

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: P196883

Luminaire Tested: **NAV-AF-05-D-UNV-5MQ-8030-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196883
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-05-D-UNV-5MQ-8030-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 80 CRI, 3000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V MEDIUM OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 21112 lumens
Efficiency: N/A
Efficacy: 100.5 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type V - Short - Full Cutoff
BUG Rating: B5 - U0 - G3

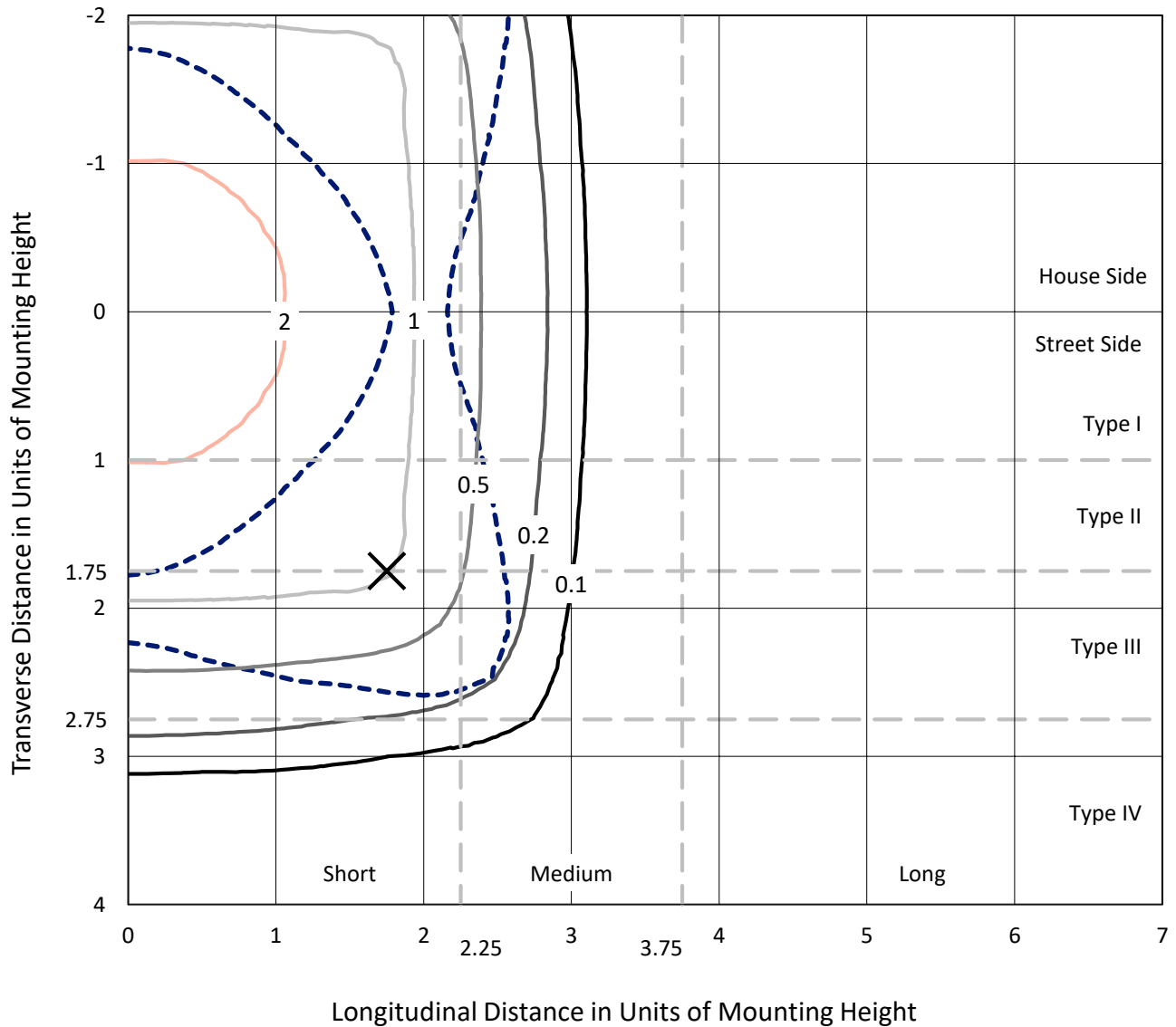
Input Watts (W): 210
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P196883
 CATALOG NUMBER: NAV-AF-05-D-UNV-5MQ-8030-800

Iso-Footcandle Lines of Horizontal Illumination

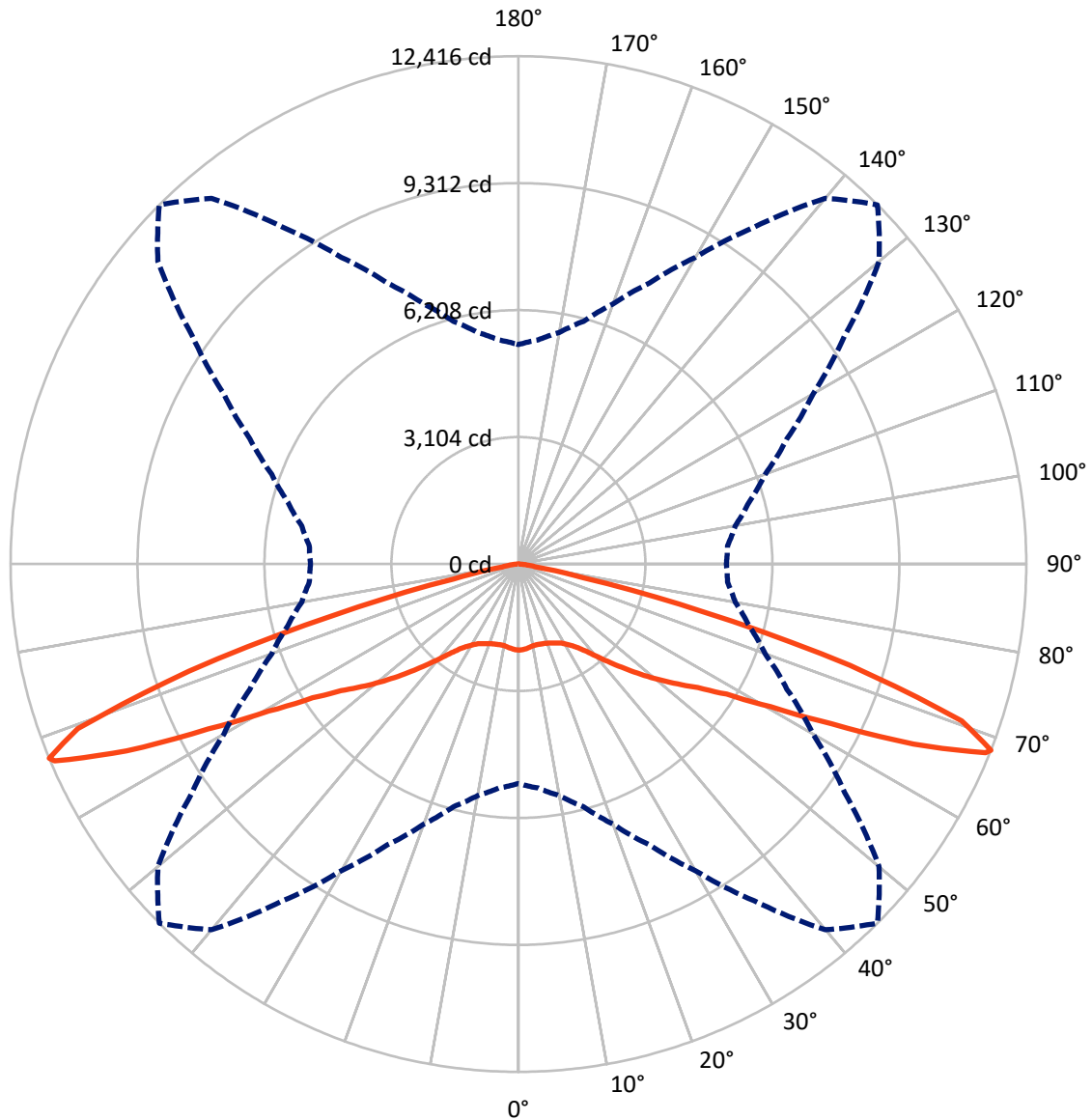
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.4 fc
 Type V - Short - Full Cutoff

REPORT NUMBER: P196883
CATALOG NUMBER: NAV-AF-05-D-UNV-5MQ-8030-800

Luminous Intensity Polar Plot



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

REPORT NUMBER: P196883

CATALOG NUMBER: NAV-AF-05-D-UNV-5MQ-8030-800

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	10556.0	0.0	10556.0
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	10556.0	0.0	10556.0
	% Fixture	50.0	0.0	50.0
Total	Lumens	21112.0	0.0	21112.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	197.1	0.9
10°-20°	571.5	2.7
20°-30°	971.6	4.6
30°-40°	1590.1	7.5
40°-50°	2841.7	13.5
50°-60°	4799.1	22.7
60°-70°	7441.7	35.2
70°-80°	2558.6	12.1
80°-90°	140.6	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°	21112.0	100.0
0°-180°	21112.0	100.0



REPORT NUMBER: P196883

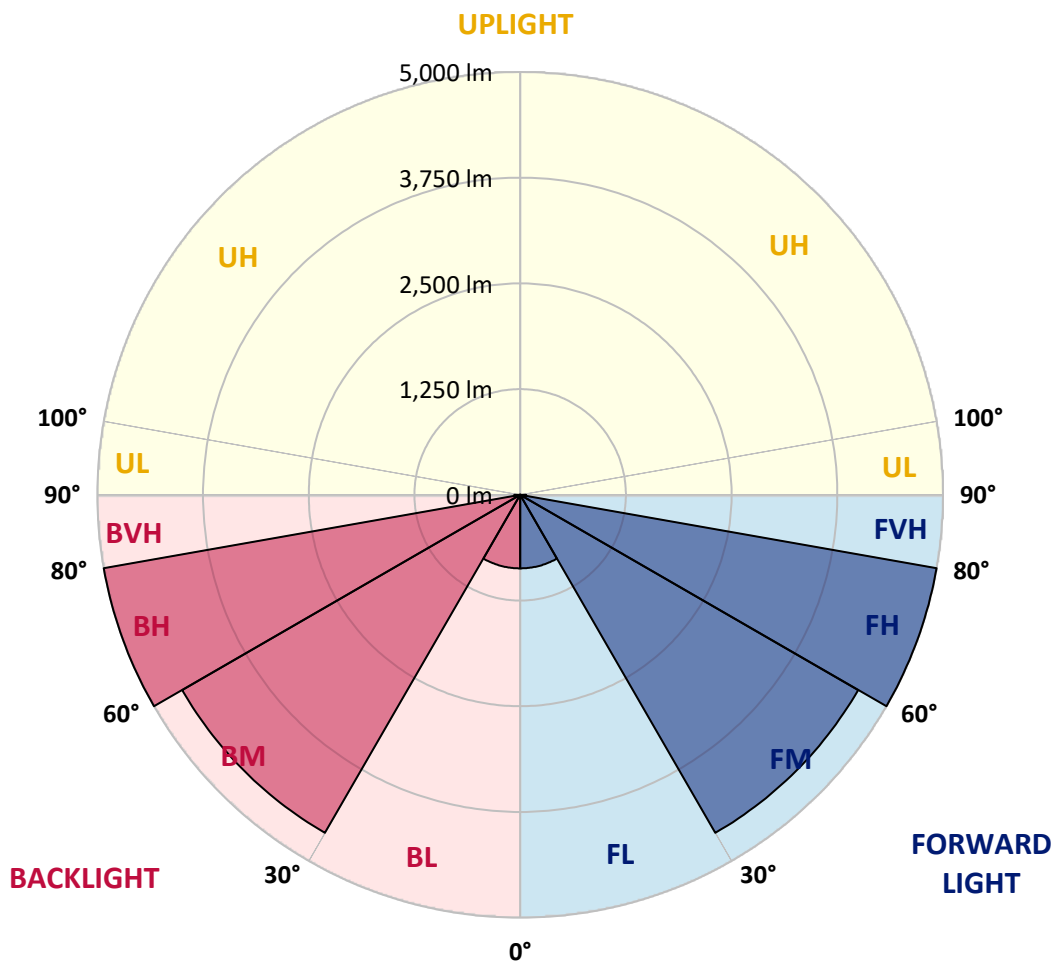
CATALOG NUMBER: NAV-AF-05-D-UNV-5MQ-8030-800

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	870.1	4.1			
FM	(30°-60°)	4615.4	21.9			
FH	(60°-80°)	5000.2	23.7			G3/7500
FVH	(80°-90°)	70.3	0.3			G1/100
BL	(0°-30°)	870.1	4.1	B2/1000		
BM	(30°-60°)	4615.4	21.9	B3/5000		
BH	(60°-80°)	5000.2	23.7	B5		G3/7500
BVH	(80°-90°)	70.3	0.3			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B5-U0-G3

Type V Short





REPORT NUMBER: P196883

CATALOG NUMBER: NAV-AF-05-D-UNV-5MQ-8030-800

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2106.0	2106.0	2106.0	2106.0	2106.0	2106.0	2106.0	2106.0	2106.0	2106.0	2106.0
2.5°	2115.0	2115.0	2117.6	2116.3	2112.4	2108.6	2104.7	2100.8	2098.2	2095.6	2093.1
5°	2093.1	2093.1	2096.9	2094.3	2091.8	2087.9	2085.3	2081.4	2078.8	2076.3	2077.5
7.5°	2064.6	2067.2	2069.8	2068.5	2063.3	2062.0	2058.2	2056.9	2054.3	2050.4	2051.7
10°	2040.1	2041.3	2043.9	2042.6	2041.3	2037.5	2036.2	2034.9	2033.6	2028.4	2027.1
12.5°	2015.5	2018.1	2020.7	2022.0	2020.7	2022.0	2023.2	2024.5	2023.2	2020.7	2020.7
15°	1996.1	1998.7	2002.6	2006.4	2007.7	2015.5	2020.7	2025.8	2029.7	2031.0	2027.1
17.5°	1985.8	1989.6	1994.8	2002.6	2009.0	2018.1	2027.1	2034.9	2041.3	2042.6	2038.8
20°	1984.5	1988.3	1996.1	2005.1	2016.8	2028.4	2042.6	2054.3	2060.7	2064.6	2060.7
22.5°	1993.5	1998.7	2009.0	2020.7	2034.9	2050.4	2068.5	2081.4	2094.3	2099.5	2095.6
25°	2019.4	2024.5	2036.2	2050.4	2065.9	2085.3	2103.4	2120.2	2133.1	2139.6	2134.4
27.5°	2073.7	2075.0	2087.9	2103.4	2121.5	2138.3	2161.6	2169.3	2179.7	2186.1	2179.7
30°	2149.9	2152.5	2164.2	2188.7	2205.5	2227.5	2240.4	2248.2	2259.8	2266.3	2258.5
32.5°	2266.3	2268.9	2279.2	2302.5	2318.0	2334.8	2350.3	2355.5	2367.1	2374.9	2365.8
35°	2430.5	2435.7	2444.7	2460.2	2473.1	2486.1	2497.7	2493.8	2501.6	2511.9	2502.9
37.5°	2655.4	2654.1	2656.7	2668.4	2681.3	2689.0	2707.1	2698.1	2705.8	2714.9	2709.7
40°	2917.9	2917.9	2916.6	2937.3	2942.4	2950.2	2969.6	2957.9	2968.3	2978.6	2969.6
42.5°	3216.5	3221.7	3228.1	3244.9	3259.2	3261.8	3270.8	3265.6	3278.6	3287.6	3278.6
45°	3560.4	3568.2	3575.9	3614.7	3621.2	3626.3	3632.8	3616.0	3630.2	3638.0	3635.4
47.5°	3917.2	3931.4	3948.2	3988.3	4014.2	4025.8	4031.0	4011.6	4012.9	4024.5	4025.8
50°	4320.6	4336.1	4352.9	4398.1	4422.7	4443.4	4449.8	4427.9	4430.5	4439.5	4442.1
52.5°	4692.9	4711.0	4747.2	4808.0	4842.9	4879.1	4881.6	4854.5	4866.1	4872.6	4867.4
55°	5043.2	5066.5	5114.3	5195.8	5259.1	5330.2	5362.6	5332.8	5332.8	5327.7	5325.1
57.5°	5451.8	5477.6	5526.8	5621.1	5709.0	5811.2	5899.1	5928.8	5983.1	6001.2	5972.8
60°	6067.1	6094.3	6144.7	6268.8	6380.0	6528.7	6673.5	6791.1	6982.5	7085.9	6992.8
62.5°	6629.5	6670.9	6789.8	7007.0	7247.5	7522.9	7842.2	8069.7	8417.5	8590.7	8356.7
65°	6501.5	6585.6	6818.3	7159.6	7656.0	8253.3	8903.6	9528.0	10246.8	10615.2	10139.5
67.5°	5679.3	5750.4	6001.2	6398.1	7017.4	7840.9	8851.9	10144.7	11627.5	12317.9	11476.3
68°	5365.2	5498.3	5747.8	6142.1	6766.6	7575.9	8655.4	10051.6	11670.2	12416.1	11507.3
70°	4113.7	4161.6	4400.7	4754.9	5428.5	6222.3	7312.1	8903.6	10732.9	11500.8	10566.1
72.5°	1954.7	1983.2	2138.3	2487.4	2915.3	3561.7	4523.5	6024.5	7672.8	8471.8	7539.7
75°	716.2	722.7	758.9	841.6	1001.9	1245.0	1706.5	2639.9	3908.2	4660.6	3923.7
77.5°	386.5	387.8	402.1	422.7	451.2	483.5	553.3	742.1	1197.1	1628.9	1264.4
80°	243.0	241.8	256.0	272.8	292.2	307.7	314.2	336.1	378.8	443.4	407.2
82.5°	124.1	135.7	168.1	186.2	214.6	219.8	213.3	212.0	224.9	243.0	250.8
85°	68.5	60.8	89.2	118.9	129.3	133.2	134.5	126.7	124.1	121.5	128.0
87.5°	34.9	32.3	38.8	59.5	63.3	51.7	53.0	45.2	31.0	31.0	32.3
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: P196883

CATALOG NUMBER: NAV-AF-05-D-UNV-5MQ-8030-800

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	2106.0	2106.0	2106.0	2106.0	2106.0	2106.0	2106.0	2106.0
2.5°	2090.5	2091.8	2089.2	2089.2	2089.2	2090.5	2089.2	2087.9
5°	2073.7	2076.3	2076.3	2077.5	2078.8	2078.8	2078.8	2078.8
7.5°	2049.1	2050.4	2053.0	2053.0	2053.0	2053.0	2053.0	2053.0
10°	2025.8	2023.2	2022.0	2019.4	2019.4	2015.5	2016.8	2018.1
12.5°	2014.2	2009.0	2006.4	2002.6	2000.0	1996.1	1996.1	1997.4
15°	2019.4	2011.6	2003.9	2001.3	1998.7	1996.1	1993.5	1994.8
17.5°	2029.7	2020.7	2011.6	2006.4	2001.3	1997.4	1996.1	1997.4
20°	2051.7	2038.8	2024.5	2015.5	2005.1	2002.6	1998.7	2002.6
22.5°	2081.4	2065.9	2047.8	2031.0	2019.4	2014.2	2009.0	2012.9
25°	2117.6	2100.8	2082.7	2063.3	2050.4	2046.5	2040.1	2040.1
27.5°	2168.0	2153.8	2138.3	2120.2	2107.3	2103.4	2093.1	2093.1
30°	2248.2	2234.0	2219.8	2204.2	2191.3	2187.4	2174.5	2174.5
32.5°	2354.2	2338.7	2329.6	2316.7	2306.4	2299.9	2284.4	2283.1
35°	2496.4	2482.2	2480.9	2471.8	2461.5	2462.8	2447.3	2444.7
37.5°	2700.7	2689.0	2692.9	2685.2	2676.1	2683.9	2674.8	2674.8
40°	2961.8	2957.9	2961.8	2956.7	2957.9	2959.2	2951.5	2954.1
42.5°	3277.3	3266.9	3290.2	3287.6	3283.7	3294.1	3276.0	3263.0
45°	3640.5	3636.7	3659.9	3663.8	3656.1	3662.5	3630.2	3628.9
47.5°	4034.9	4034.9	4055.5	4053.0	4045.2	4046.5	4007.7	3983.1
50°	4446.0	4443.4	4464.1	4458.9	4448.6	4447.3	4407.2	4382.6
52.5°	4873.9	4873.9	4903.6	4889.4	4864.8	4853.2	4804.1	4771.8
55°	5347.1	5340.6	5349.6	5303.1	5255.3	5220.4	5159.6	5135.0
57.5°	5945.6	5870.6	5806.0	5746.5	5679.3	5637.9	5566.8	5541.0
60°	6795.0	6594.6	6508.0	6389.1	6277.9	6222.3	6127.9	6077.5
62.5°	7971.5	7639.2	7403.9	7141.5	6888.1	6709.7	6566.2	6502.8
65°	9331.5	8607.5	8008.9	7446.6	6969.5	6590.7	6380.0	6314.1
67.5°	9848.6	8519.6	7486.7	6679.9	6100.8	5649.6	5397.5	5344.5
68°	9738.7	8317.9	7244.9	6418.8	5837.0	5382.0	5131.2	5083.3
70°	8590.7	7017.4	5884.9	5062.6	4519.7	4086.6	3909.5	3833.2
72.5°	5856.4	4506.7	3457.0	2765.3	2359.4	2085.3	1922.4	1866.8
75°	2695.5	1821.6	1216.5	908.8	771.8	705.9	655.5	642.5
77.5°	786.0	571.4	491.3	455.1	427.9	404.6	387.8	386.5
80°	373.6	350.4	340.0	316.7	292.2	270.2	254.7	257.3
82.5°	250.8	244.3	244.3	221.1	182.3	156.4	129.3	116.4
85°	133.2	138.3	146.1	138.3	120.2	89.2	58.2	63.3
87.5°	45.2	51.7	54.3	53.0	47.8	36.2	27.1	27.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)