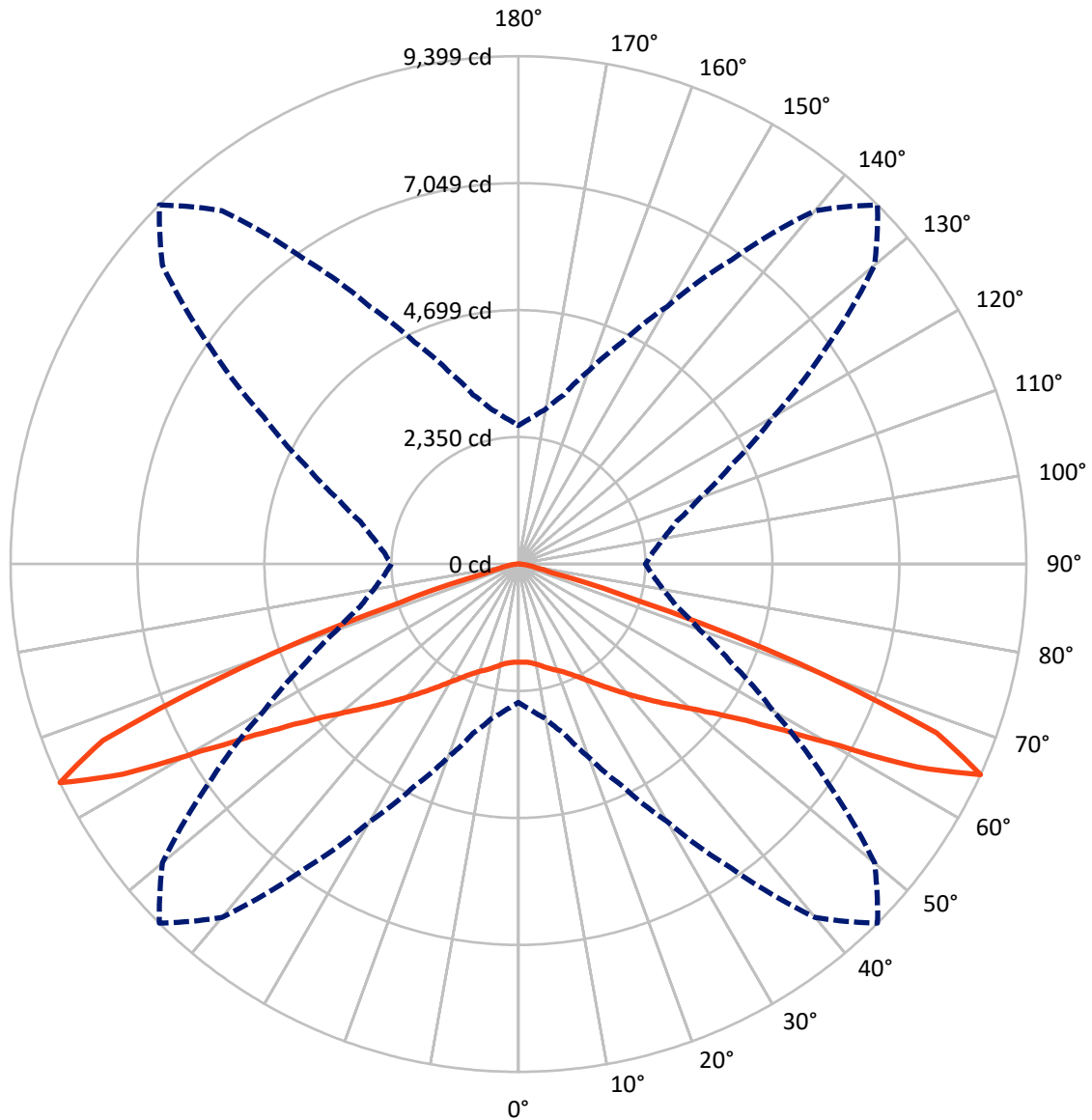
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.9 fc  
 Type V - Short - 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	7991.2	0.0	7991.2
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	7991.2	0.0	7991.2
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	15982.4	0.0	15982.4
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	177.0	1.1
10°-20°	567.4	3.6
20°-30°	1058.5	6.6
30°-40°	1784.8	11.2
40°-50°	2899.0	18.1
50°-60°	4542.2	28.4
60°-70°	4287.6	26.8
70°-80°	577.8	3.6
80°-90°	88.0	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°	15982.4	100.0
0°-180°	15982.4	100.0



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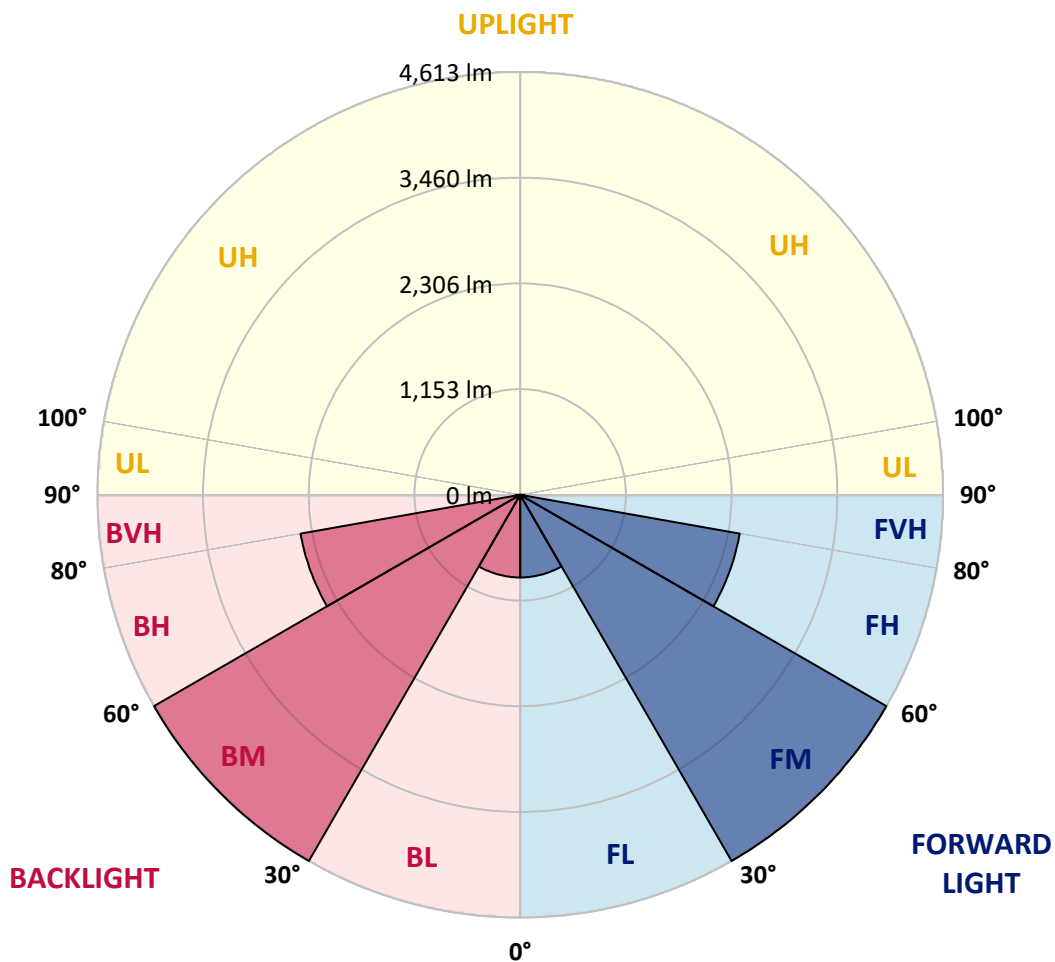
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	901.5	5.6			
FM	(30°-60°)	4613.0	28.9			
FH	(60°-80°)	2432.7	15.2			G2/5000
FVH	(80°-90°)	44.0	0.3			G1/100
BL	(0°-30°)	901.5	5.6	B2/1000		
BM	(30°-60°)	4613.0	28.9	B3/5000		
BH	(60°-80°)	2432.7	15.2	B3/2500		G2/5000
BVH	(80°-90°)	44.0	0.3			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B3-U0-G2**

Type V Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1818.0	1818.0	1818.0	1818.0	1818.0	1818.0	1818.0	1818.0	1818.0	1818.0	1818.0
2.5°	1833.0	1833.0	1835.9	1834.9	1830.9	1827.9	1824.9	1821.1	1818.9	1817.0	1816.0
5°	1842.8	1842.8	1845.8	1844.9	1841.9	1837.8	1835.9	1833.0	1830.0	1827.9	1828.9
7.5°	1867.8	1868.8	1869.8	1868.8	1865.8	1862.8	1858.8	1857.9	1853.8	1850.9	1852.8
10°	1905.6	1905.6	1906.6	1907.5	1905.6	1898.6	1898.6	1896.6	1892.7	1888.6	1889.6
12.5°	1947.4	1947.4	1948.4	1948.4	1948.4	1944.4	1945.5	1944.4	1939.5	1937.5	1939.5
15°	1988.2	1989.3	1989.3	1991.2	1991.2	1992.3	1996.1	1996.1	1994.2	1993.2	1993.2
17.5°	2036.0	2038.0	2039.0	2041.9	2043.0	2045.0	2048.9	2049.9	2050.9	2047.9	2048.9
20°	2099.8	2100.7	2103.7	2104.8	2108.7	2108.7	2110.7	2109.7	2107.7	2103.7	2103.7
22.5°	2171.4	2173.3	2179.4	2179.4	2184.4	2181.4	2182.4	2179.4	2174.4	2172.4	2170.4
25°	2265.1	2268.0	2273.0	2271.0	2273.0	2268.0	2268.0	2268.0	2265.1	2262.0	2261.0
27.5°	2383.5	2378.5	2383.5	2379.5	2378.5	2374.5	2375.6	2373.5	2370.6	2369.5	2365.6
30°	2507.0	2501.0	2504.0	2505.0	2502.9	2501.9	2498.0	2495.1	2490.0	2491.0	2488.1
32.5°	2648.3	2642.3	2645.3	2646.4	2644.3	2646.4	2645.3	2638.4	2632.4	2636.4	2636.4
35°	2816.6	2812.6	2820.5	2823.6	2817.6	2814.6	2810.5	2802.6	2793.6	2799.7	2800.7
37.5°	3018.8	3013.7	3019.7	3027.7	3016.6	3010.7	2994.8	2982.9	2976.9	2979.8	2983.9
40°	3228.7	3229.8	3246.6	3248.8	3236.7	3229.8	3213.9	3196.0	3179.0	3179.0	3184.0
42.5°	3449.8	3452.8	3472.7	3479.7	3475.6	3462.8	3440.8	3418.9	3397.0	3401.0	3407.0
45°	3699.7	3695.7	3716.6	3733.5	3730.5	3726.7	3705.6	3665.8	3645.9	3644.9	3654.8
47.5°	3962.5	3970.5	3992.5	4021.3	4020.3	4010.4	3983.5	3946.6	3909.8	3912.8	3924.7
50°	4269.2	4280.1	4317.0	4345.8	4349.8	4346.9	4314.9	4272.1	4220.3	4223.4	4239.3
52.5°	4544.0	4559.9	4602.6	4662.4	4699.2	4716.1	4695.3	4655.4	4602.6	4605.8	4622.6
55°	4792.8	4817.8	4881.4	4963.1	5036.8	5105.4	5136.4	5135.4	5096.5	5105.4	5127.4
57.5°	4949.2	4984.0	5080.5	5212.0	5358.4	5496.8	5616.3	5728.8	5753.6	5800.5	5800.5
60°	4739.1	4820.7	4949.2	5174.2	5461.9	5772.5	6109.0	6436.6	6647.7	6814.0	6724.4
62.5°	3957.6	4078.0	4258.3	4554.9	5003.0	5557.5	6233.6	6995.1	7789.6	8275.6	7919.1
65°	2560.7	2712.1	2908.2	3241.7	3806.3	4520.0	5504.7	6873.7	8536.3	9398.6	8602.1
67.5°	1014.5	1117.0	1236.6	1473.5	1963.4	2664.3	3769.3	5457.9	7537.8	8351.2	7458.1
70°	484.9	501.8	524.7	575.5	697.9	941.9	1514.4	2689.1	4622.6	5479.8	4512.1
72.5°	350.5	353.5	364.4	381.4	417.2	467.0	567.5	822.4	1594.0	2317.8	1596.0
75°	265.8	269.8	275.8	284.7	303.6	327.6	365.4	438.0	545.6	629.3	544.5
77.5°	202.1	206.1	211.1	220.0	230.0	246.9	260.8	289.7	335.5	353.5	351.5
80°	147.4	154.3	162.2	170.2	177.2	185.2	186.2	200.2	226.0	242.9	237.9
82.5°	93.6	99.5	120.5	129.5	130.4	132.4	131.4	132.4	146.4	158.3	154.3
85°	59.8	63.7	74.7	84.6	82.6	86.7	86.7	84.6	78.6	67.7	80.7
87.5°	29.8	30.8	35.8	44.8	42.8	37.8	36.8	36.8	26.9	23.0	24.9
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°	1818.0	1818.0	1818.0	1818.0	1818.0	1818.0	1818.0	1818.0
2.5°	1813.0	1815.1	1812.1	1812.1	1811.0	1813.0	1810.0	1810.0
5°	1827.0	1830.0	1828.9	1828.9	1830.9	1833.0	1832.0	1830.9
7.5°	1851.8	1853.8	1855.8	1856.9	1858.8	1857.9	1859.8	1858.8
10°	1889.6	1887.7	1890.6	1887.7	1888.6	1886.7	1887.7	1887.7
12.5°	1937.5	1934.4	1932.5	1930.5	1930.5	1926.5	1926.5	1927.6
15°	1992.3	1987.2	1983.3	1981.3	1979.2	1979.2	1976.3	1978.2
17.5°	2046.0	2041.0	2034.1	2034.1	2031.0	2029.1	2027.1	2032.0
20°	2102.7	2097.8	2093.7	2092.8	2086.9	2084.7	2085.8	2091.8
22.5°	2168.5	2165.4	2165.4	2163.5	2159.5	2156.4	2156.4	2163.5
25°	2257.1	2251.1	2252.1	2253.0	2251.1	2251.1	2249.1	2254.0
27.5°	2365.6	2360.5	2363.6	2365.6	2363.6	2366.5	2363.6	2367.5
30°	2493.0	2490.0	2493.0	2496.0	2491.0	2491.0	2489.0	2491.9
32.5°	2645.3	2641.4	2643.3	2643.3	2636.4	2630.4	2622.4	2628.4
35°	2812.6	2807.6	2811.6	2814.6	2806.7	2800.7	2788.8	2793.6
37.5°	2996.8	2998.7	3003.7	3016.6	3014.7	3004.7	2995.8	2999.8
40°	3202.8	3212.9	3234.7	3243.7	3241.7	3231.8	3219.8	3221.8
42.5°	3435.8	3448.8	3471.7	3486.6	3479.7	3465.7	3450.7	3456.8
45°	3689.6	3709.7	3739.5	3754.4	3745.5	3730.5	3709.7	3720.6
47.5°	3958.6	3998.4	4038.2	4058.1	4055.1	4034.2	4007.3	4010.4
50°	4280.1	4332.9	4383.7	4403.5	4388.6	4356.8	4318.9	4317.9
52.5°	4680.3	4737.2	4778.9	4774.0	4737.2	4687.3	4644.5	4642.5
55°	5180.2	5199.1	5193.1	5150.3	5085.6	5007.9	4953.2	4944.2
57.5°	5784.5	5720.9	5627.2	5497.7	5352.4	5205.0	5105.4	5068.6
60°	6523.3	6235.5	5901.0	5548.5	5227.0	4986.0	4833.7	4741.1
62.5°	7133.5	6300.2	5552.5	4940.2	4439.4	4141.7	3933.7	3805.2
65°	6924.5	5443.0	4359.8	3570.3	3023.6	2716.0	2496.0	2349.6
67.5°	5349.5	3636.9	2530.9	1754.2	1330.1	1126.0	983.7	891.1
70°	2697.1	1394.8	845.2	596.3	509.8	473.8	450.0	436.1
72.5°	791.5	528.7	439.1	388.3	357.4	335.5	321.6	314.6
75°	438.0	357.4	315.6	286.7	266.8	251.9	242.9	237.0
77.5°	301.7	259.8	239.0	220.0	204.1	193.2	186.2	180.2
80°	211.1	190.1	181.2	171.2	159.3	150.3	140.4	136.3
82.5°	140.4	131.4	129.5	121.5	114.5	104.6	86.7	80.7
85°	82.6	81.6	81.6	78.6	73.6	64.7	51.8	51.8
87.5°	28.9	29.8	30.8	32.9	31.9	26.9	21.9	20.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)