

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: P270626

Luminaire Tested: **NAV-AF-05-D-UNV-T3-7027-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270626
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (p24135)
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-T3-7027-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 70 CRI, 2700K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 17217.2 lumens
Efficiency: N/A
Efficacy: 106.3 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type III - Short - Semi-Cutoff
BUG Rating: B3 - U0 - G3

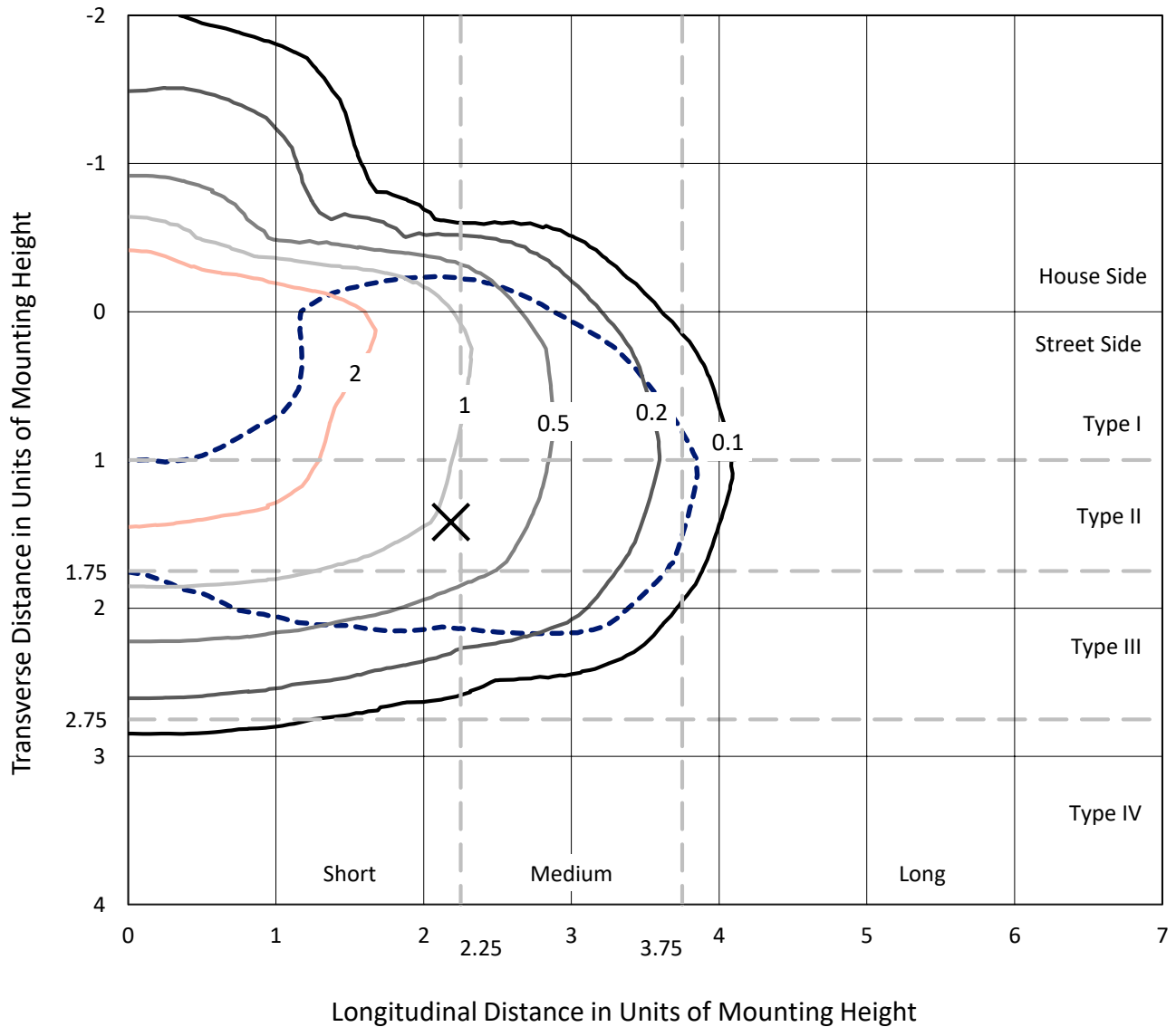
Input Watts (W): 162
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

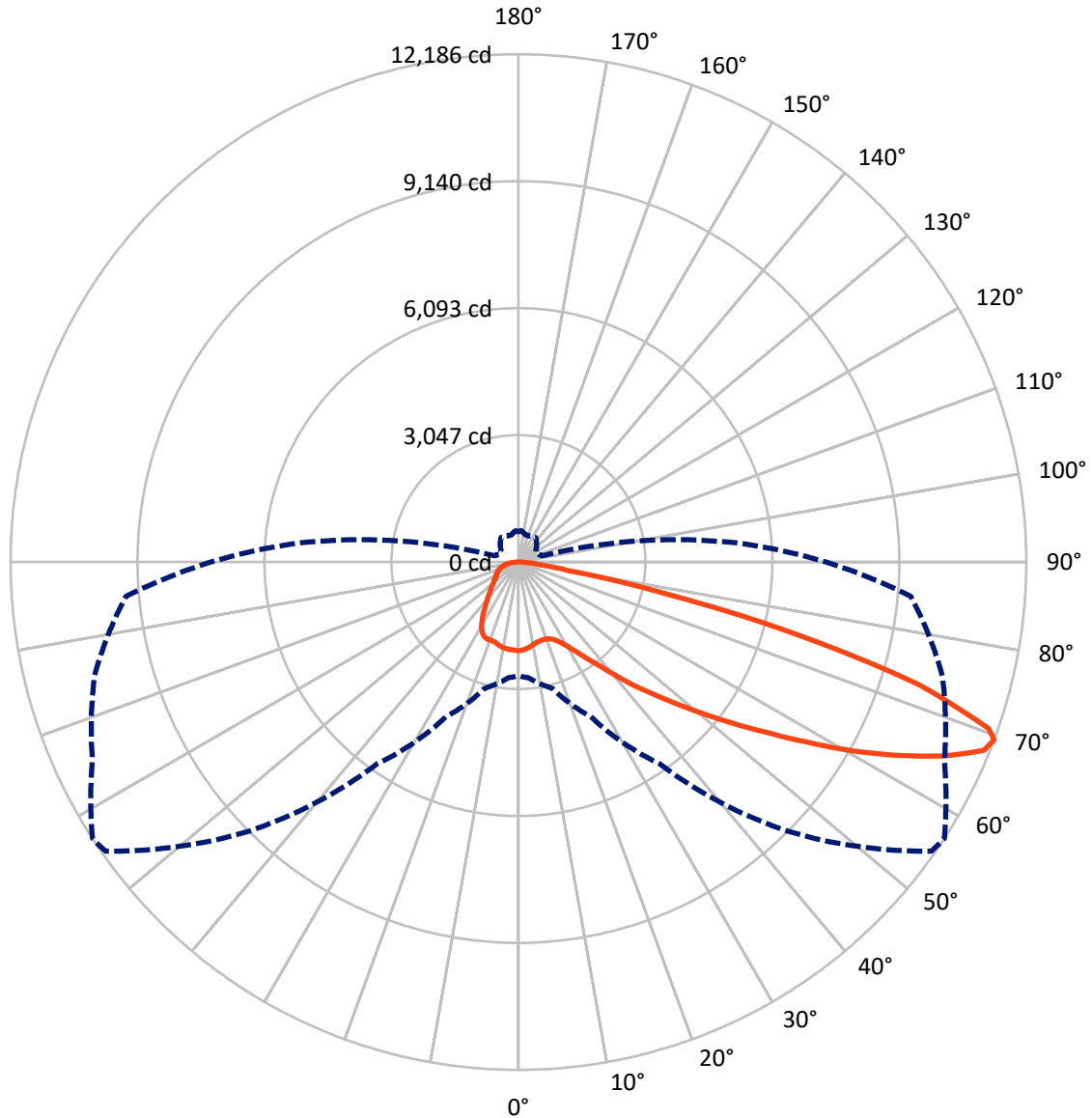
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.5 fc
 Type III - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 57-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3799.2	0.0	3799.2
	% Fixture	22.1	0.0	22.1
Street Side	Lumens	13417.9	0.0	13417.9
	% Fixture	77.9	0.0	77.9
Total	Lumens	17217.2	0.0	17217.2
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	199.2	1.2
10°-20°	566.3	3.3
20°-30°	942.0	5.5
30°-40°	1538.2	8.9
40°-50°	2596.2	15.1
50°-60°	4038.5	23.5
60°-70°	4810.7	27.9
70°-80°	2241.1	13.0
80°-90°	285.1	1.7
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°	17217.2	100.0
0°-180°	17217.2	100.0



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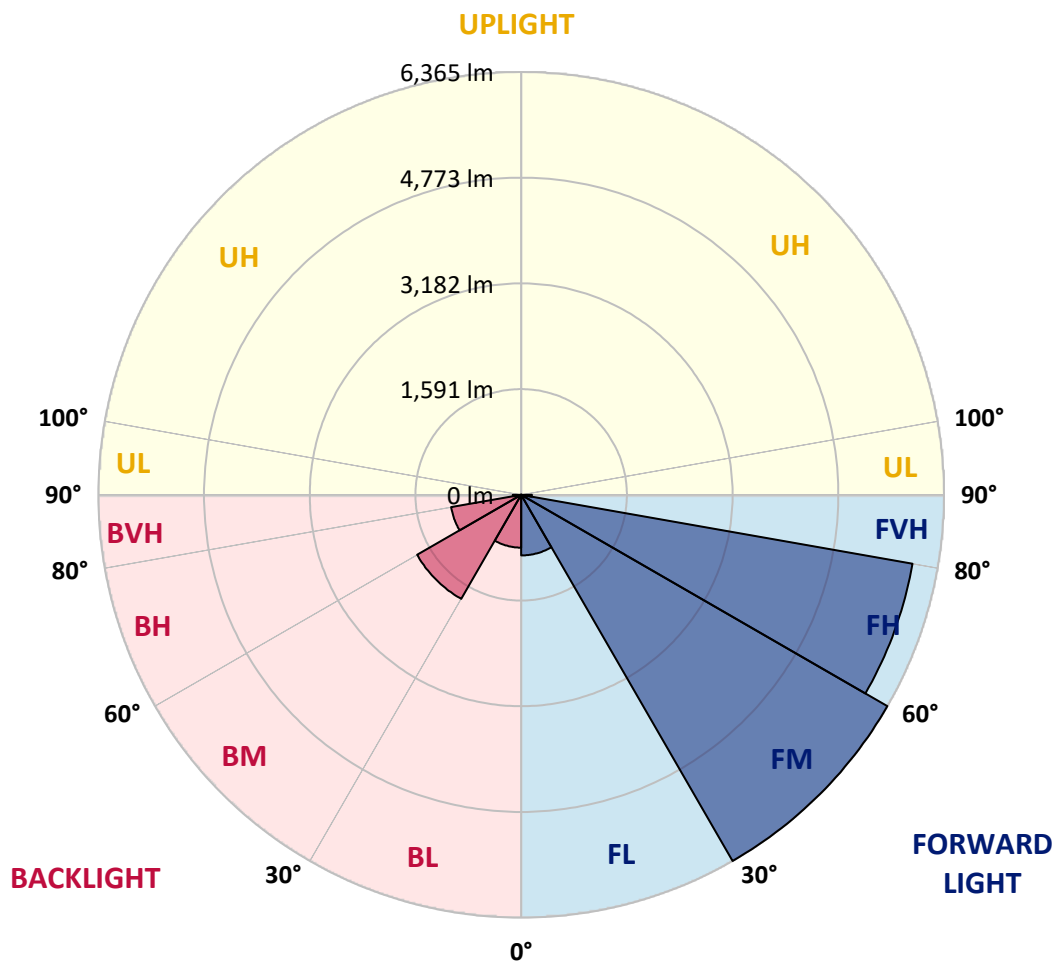
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	911.8	5.3			
FM	(30°-60°)	6364.7	37.0			
FH	(60°-80°)	5981.3	34.7			G3/7500
FVH	(80°-90°)	160.2	0.9			G2/225
BL	(0°-30°)	795.6	4.6	B2/1000		
BM	(30°-60°)	1808.2	10.5	B2/2500		
BH	(60°-80°)	1070.6	6.2	B3/2500		G3/2500
BVH	(80°-90°)	124.8	0.7			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G3

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	57°	65°	75°	85°
0°	2127.4	2127.4	2127.4	2127.4	2127.4	2127.4	2127.4	2127.4	2127.4	2127.4	2127.4
2.5°	2115.1	2115.1	2120.7	2120.7	2120.7	2118.6	2111.9	2114.2	2109.7	2106.3	2100.9
5°	2072.2	2074.5	2081.1	2083.3	2086.6	2087.8	2087.8	2086.6	2087.8	2087.8	2084.3
7.5°	2012.7	2014.9	2022.7	2027.0	2036.9	2045.8	2050.2	2050.2	2055.7	2060.2	2061.3
10°	1976.4	1976.4	1980.8	1980.8	1988.5	1992.9	2007.3	2006.1	2021.5	2035.9	2042.4
12.5°	1971.9	1971.9	1969.8	1962.0	1957.5	1956.5	1970.8	1973.0	1996.2	2021.5	2033.7
15°	1986.2	1986.2	1979.7	1964.2	1947.6	1940.0	1954.4	1958.8	1984.0	2013.8	2032.5
17.5°	2032.5	2031.4	2017.1	1986.2	1957.5	1945.5	1950.0	1954.4	1977.4	2011.7	2034.8
20°	2135.0	2135.0	2104.2	2048.0	1998.4	1969.8	1963.2	1966.4	1983.0	2014.9	2044.7
22.5°	2314.8	2318.0	2262.9	2170.3	2085.4	2024.8	1998.4	2001.8	2009.4	2040.3	2073.4
25°	2579.3	2570.5	2492.2	2361.0	2228.8	2125.1	2071.1	2074.5	2074.5	2103.1	2137.2
27.5°	2859.2	2861.5	2749.1	2607.9	2433.8	2279.4	2193.5	2192.4	2191.2	2218.9	2255.3
30°	3175.6	3176.6	3046.6	2883.5	2684.0	2486.7	2357.7	2356.7	2346.7	2380.9	2428.3
32.5°	3521.6	3520.5	3369.6	3185.5	2964.0	2740.2	2572.7	2571.6	2563.9	2610.1	2667.4
35°	3905.3	3905.3	3755.4	3528.4	3289.1	3040.0	2846.0	2844.9	2849.3	2912.1	2966.2
37.5°	4367.1	4377.0	4196.3	3920.7	3659.4	3393.8	3167.9	3161.2	3128.2	3234.0	3323.3
40°	4848.8	4876.4	4689.1	4367.1	4085.0	3810.5	3561.4	3557.0	3528.4	3640.7	3785.2
42.5°	5370.2	5432.9	5224.7	4896.2	4588.7	4292.2	4042.0	4029.8	3919.7	4094.8	4320.8
45°	6053.6	6094.3	5792.4	5494.8	5204.8	4866.5	4568.8	4503.8	4393.6	4618.5	4911.7
47.5°	6518.7	6498.9	6310.5	6110.9	5924.6	5600.6	5143.1	5060.4	4925.9	5223.6	5546.6
50°	6807.5	6821.9	6716.0	6706.0	6696.1	6470.2	5791.3	5692.0	5536.7	5889.4	6266.2
52.5°	6998.2	6933.2	6952.0	7176.7	7449.0	7340.9	6524.2	6414.0	6254.2	6606.9	7032.4
55°	6918.8	6832.9	7005.9	7449.0	8089.4	8113.8	7328.9	7215.4	7078.6	7369.6	7953.9
57.5°	6590.3	6633.4	6906.7	7522.9	8527.0	8805.8	8253.6	8137.9	7869.0	8164.3	8829.0
60°	6128.5	6215.6	6633.4	7406.0	8833.5	9344.9	9268.8	9191.6	8728.7	8938.1	9748.2
62.5°	5632.6	5718.5	6232.1	7206.6	8695.7	9822.2	10265.3	10218.0	9677.8	9683.3	10331.3
65°	4899.5	4934.7	5459.4	6662.0	8313.2	10253.2	11262.8	11220.9	10584.9	10319.3	10494.5
67.5°	3700.3	3744.3	4175.3	5258.9	7149.3	10019.4	12059.7	12053.1	11130.5	10555.2	10106.6
69°	2732.5	2786.5	3138.0	4082.7	5911.3	9128.8	12097.2	12186.4	11278.2	10530.9	9450.7
70°	1999.4	2061.3	2386.3	3240.6	4923.8	8145.7	11776.5	11968.3	11222.0	10377.7	8939.3
72.5°	849.8	870.7	1030.6	1462.7	2497.6	4911.7	9645.8	10049.2	10135.1	9298.5	6983.9
75°	532.3	539.1	601.9	750.7	1111.1	2031.4	6246.5	6796.4	7567.0	7214.3	4675.8
77.5°	401.3	406.8	443.1	517.0	690.0	758.3	2897.8	3455.6	4334.1	4243.7	2326.9
80°	307.5	310.9	335.1	375.9	486.2	475.1	940.3	1181.6	1808.7	1596.1	823.3
82.5°	241.4	242.5	263.5	271.2	339.5	319.6	471.8	525.8	730.9	607.3	402.4
85°	213.8	217.1	238.1	198.3	217.1	192.9	259.0	281.1	388.0	366.0	152.2
87.5°	109.1	114.7	199.6	169.7	109.1	91.4	113.5	122.3	157.7	170.9	73.8
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):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2127.4	2127.4	2127.4	2127.4	2127.4	2127.4	2127.4	2127.4	2127.4	2127.4	2127.4
2.5°	2102.0	2103.1	2106.3	2111.9	2120.7	2131.8	2145.1	2158.2	2166.0	2171.5	2169.2
5°	2084.3	2085.4	2092.1	2102.0	2113.1	2129.5	2151.6	2168.1	2180.2	2188.0	2186.8
7.5°	2062.2	2065.7	2078.9	2089.8	2105.3	2118.6	2136.2	2151.6	2163.7	2171.5	2170.3
10°	2045.8	2049.0	2065.7	2079.9	2093.2	2095.3	2092.1	2087.8	2086.6	2092.1	2089.8
12.5°	2038.1	2044.7	2060.2	2070.1	2064.6	2043.6	2019.3	2009.4	2006.1	2017.1	2018.2
15°	2040.3	2045.8	2059.1	2052.4	2022.7	1987.4	1974.1	1981.8	1988.5	1995.0	1996.2
17.5°	2045.8	2049.0	2052.4	2028.2	1986.2	1963.2	1958.8	1950.9	1931.1	1920.1	1919.0
20°	2055.7	2060.2	2054.7	2016.1	1978.5	1947.6	1894.7	1847.4	1802.2	1777.9	1768.0
22.5°	2089.8	2093.2	2076.6	2039.2	1981.8	1881.5	1774.6	1693.0	1623.6	1586.1	1571.9
25°	2157.1	2162.6	2139.5	2092.1	1942.1	1766.8	1616.0	1505.6	1418.7	1373.4	1361.3
27.5°	2275.0	2280.5	2255.3	2131.8	1849.6	1613.6	1430.7	1321.5	1246.7	1208.1	1202.6
30°	2451.5	2459.1	2435.9	2130.7	1708.4	1418.7	1249.9	1186.0	1143.1	1116.6	1115.4
32.5°	2696.2	2724.7	2630.0	2093.2	1534.3	1221.2	1113.3	1091.3	1070.3	1052.6	1052.6
35°	3006.9	3074.2	2821.8	2014.9	1342.5	1086.8	1037.3	1016.3	989.8	971.1	968.9
37.5°	3378.3	3483.1	2958.5	1876.0	1177.1	1021.8	990.9	956.8	914.8	878.5	869.6
40°	3888.8	3912.9	3025.8	1650.0	1053.7	986.5	947.9	905.0	852.0	811.3	806.9
42.5°	4401.2	4321.9	3012.5	1407.6	983.3	954.5	903.9	856.4	809.1	774.9	774.9
45°	4984.3	4679.0	2912.1	1163.9	919.2	918.2	863.0	817.8	781.4	756.2	750.7
47.5°	5542.2	4999.8	2739.1	984.4	853.1	881.7	836.6	800.2	767.2	742.9	738.4
50°	6218.8	5371.2	2555.0	858.7	789.3	849.8	825.6	806.9	774.9	732.9	728.5
52.5°	6891.3	5805.6	2412.8	763.9	732.9	824.5	832.2	834.3	804.6	723.0	717.6
55°	7613.2	6269.6	2262.9	690.0	686.8	812.3	847.6	845.5	831.1	725.3	716.5
57.5°	8300.0	6735.9	2039.2	638.2	650.4	800.2	851.0	815.8	790.2	736.3	722.0
60°	8868.7	7121.7	1710.7	601.9	619.6	776.0	828.9	776.0	732.9	734.2	720.9
62.5°	9145.4	7229.6	1308.4	560.0	594.0	736.3	796.9	746.2	706.5	738.4	730.9
65°	8934.8	6922.1	932.5	521.3	563.2	690.0	778.2	720.9	693.3	760.5	751.7
67.5°	8178.7	6084.4	676.9	487.2	533.6	642.6	742.9	697.8	680.0	777.0	757.2
69°	7375.2	5253.4	586.5	467.4	512.6	617.2	719.8	685.5	670.1	753.9	725.3
70°	6707.3	4612.9	541.1	455.3	494.8	602.9	702.1	678.0	660.3	726.4	692.2
72.5°	4809.2	2981.6	455.3	418.9	448.7	571.0	663.6	649.3	622.7	655.9	633.8
75°	2905.6	1556.4	386.9	381.4	400.1	526.9	618.4	600.7	574.2	577.6	566.6
77.5°	1334.8	718.6	324.1	337.4	349.4	471.8	563.2	543.5	519.2	510.3	511.5
80°	585.2	420.0	271.2	287.6	294.4	424.4	503.7	481.8	455.3	502.6	466.2
82.5°	316.4	243.6	211.6	222.7	241.4	369.3	437.7	409.0	383.5	446.4	360.4
85°	127.9	124.5	143.3	154.2	167.5	265.7	366.0	336.1	305.3	273.4	266.7
87.5°	55.2	59.5	70.5	75.0	89.3	165.4	245.7	215.0	216.0	185.2	181.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)