

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: P196943

Luminaire Tested: **NAV-AF-05-D-UNV-5WQ-8030-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196943
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-8030-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 80 CRI, 3000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 28003 lumens
Efficiency: N/A
Efficacy: 87.5 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

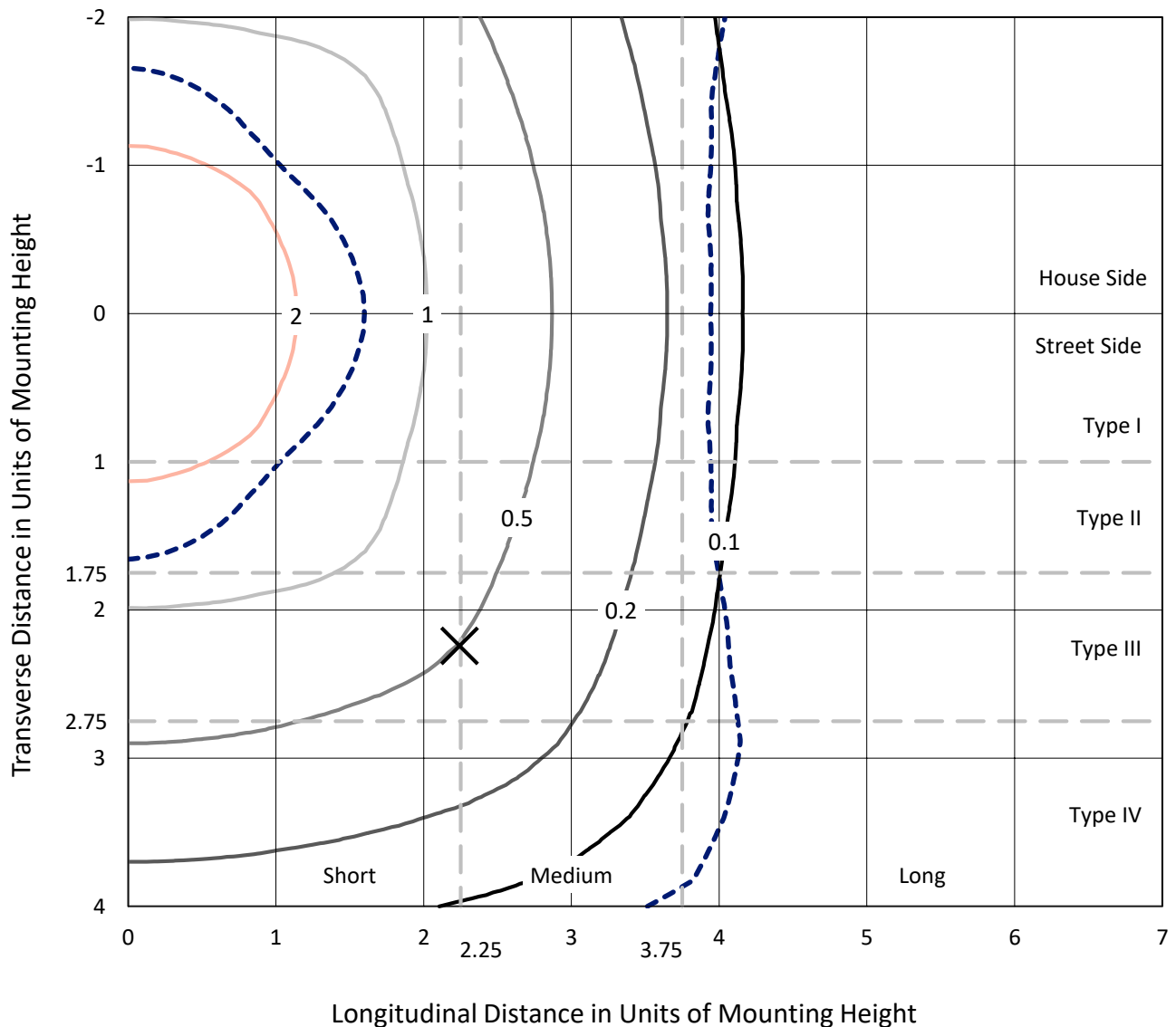
Input Watts (W): 320
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

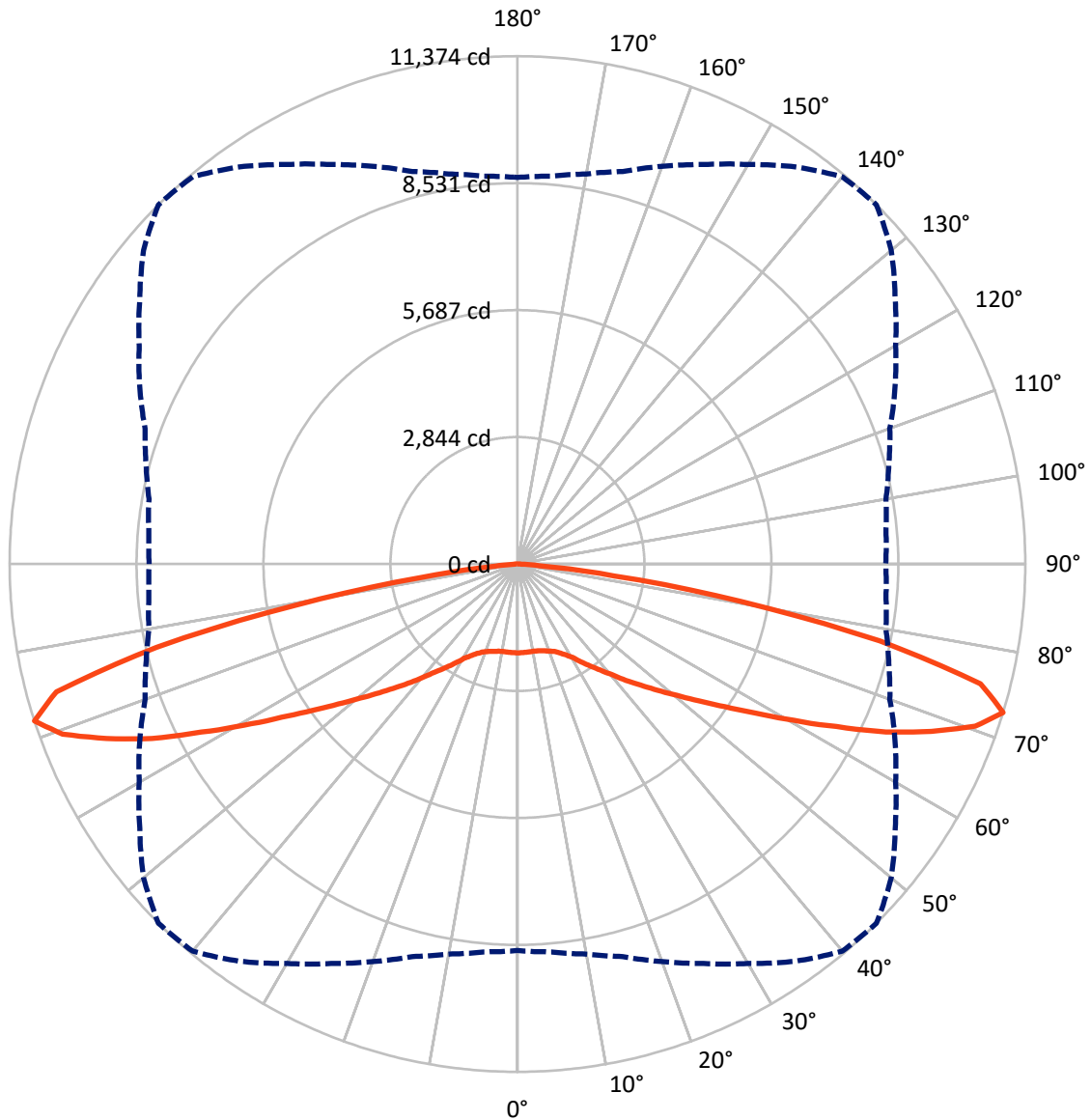
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.2 fc
 Type V - Short - 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	14001.5	0.0	14001.5
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	14001.5	0.0	14001.5
	% Fixture	50.0	0.0	50.0
Total	Lumens	28003.0	0.0	28003.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	190.0	0.7
10°-20°	575.1	2.1
20°-30°	1038.2	3.7
30°-40°	1770.8	6.3
40°-50°	3014.9	10.8
50°-60°	4852.0	17.3
60°-70°	8069.0	28.8
70°-80°	7805.9	27.9
80°-90°	687.0	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°	28003.0	100.0
0°-180°	28003.0	100.0



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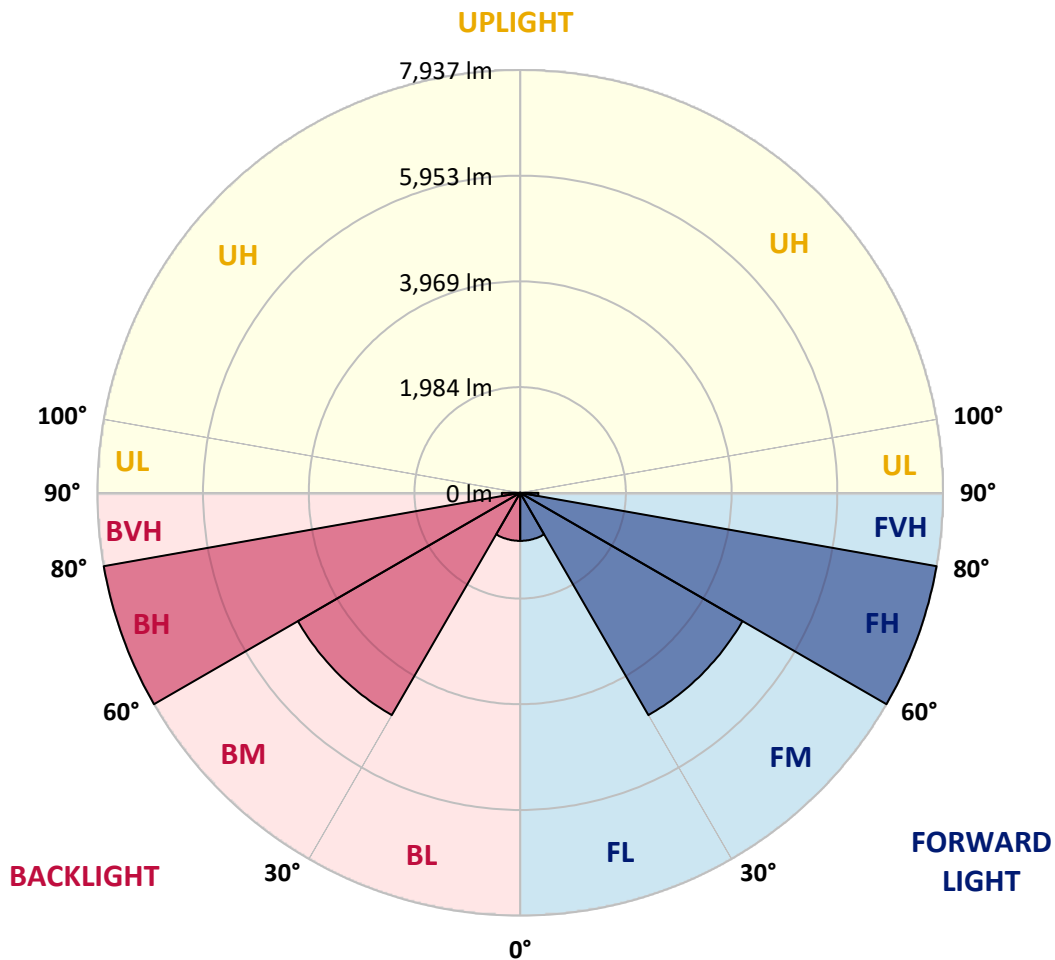
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	901.6	3.2			
FM	(30°-60°)	4818.9	17.2			
FH	(60°-80°)	7937.5	28.3			G4/12000
FVH	(80°-90°)	343.5	1.2			G3/500
BL	(0°-30°)	901.6	3.2	B2/1000		
BM	(30°-60°)	4818.9	17.2	B3/5000		
BH	(60°-80°)	7937.5	28.3	B5		G4/12000
BVH	(80°-90°)	343.5	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°	1990.8	1990.8	1990.8	1990.8	1990.8	1990.8	1990.8	1990.8	1990.8	1990.8	1990.8
2.5°	2006.3	2006.3	2008.0	2006.3	2002.9	2001.1	1996.0	1992.5	1989.1	1987.4	1983.9
5°	2008.0	2008.0	2009.8	2008.0	2004.6	2001.1	1997.7	1992.5	1989.1	1985.6	1983.9
7.5°	2014.9	2016.7	2018.4	2016.7	2009.8	2006.3	2001.1	1996.0	1989.1	1985.6	1982.2
10°	2028.7	2028.7	2028.7	2027.0	2021.8	2014.9	2008.0	2002.9	1994.3	1985.6	1980.5
12.5°	2039.1	2040.8	2040.8	2037.3	2030.4	2021.8	2014.9	2009.8	2002.9	1996.0	1990.8
15°	2054.6	2054.6	2052.9	2046.0	2035.6	2028.7	2025.3	2023.6	2021.8	2018.4	2013.2
17.5°	2085.6	2083.9	2078.7	2068.4	2056.3	2051.1	2047.7	2047.7	2047.7	2046.0	2042.5
20°	2130.4	2130.4	2123.5	2106.3	2095.9	2090.8	2085.6	2085.6	2085.6	2080.4	2075.3
22.5°	2202.8	2204.5	2194.2	2173.5	2159.7	2149.4	2142.5	2137.3	2132.1	2128.7	2120.1
25°	2301.1	2299.3	2287.3	2261.4	2251.1	2240.7	2226.9	2218.3	2211.4	2206.3	2195.9
27.5°	2404.5	2402.8	2389.0	2366.6	2359.7	2344.1	2333.8	2321.7	2313.1	2304.5	2294.2
30°	2537.2	2528.6	2518.2	2501.0	2497.6	2485.5	2471.7	2454.5	2440.7	2426.9	2414.8
32.5°	2656.1	2656.1	2640.6	2632.0	2638.9	2633.7	2635.4	2625.1	2616.5	2611.3	2599.2
35°	2821.6	2821.6	2814.7	2804.4	2806.1	2794.0	2792.3	2794.0	2800.9	2800.9	2787.1
37.5°	3042.2	3045.7	3023.3	3019.8	3011.2	2994.0	2985.3	2988.8	3004.3	3012.9	2994.0
40°	3316.3	3323.2	3316.3	3293.9	3283.5	3254.2	3237.0	3237.0	3249.1	3257.7	3250.8
42.5°	3586.9	3599.0	3586.9	3569.7	3561.0	3538.6	3530.0	3536.9	3552.4	3562.8	3552.4
45°	3888.5	3897.1	3881.6	3861.0	3850.6	3838.5	3833.4	3838.5	3855.8	3866.1	3862.7
47.5°	4185.0	4197.1	4178.1	4169.5	4169.5	4157.4	4171.2	4185.0	4200.5	4224.6	4214.3
50°	4474.6	4490.1	4478.0	4479.7	4493.5	4515.9	4541.8	4569.4	4596.9	4622.8	4626.2
52.5°	4733.1	4757.2	4759.0	4790.0	4833.1	4867.6	4939.9	5000.3	5065.8	5088.2	5077.8
55°	5005.4	5038.2	5081.3	5129.5	5198.5	5269.2	5391.5	5500.1	5586.3	5639.7	5631.1
57.5°	5395.0	5427.7	5472.6	5551.8	5655.3	5751.8	5919.0	6087.9	6218.9	6299.9	6260.3
60°	5900.0	5934.5	5993.1	6077.6	6212.0	6343.0	6572.2	6815.3	7018.7	7111.7	7039.3
62.5°	6568.8	6601.5	6639.5	6751.5	6901.5	7070.4	7358.2	7670.2	7928.7	8018.4	7916.7
65°	7522.0	7561.6	7573.7	7665.0	7811.5	7968.4	8278.6	8630.3	8925.0	9071.5	8868.1
67.5°	8595.8	8611.3	8659.6	8766.4	8916.4	9057.7	9302.5	9635.1	9917.8	9998.8	9781.7
70°	9224.9	9255.9	9340.4	9488.6	9667.9	9890.2	10157.4	10515.9	10836.5	10874.4	10598.7
72.5°	8656.1	8719.9	8869.8	9100.8	9476.6	9871.3	10331.5	10860.6	11320.9	11374.3	10931.3
75°	6942.8	7015.2	7194.5	7447.8	7892.5	8478.6	9143.9	9938.5	10628.0	10715.9	10129.8
77.5°	3700.7	3790.3	4050.6	4391.8	5026.1	5801.8	6603.3	7509.9	8095.9	8294.2	7871.9
80°	932.5	980.8	1106.6	1306.5	1735.7	2361.4	3052.6	4028.1	4755.5	5064.1	4755.5
82.5°	362.0	398.2	432.6	456.8	498.1	584.3	806.7	1315.1	1771.9	2182.1	1889.1
85°	139.6	148.2	213.7	243.0	243.0	267.2	306.8	362.0	448.1	489.5	410.2
87.5°	55.2	60.3	74.1	113.8	117.2	103.4	110.3	124.1	94.8	79.3	89.6
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°	1990.8	1990.8	1990.8	1990.8	1990.8	1990.8	1990.8	1990.8
2.5°	1982.2	1980.5	1977.0	1978.7	1977.0	1977.0	1977.0	1977.0
5°	1980.5	1980.5	1977.0	1977.0	1977.0	1978.7	1977.0	1977.0
7.5°	1978.7	1977.0	1973.6	1971.8	1971.8	1970.1	1970.1	1970.1
10°	1975.3	1971.8	1968.4	1966.7	1966.7	1963.2	1963.2	1963.2
12.5°	1983.9	1978.7	1975.3	1973.6	1973.6	1973.6	1975.3	1975.3
15°	2008.0	1997.7	1992.5	1990.8	1992.5	1996.0	1997.7	1999.4
17.5°	2033.9	2023.6	2014.9	2011.5	2013.2	2018.4	2023.6	2027.0
20°	2066.6	2058.0	2047.7	2044.2	2044.2	2051.1	2054.6	2059.7
22.5°	2113.2	2106.3	2097.7	2092.5	2089.1	2097.7	2102.8	2106.3
25°	2187.3	2180.4	2173.5	2168.3	2166.6	2175.2	2178.7	2180.4
27.5°	2285.5	2278.7	2275.2	2273.5	2268.3	2271.8	2276.9	2275.2
30°	2413.1	2418.3	2413.1	2413.1	2404.5	2407.9	2404.5	2401.0
32.5°	2583.7	2578.6	2563.1	2552.7	2540.6	2540.6	2535.5	2530.3
35°	2754.4	2737.1	2728.5	2733.7	2728.5	2732.0	2723.3	2714.7
37.5°	2956.0	2945.7	2944.0	2959.5	2956.0	2959.5	2959.5	2947.4
40°	3223.2	3216.3	3228.4	3254.2	3264.6	3262.8	3266.3	3250.8
42.5°	3530.0	3517.9	3523.1	3545.5	3557.6	3561.0	3559.3	3545.5
45°	3836.8	3840.3	3840.3	3864.4	3876.5	3883.4	3871.3	3866.1
47.5°	4183.3	4188.4	4176.4	4191.9	4195.3	4207.4	4197.1	4188.4
50°	4583.2	4564.2	4536.6	4541.8	4541.8	4538.3	4526.3	4515.9
52.5°	5029.6	4986.5	4934.8	4917.5	4898.6	4879.6	4855.5	4836.5
55°	5538.1	5463.9	5370.9	5327.8	5291.6	5248.5	5193.3	5174.4
57.5°	6127.5	6000.0	5875.9	5798.3	5705.2	5648.4	5577.7	5574.2
60°	6827.3	6655.0	6436.1	6320.6	6227.5	6160.3	6106.9	6086.2
62.5°	7635.7	7339.3	7103.1	6979.0	6870.4	6829.1	6761.8	6770.5
65°	8464.8	8163.2	7933.9	7833.9	7732.2	7704.7	7642.6	7665.0
67.5°	9362.8	9114.6	8863.0	8769.9	8676.8	8649.2	8585.4	8604.4
70°	10167.7	9852.3	9566.2	9383.5	9224.9	9097.4	9016.4	8983.6
72.5°	10328.0	9781.7	9331.8	8875.0	8611.3	8380.3	8285.5	8249.3
75°	9280.1	8432.0	7790.8	7254.8	6958.3	6622.2	6586.0	6536.0
77.5°	7218.6	6253.4	5477.7	4788.3	4390.1	3979.9	3838.5	3731.7
80°	4305.7	3309.4	2564.8	1797.8	1466.8	1180.7	1110.0	1035.9
82.5°	1540.9	987.6	665.3	518.8	463.7	427.5	399.9	363.7
85°	372.3	313.7	296.5	268.9	265.4	225.8	160.3	143.1
87.5°	118.9	108.6	110.3	105.1	110.3	82.7	67.2	60.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)