

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: P196878

Luminaire Tested: **NAV-AF-06-D-UNV-5MQ-8030-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196878
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-06-D-UNV-5MQ-8030-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 80 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: 20625 lumens
Efficiency: N/A
Efficacy: 106.9 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

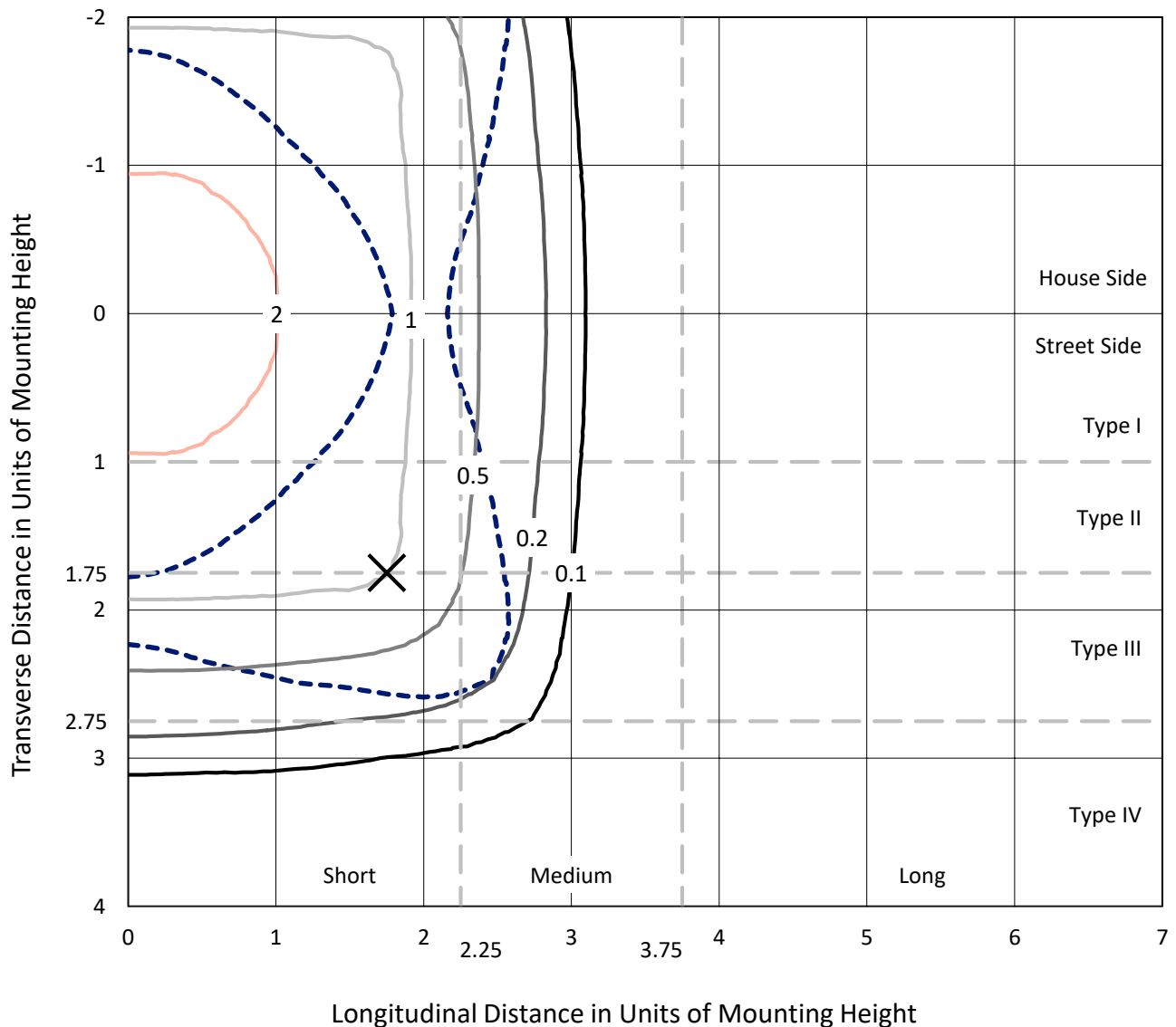
Input Watts (W): 193
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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 CATALOG NUMBER: NAV-AF-06-D-UNV-5MQ-8030-600

Iso-Footcandle Lines of Horizontal Illumination

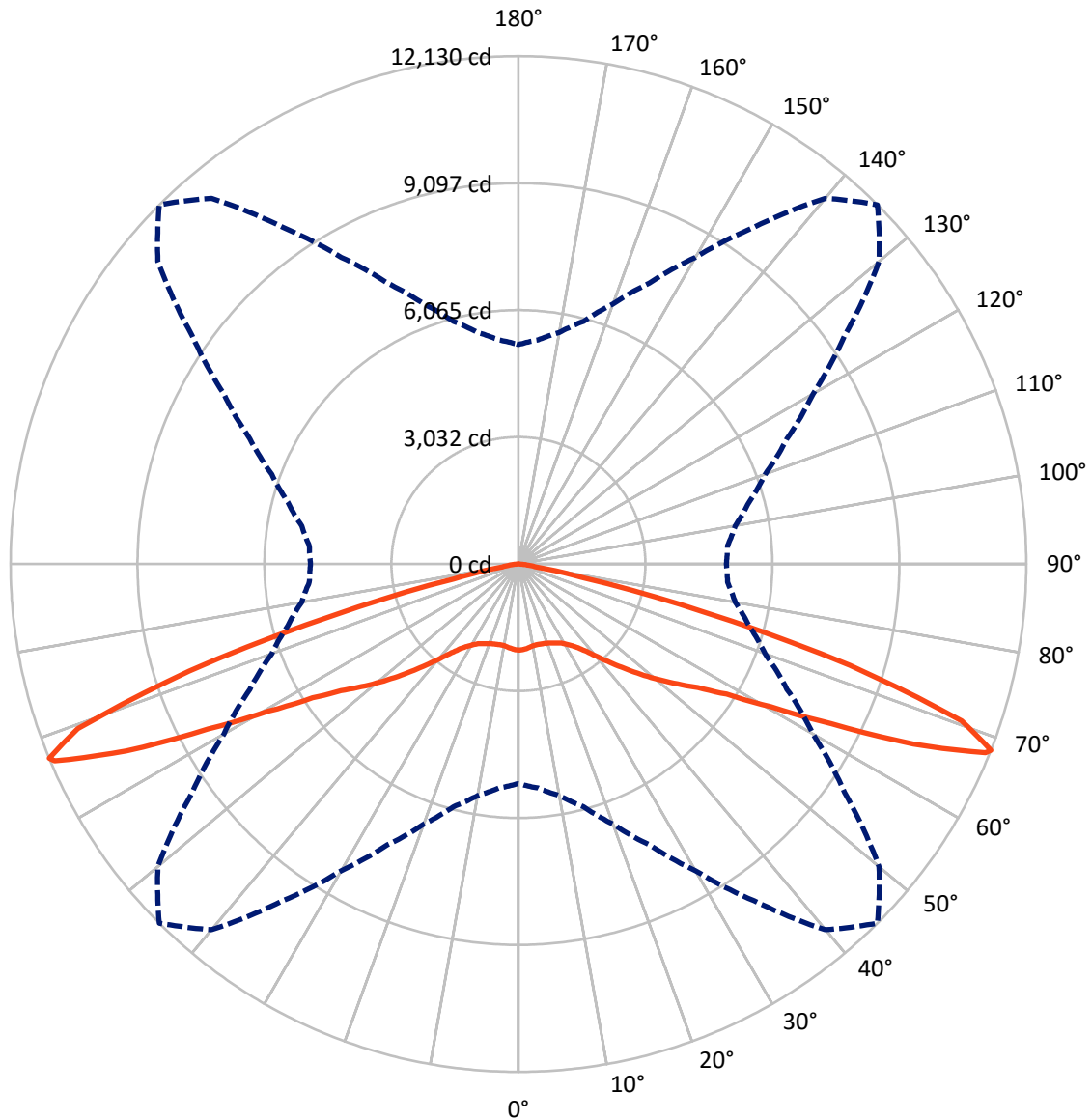
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.3 fc
 Type V - Short - Full Cutoff

REPORT NUMBER: P196878
CATALOG NUMBER: NAV-AF-06-D-UNV-5MQ-8030-600

Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 68-Deg Vertical

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CATALOG NUMBER: NAV-AF-06-D-UNV-5MQ-8030-600

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	10312.5	0.0	10312.5
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	10312.5	0.0	10312.5
	% Fixture	50.0	0.0	50.0
Total	Lumens	20625.0	0.0	20625.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	192.5	0.9
10°-20°	558.3	2.7
20°-30°	949.2	4.6
30°-40°	1553.4	7.5
40°-50°	2776.1	13.5
50°-60°	4688.4	22.7
60°-70°	7270.0	35.2
70°-80°	2499.6	12.1
80°-90°	137.4	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°	20625.0	100.0
0°-180°	20625.0	100.0



REPORT NUMBER: P196878

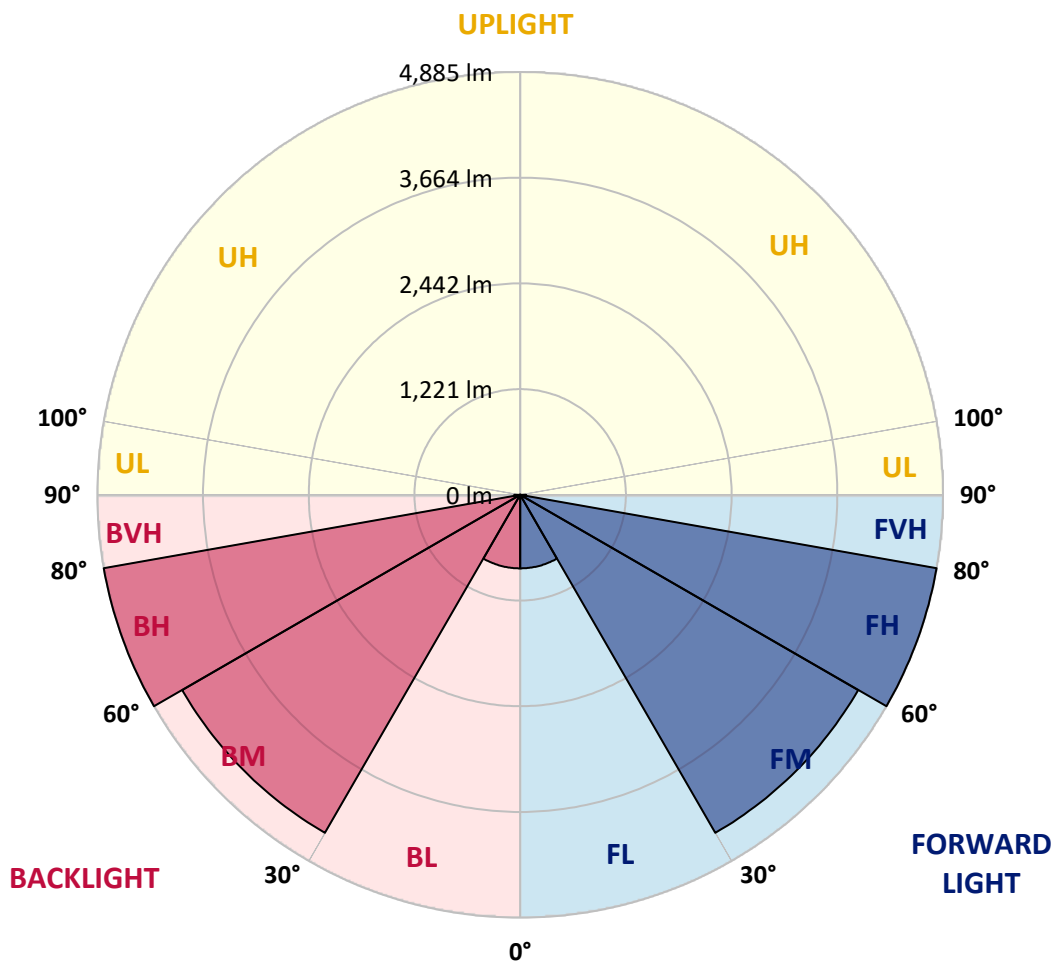
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	850.0	4.1			
FM	(30°-60°)	4509.0	21.9			
FH	(60°-80°)	4884.8	23.7			G2/5000
FVH	(80°-90°)	68.7	0.3			G1/100
BL	(0°-30°)	850.0	4.1	B2/1000		
BM	(30°-60°)	4509.0	21.9	B3/5000		
BH	(60°-80°)	4884.8	23.7	B4/5000		G2/5000
BVH	(80°-90°)	68.7	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





REPORT NUMBER: P196878

CATALOG NUMBER: NAV-AF-06-D-UNV-5MQ-8030-600

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2057.4	2057.4	2057.4	2057.4	2057.4	2057.4	2057.4	2057.4	2057.4	2057.4	2057.4
2.5°	2066.2	2066.2	2068.8	2067.5	2063.7	2059.9	2056.1	2052.4	2049.8	2047.3	2044.8
5°	2044.8	2044.8	2048.6	2046.0	2043.5	2039.7	2037.2	2033.4	2030.9	2028.4	2029.6
7.5°	2017.0	2019.5	2022.0	2020.8	2015.7	2014.5	2010.7	2009.4	2006.9	2003.1	2004.4
10°	1993.0	1994.3	1996.8	1995.5	1994.3	1990.5	1989.2	1987.9	1986.7	1981.6	1980.4
12.5°	1969.0	1971.5	1974.0	1975.3	1974.0	1975.3	1976.6	1977.8	1976.6	1974.0	1974.0
15°	1950.1	1952.6	1956.4	1960.2	1961.4	1969.0	1974.0	1979.1	1982.9	1984.2	1980.4
17.5°	1939.9	1943.7	1948.8	1956.4	1962.7	1971.5	1980.4	1987.9	1994.3	1995.5	1991.7
20°	1938.7	1942.5	1950.1	1958.9	1970.3	1981.6	1995.5	2006.9	2013.2	2017.0	2013.2
22.5°	1947.5	1952.6	1962.7	1974.0	1987.9	2003.1	2020.8	2033.4	2046.0	2051.1	2047.3
25°	1972.8	1977.8	1989.2	2003.1	2018.3	2037.2	2054.9	2071.3	2083.9	2090.2	2085.2
27.5°	2025.8	2027.1	2039.7	2054.9	2072.6	2089.0	2111.7	2119.3	2129.4	2135.7	2129.4
30°	2100.3	2102.9	2114.2	2138.2	2154.7	2176.1	2188.8	2196.3	2207.7	2214.0	2206.4
32.5°	2214.0	2216.5	2226.6	2249.4	2264.5	2281.0	2296.1	2301.2	2312.5	2320.1	2311.3
35°	2374.4	2379.5	2388.3	2403.5	2416.1	2428.7	2440.1	2436.3	2443.9	2454.0	2445.1
37.5°	2594.2	2592.9	2595.4	2606.8	2619.4	2627.0	2644.7	2635.9	2643.4	2652.3	2647.2
40°	2850.6	2850.6	2849.3	2869.5	2874.6	2882.1	2901.1	2889.7	2899.8	2909.9	2901.1
42.5°	3142.3	3147.4	3153.7	3170.1	3184.0	3186.5	3195.4	3190.3	3202.9	3211.8	3202.9
45°	3478.3	3485.8	3493.4	3531.3	3537.6	3542.7	3549.0	3532.6	3546.5	3554.0	3551.5
47.5°	3826.8	3840.7	3857.2	3896.3	3921.6	3932.9	3938.0	3919.0	3920.3	3931.7	3932.9
50°	4220.9	4236.1	4252.5	4296.7	4320.7	4340.9	4347.2	4325.7	4328.3	4337.1	4339.6
52.5°	4584.6	4602.3	4637.7	4697.0	4731.1	4766.5	4769.0	4742.5	4753.9	4760.2	4755.1
55°	4926.9	4949.6	4996.4	5075.9	5137.8	5207.3	5238.9	5209.8	5209.8	5204.8	5202.2
57.5°	5326.0	5351.3	5399.3	5491.5	5577.3	5677.1	5763.0	5792.1	5845.1	5862.8	5835.0
60°	5927.2	5953.7	6003.0	6124.2	6232.8	6378.1	6519.5	6634.5	6821.4	6922.4	6831.5
62.5°	6476.6	6517.0	6633.2	6845.4	7080.3	7349.3	7661.3	7883.6	8223.3	8392.5	8163.9
65°	6351.6	6433.7	6661.0	6994.4	7479.4	8062.9	8698.2	9308.2	10010.4	10370.4	9905.6
67.5°	5548.3	5617.8	5862.8	6250.5	6855.5	7660.0	8647.7	9910.7	11359.3	12033.7	11211.5
68°	5241.4	5371.5	5615.2	6000.4	6610.5	7401.1	8455.7	9819.7	11401.0	12129.7	11241.8
70°	4018.8	4065.6	4299.2	4645.3	5303.3	6078.8	7143.5	8698.2	10485.3	11235.5	10322.4
72.5°	1909.6	1937.4	2089.0	2430.0	2848.0	3479.5	4419.2	5885.5	7495.8	8276.4	7365.7
75°	699.7	706.0	741.4	822.2	978.8	1216.3	1667.1	2579.0	3818.0	4553.1	3833.2
77.5°	377.6	378.9	392.8	413.0	440.8	472.4	540.6	725.0	1169.5	1591.4	1235.2
80°	237.4	236.2	250.1	266.5	285.4	300.6	306.9	328.4	370.1	433.2	397.8
82.5°	121.2	132.6	164.2	181.9	209.7	214.7	208.4	207.1	219.8	237.4	245.0
85°	66.9	59.4	87.1	116.2	126.3	130.1	131.4	123.8	121.2	118.7	125.0
87.5°	34.1	31.6	37.9	58.1	61.9	50.5	51.8	44.2	30.3	30.3	31.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P196878

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	2057.4	2057.4	2057.4	2057.4	2057.4	2057.4	2057.4	2057.4
2.5°	2042.2	2043.5	2041.0	2041.0	2041.0	2042.2	2041.0	2039.7
5°	2025.8	2028.4	2028.4	2029.6	2030.9	2030.9	2030.9	2030.9
7.5°	2001.8	2003.1	2005.6	2005.6	2005.6	2005.6	2005.6	2005.6
10°	1979.1	1976.6	1975.3	1972.8	1972.8	1969.0	1970.3	1971.5
12.5°	1967.7	1962.7	1960.2	1956.4	1953.8	1950.1	1950.1	1951.3
15°	1972.8	1965.2	1957.6	1955.1	1952.6	1950.1	1947.5	1948.8
17.5°	1982.9	1974.0	1965.2	1960.2	1955.1	1951.3	1950.1	1951.3
20°	2004.4	1991.7	1977.8	1969.0	1958.9	1956.4	1952.6	1956.4
22.5°	2033.4	2018.3	2000.6	1984.2	1972.8	1967.7	1962.7	1966.5
25°	2068.8	2052.4	2034.7	2015.7	2003.1	1999.3	1993.0	1993.0
27.5°	2118.0	2104.1	2089.0	2071.3	2058.7	2054.9	2044.8	2044.8
30°	2196.3	2182.4	2168.5	2153.4	2140.8	2137.0	2124.3	2124.3
32.5°	2299.9	2284.7	2275.9	2263.3	2253.2	2246.9	2231.7	2230.4
35°	2438.8	2424.9	2423.7	2414.8	2404.7	2406.0	2390.8	2388.3
37.5°	2638.4	2627.0	2630.8	2623.2	2614.4	2622.0	2613.1	2613.1
40°	2893.5	2889.7	2893.5	2888.5	2889.7	2891.0	2883.4	2885.9
42.5°	3201.7	3191.6	3214.3	3211.8	3208.0	3218.1	3200.4	3187.8
45°	3556.6	3552.8	3575.5	3579.3	3571.7	3578.0	3546.5	3545.2
47.5°	3941.8	3941.8	3962.0	3959.5	3951.9	3953.1	3915.3	3891.3
50°	4343.4	4340.9	4361.1	4356.0	4345.9	4344.7	4305.5	4281.5
52.5°	4761.5	4761.5	4790.5	4776.6	4752.6	4741.3	4693.3	4661.7
55°	5223.7	5217.4	5226.2	5180.8	5134.0	5099.9	5040.6	5016.6
57.5°	5808.5	5735.2	5672.1	5614.0	5548.3	5507.9	5438.4	5413.2
60°	6638.3	6442.5	6357.9	6241.7	6133.1	6078.8	5986.6	5937.3
62.5°	7787.6	7463.0	7233.1	6976.7	6729.2	6554.9	6414.7	6352.8
65°	9116.2	8409.0	7824.2	7274.8	6808.8	6438.7	6232.8	6168.4
67.5°	9621.4	8323.1	7314.0	6525.9	5960.0	5519.3	5273.0	5221.2
68°	9514.1	8126.1	7077.8	6270.7	5702.4	5257.8	5012.8	4966.1
70°	8392.5	6855.5	5749.1	4945.9	4415.4	3992.3	3819.3	3744.8
72.5°	5721.3	4402.8	3377.2	2701.5	2305.0	2037.2	1878.1	1823.8
75°	2633.3	1779.5	1188.5	887.9	754.0	689.6	640.3	627.7
77.5°	767.9	558.2	479.9	444.6	418.0	395.3	378.9	377.6
80°	365.0	342.3	332.2	309.4	285.4	264.0	248.8	251.3
82.5°	245.0	238.7	238.7	216.0	178.1	152.8	126.3	113.7
85°	130.1	135.1	142.7	135.1	117.5	87.1	56.8	61.9
87.5°	44.2	50.5	53.0	51.8	46.7	35.4	26.5	26.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)