

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: P270569

Luminaire Tested: **NAV-AF-05-D-UNV-5WQ-7027**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270569
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24131)
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-5WQ-7027
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 70 CRI, 2700K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 27180.2 lumens
Efficiency: N/A
Efficacy: 97.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type V - Short - Semi-Cutoff
BUG Rating: B5 - U0 - G4

Input Watts (W): 279
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

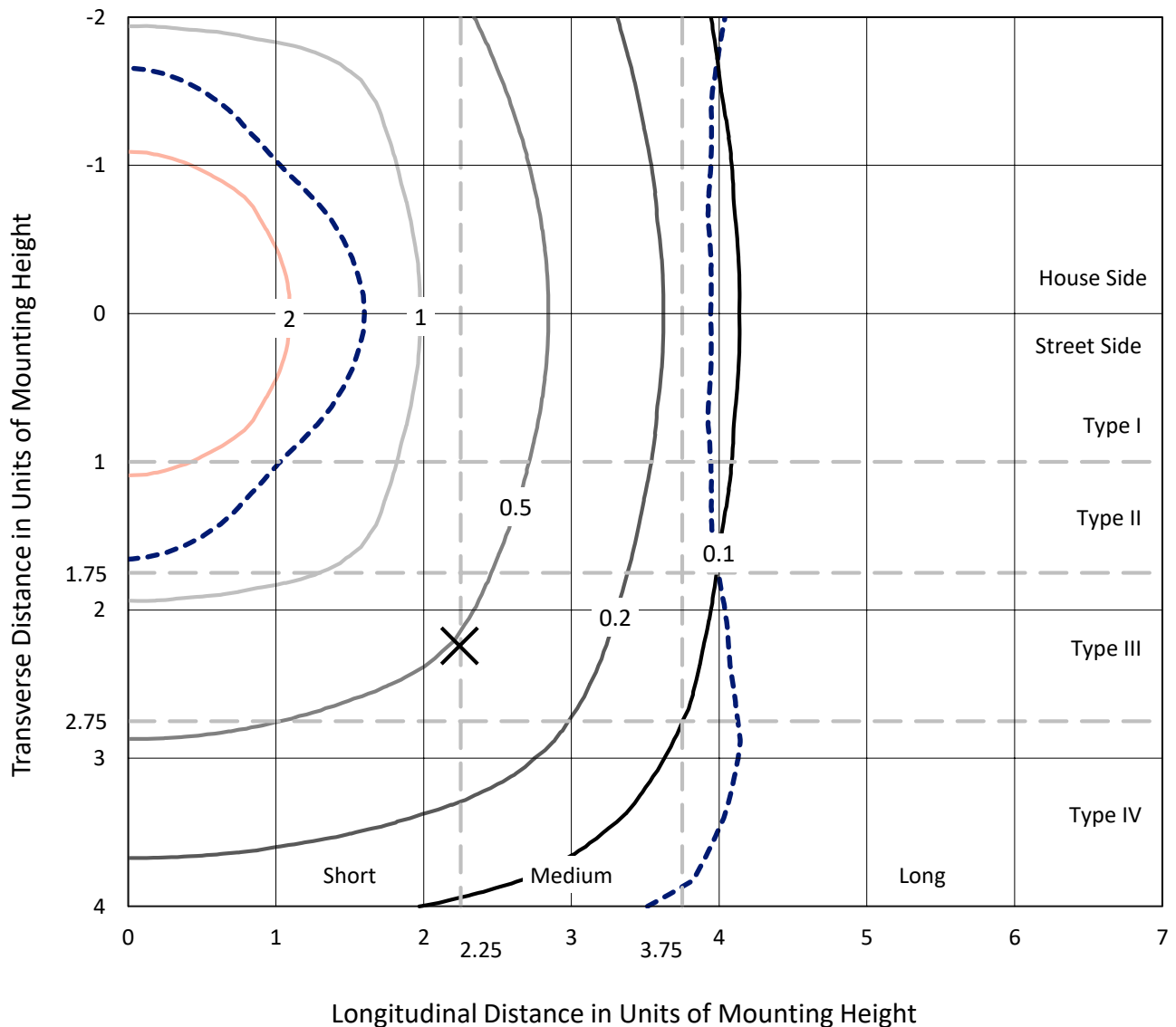


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

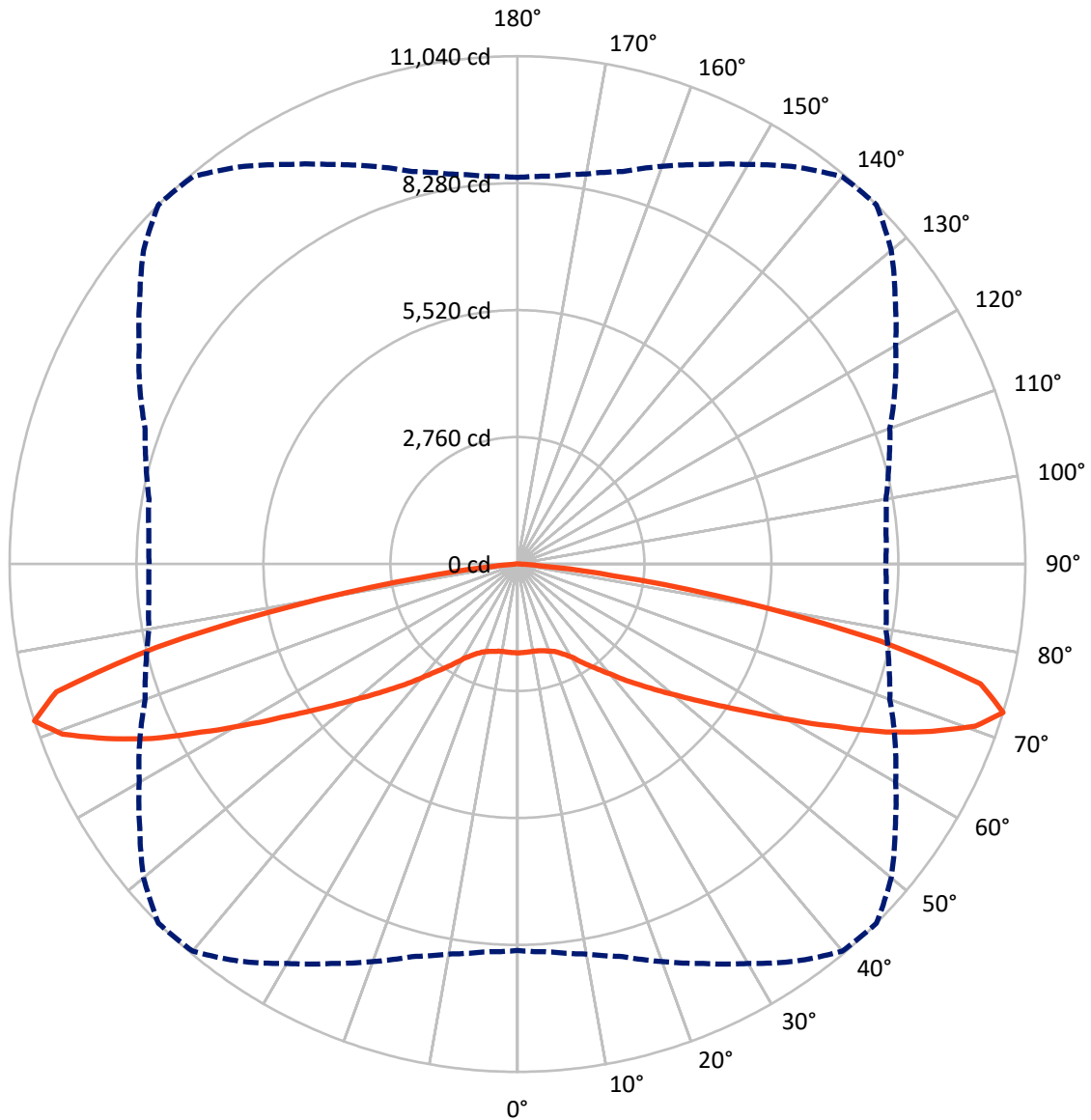


Based on 25 foot mounting height. Maximum calculated value = 3.1 fc
 Type V - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	13590.1	0.0	13590.1
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	13590.1	0.0	13590.1
	% Fixture	50.0	0.0	50.0
Total	Lumens	27180.2	0.0	27180.2
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	184.4	0.7
10°-20°	558.2	2.1
20°-30°	1007.7	3.7
30°-40°	1718.8	6.3
40°-50°	2926.3	10.8
50°-60°	4709.5	17.3
60°-70°	7832.0	28.8
70°-80°	7576.5	27.9
80°-90°	666.8	2.5
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°	27180.2	100.0
0°-180°	27180.2	100.0



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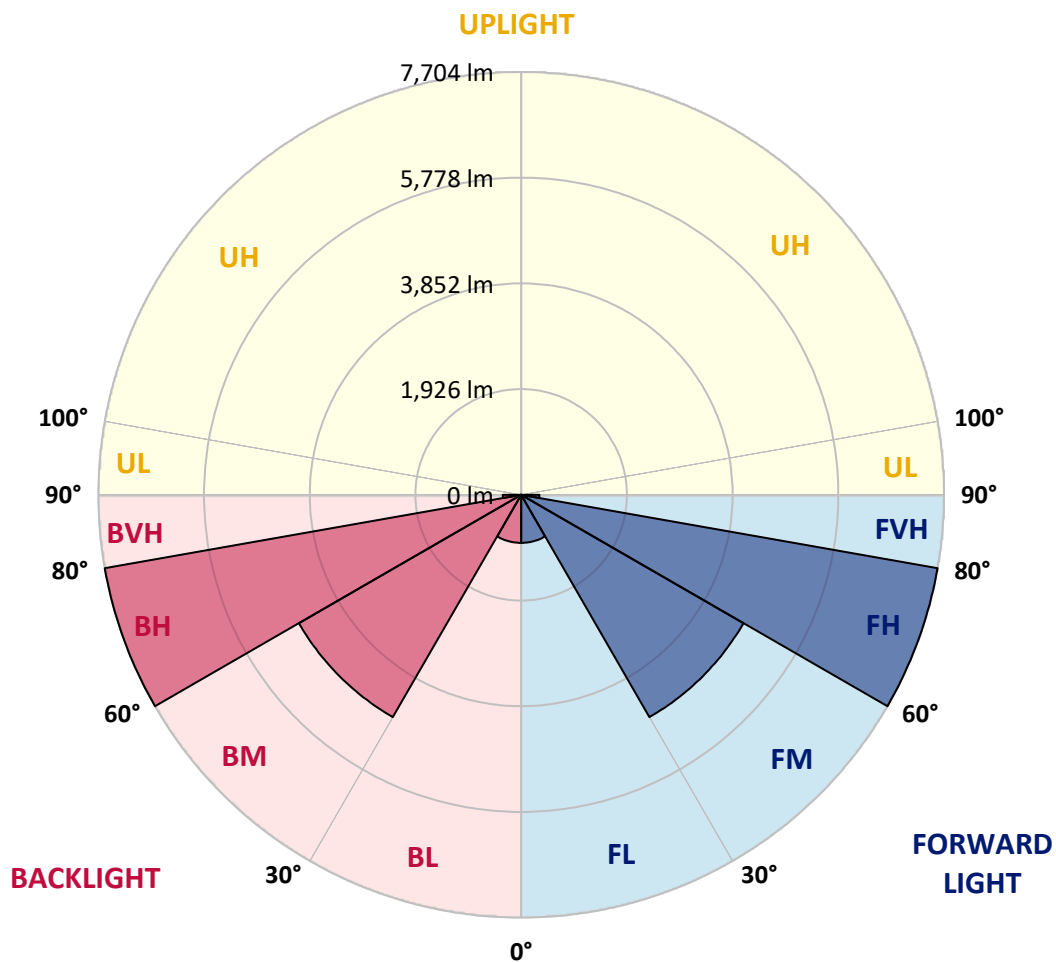
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	875.1	3.2			
FM	(30°-60°)	4677.3	17.2			
FH	(60°-80°)	7704.2	28.3			G4/12000
FVH	(80°-90°)	333.4	1.2			G3/500
BL	(0°-30°)	875.1	3.2	B2/1000		
BM	(30°-60°)	4677.3	17.2	B3/5000		
BH	(60°-80°)	7704.2	28.3	B5		G4/12000
BVH	(80°-90°)	333.4	1.2			G3/500
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B5-U0-G4

Type V Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1932.3	1932.3	1932.3	1932.3	1932.3	1932.3	1932.3	1932.3	1932.3	1932.3	1932.3
2.5°	1947.3	1947.3	1949.1	1947.3	1944.0	1942.3	1937.4	1934.1	1930.6	1929.0	1925.5
5°	1949.1	1949.1	1950.7	1949.1	1945.6	1942.3	1939.0	1934.1	1930.6	1927.4	1925.5
7.5°	1955.7	1957.3	1959.1	1957.3	1950.7	1947.3	1942.3	1937.4	1930.6	1927.4	1923.9
10°	1969.2	1969.2	1969.2	1967.5	1962.3	1955.7	1949.1	1944.0	1935.7	1927.4	1922.3
12.5°	1979.1	1980.9	1980.9	1977.4	1970.8	1962.3	1955.7	1950.7	1944.0	1937.4	1932.3
15°	1994.1	1994.1	1992.5	1985.9	1975.8	1969.2	1965.9	1964.1	1962.3	1959.1	1954.1
17.5°	2024.3	2022.7	2017.7	2007.6	1995.9	1990.9	1987.5	1987.5	1987.5	1985.9	1982.5
20°	2067.8	2067.8	2061.2	2044.5	2034.3	2029.4	2024.3	2024.3	2024.3	2019.3	2014.3
22.5°	2138.1	2139.8	2129.7	2109.6	2096.3	2086.3	2079.5	2074.5	2069.4	2066.1	2057.7
25°	2233.5	2231.7	2220.0	2195.0	2184.9	2174.8	2161.5	2153.1	2146.4	2141.4	2131.4
27.5°	2333.8	2332.2	2318.7	2297.1	2290.3	2275.2	2265.3	2253.5	2245.1	2236.8	2226.8
30°	2462.7	2454.3	2444.3	2427.5	2424.2	2412.5	2399.1	2382.3	2369.0	2355.5	2343.9
32.5°	2578.0	2578.0	2563.0	2554.7	2561.3	2556.3	2558.1	2548.0	2539.6	2534.6	2522.9
35°	2738.8	2738.8	2731.9	2722.0	2723.7	2712.0	2710.2	2712.0	2718.6	2718.6	2705.2
37.5°	2952.8	2956.2	2934.5	2931.1	2922.7	2905.9	2897.7	2900.9	2916.0	2924.4	2905.9
40°	3218.8	3225.5	3218.8	3197.1	3187.0	3158.6	3141.9	3141.9	3153.6	3161.9	3155.2
42.5°	3481.6	3493.1	3481.6	3464.8	3456.4	3434.7	3426.2	3433.1	3448.1	3458.0	3448.1
45°	3774.3	3782.7	3767.6	3747.5	3737.5	3725.8	3720.7	3725.8	3742.5	3752.5	3749.2
47.5°	4062.0	4073.8	4055.3	4047.0	4047.0	4035.2	4048.7	4062.0	4077.0	4100.6	4090.4
50°	4343.0	4358.1	4346.4	4348.1	4361.5	4383.2	4408.3	4435.1	4461.9	4486.9	4490.3
52.5°	4594.0	4617.5	4619.2	4649.3	4691.0	4724.5	4794.9	4853.4	4917.0	4938.7	4928.6
55°	4858.4	4890.2	4932.0	4978.9	5045.7	5114.3	5233.2	5338.4	5422.2	5474.0	5465.6
57.5°	5236.5	5268.3	5311.8	5388.8	5489.2	5582.7	5745.1	5909.1	6036.2	6114.9	6076.3
60°	5726.6	5760.1	5817.0	5899.0	6029.5	6156.7	6379.1	6614.9	6812.4	6902.8	6832.5
62.5°	6375.8	6407.6	6444.4	6553.1	6698.7	6862.6	7142.1	7444.9	7695.8	7782.7	7684.0
65°	7301.0	7339.4	7351.1	7439.9	7582.1	7734.2	8035.3	8376.6	8662.7	8804.9	8607.6
67.5°	8343.2	8358.3	8405.1	8508.8	8654.5	8791.6	9029.1	9352.1	9626.3	9705.0	9494.2
70°	8953.9	8983.9	9066.0	9209.9	9383.9	9599.6	9859.0	10206.9	10518.2	10554.9	10287.2
72.5°	8401.8	8463.7	8609.3	8833.5	9198.1	9581.2	10027.9	10541.5	10988.2	11040.1	10610.2
75°	6738.8	6809.2	6983.1	7229.0	7660.7	8229.5	8875.3	9646.4	10315.6	10400.9	9832.2
77.5°	3592.0	3678.9	3931.5	4262.7	4878.4	5631.2	6409.2	7289.2	7858.1	8050.4	7640.5
80°	905.1	951.9	1074.1	1268.1	1684.7	2291.9	2962.9	3909.9	4615.9	4915.3	4615.9
82.5°	351.3	386.5	419.9	443.4	483.5	567.1	783.0	1276.5	1719.8	2118.1	1833.6
85°	135.6	143.9	207.5	235.9	235.9	259.3	297.8	351.3	435.0	475.2	398.2
87.5°	53.4	58.6	72.0	110.4	113.7	100.4	107.1	120.5	92.0	77.0	87.0
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°	1932.3	1932.3	1932.3	1932.3	1932.3	1932.3	1932.3	1932.3
2.5°	1923.9	1922.3	1918.9	1920.5	1918.9	1918.9	1918.9	1918.9
5°	1922.3	1922.3	1918.9	1918.9	1918.9	1920.5	1918.9	1918.9
7.5°	1920.5	1918.9	1915.5	1913.8	1913.8	1912.2	1912.2	1912.2
10°	1917.3	1913.8	1910.5	1908.9	1908.9	1905.6	1905.6	1905.6
12.5°	1925.5	1920.5	1917.3	1915.5	1915.5	1915.5	1917.3	1917.3
15°	1949.1	1939.0	1934.1	1932.3	1934.1	1937.4	1939.0	1940.7
17.5°	1974.1	1964.1	1955.7	1952.3	1954.1	1959.1	1964.1	1967.5
20°	2005.9	1997.6	1987.5	1984.1	1984.1	1990.9	1994.1	1999.2
22.5°	2051.1	2044.5	2036.0	2031.0	2027.7	2036.0	2041.0	2044.5
25°	2123.1	2116.3	2109.6	2104.5	2102.9	2111.3	2114.7	2116.3
27.5°	2218.4	2211.6	2208.4	2206.6	2201.7	2205.0	2210.0	2208.4
30°	2342.2	2347.2	2342.2	2342.2	2333.8	2337.2	2333.8	2330.5
32.5°	2507.8	2502.8	2487.8	2477.7	2465.9	2465.9	2460.9	2456.0
35°	2673.4	2656.6	2648.4	2653.4	2648.4	2651.6	2643.4	2635.0
37.5°	2869.1	2859.1	2857.5	2872.5	2869.1	2872.5	2872.5	2860.8
40°	3128.4	3121.8	3133.5	3158.6	3168.6	3167.0	3170.3	3155.2
42.5°	3426.2	3414.5	3419.6	3441.3	3453.1	3456.4	3454.7	3441.3
45°	3724.1	3727.4	3727.4	3750.9	3762.6	3769.3	3757.5	3752.5
47.5°	4060.3	4065.4	4053.6	4068.8	4072.0	4083.8	4073.8	4065.4
50°	4448.4	4430.1	4403.3	4408.3	4408.3	4405.0	4393.3	4383.2
52.5°	4881.7	4840.0	4789.8	4773.1	4754.6	4736.3	4712.8	4694.5
55°	5375.3	5303.4	5213.0	5171.3	5136.1	5094.3	5040.7	5022.3
57.5°	5947.5	5823.7	5703.2	5627.9	5537.6	5482.4	5413.7	5410.4
60°	6626.7	6459.4	6247.0	6134.9	6044.5	5979.3	5927.3	5907.3
62.5°	7411.3	7123.6	6894.4	6773.9	6668.6	6628.5	6563.1	6571.6
65°	8216.1	7923.3	7700.8	7603.8	7505.0	7478.3	7418.1	7439.9
67.5°	9087.8	8846.8	8602.4	8512.2	8421.8	8395.1	8333.1	8351.6
70°	9869.0	9562.8	9285.2	9107.7	8953.9	8830.1	8751.4	8719.7
72.5°	10024.5	9494.2	9057.6	8614.2	8358.3	8134.2	8042.0	8007.0
75°	9007.3	8184.3	7561.9	7041.6	6753.8	6427.6	6392.5	6344.0
77.5°	7006.5	6069.6	5316.8	4647.7	4261.1	3862.9	3725.8	3622.1
80°	4179.2	3212.2	2489.5	1745.0	1423.8	1146.0	1077.3	1005.5
82.5°	1495.7	958.6	645.8	503.6	450.1	414.8	388.2	353.0
85°	361.4	304.4	287.7	261.0	257.6	219.1	155.5	138.9
87.5°	115.4	105.5	107.1	102.0	107.1	80.3	65.2	58.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)