

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: P270465

Luminaire Tested: **NAV-AF-03-D-UNV-T3-7027**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270465
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-03-D-UNV-T3-7027
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 2700K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 15742 lumens
Efficiency: N/A
Efficacy: 94.8 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type III - Short - Semi-Cutoff
BUG Rating: B2 - U0 - G3

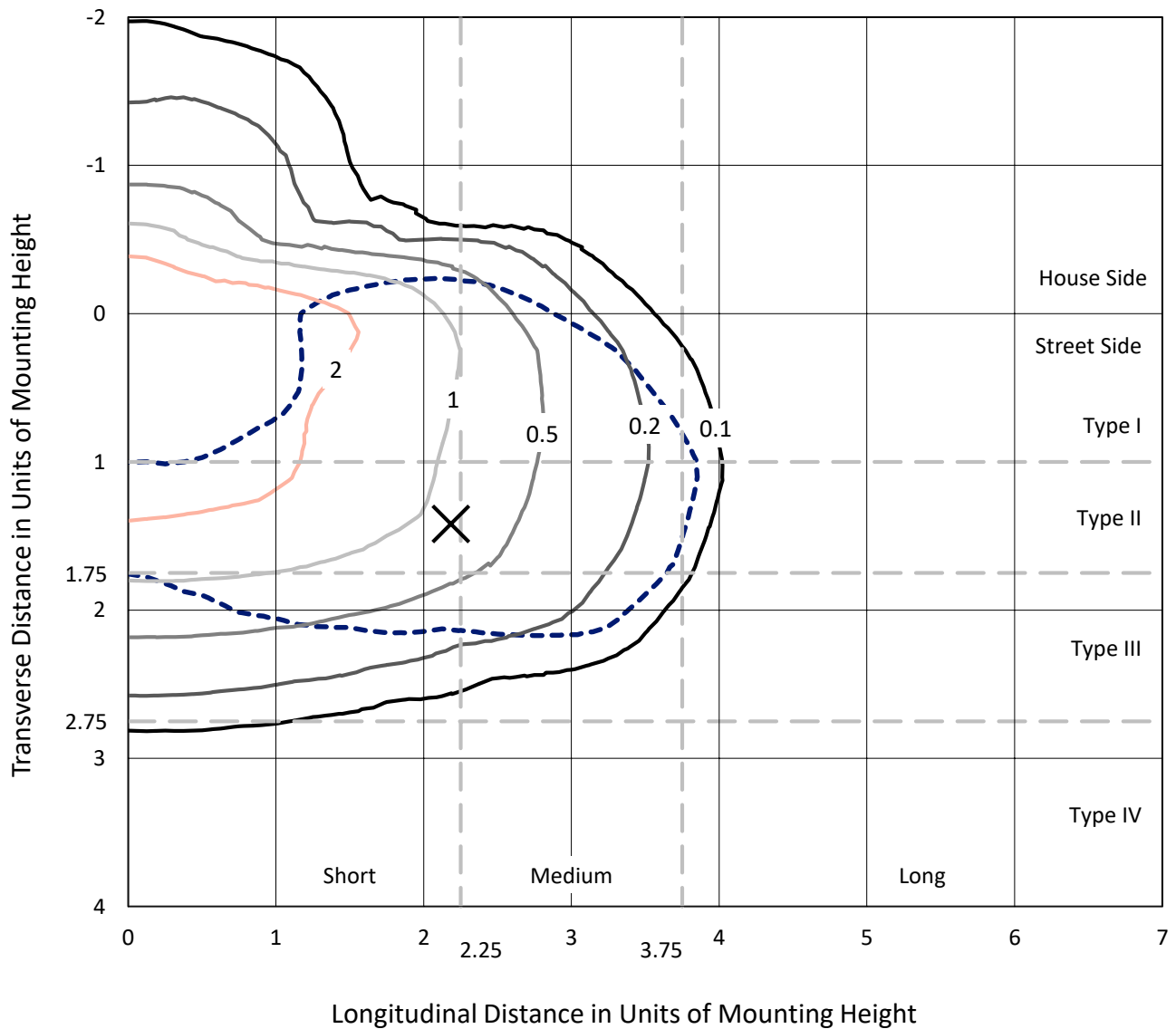
Input Watts (W): 166
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

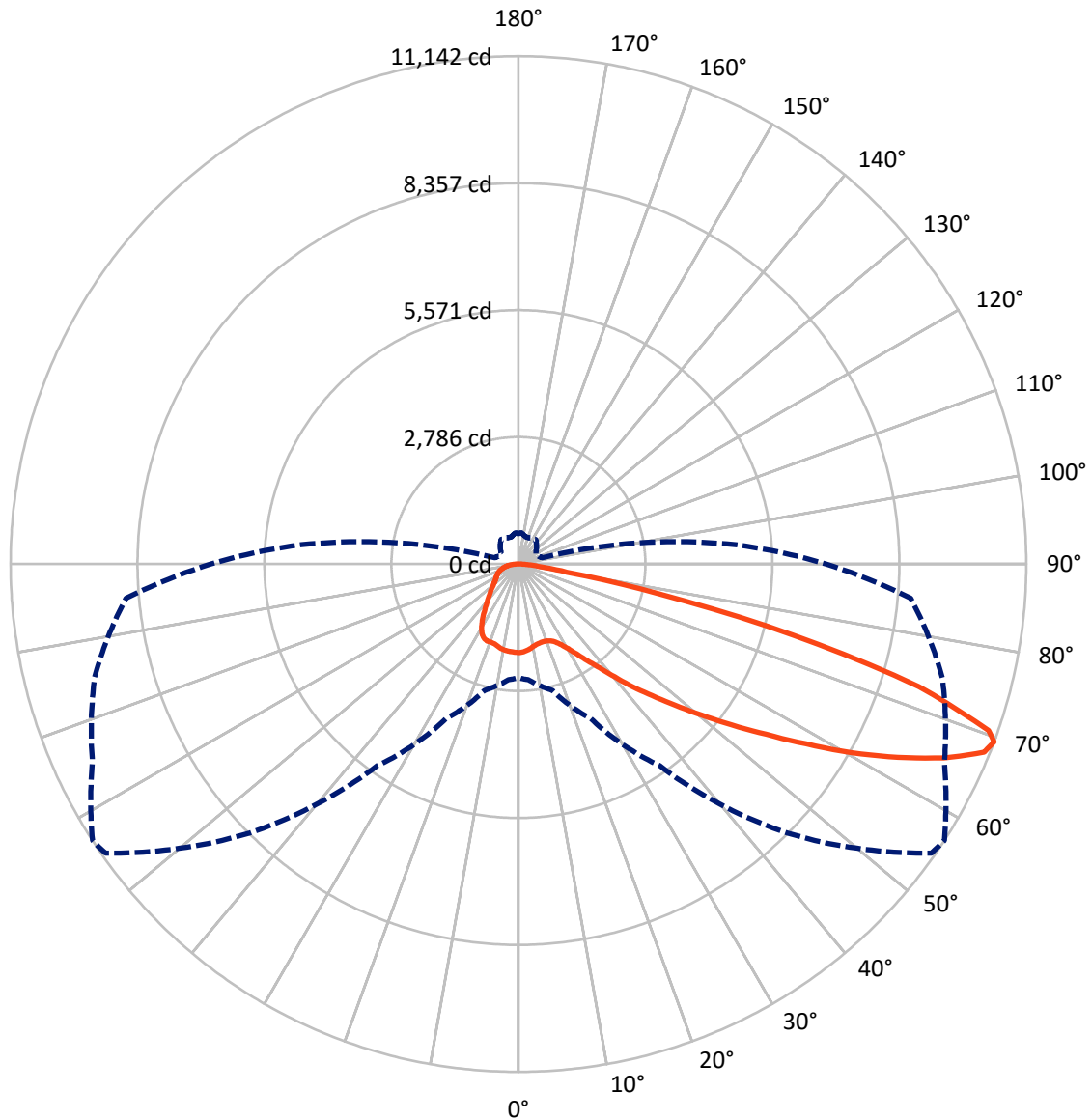
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.2 fc
 Type 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	3473.7	0.0	3473.7
	% Fixture	22.1	0.0	22.1
Street Side	Lumens	12268.3	0.0	12268.3
	% Fixture	77.9	0.0	77.9
Total	Lumens	15742.0	0.0	15742.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	182.1	1.2
10°-20°	517.8	3.3
20°-30°	861.3	5.5
30°-40°	1406.4	8.9
40°-50°	2373.7	15.1
50°-60°	3692.4	23.5
60°-70°	4398.5	27.9
70°-80°	2049.1	13.0
80°-90°	260.6	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°	15742.0	100.0
0°-180°	15742.0	100.0



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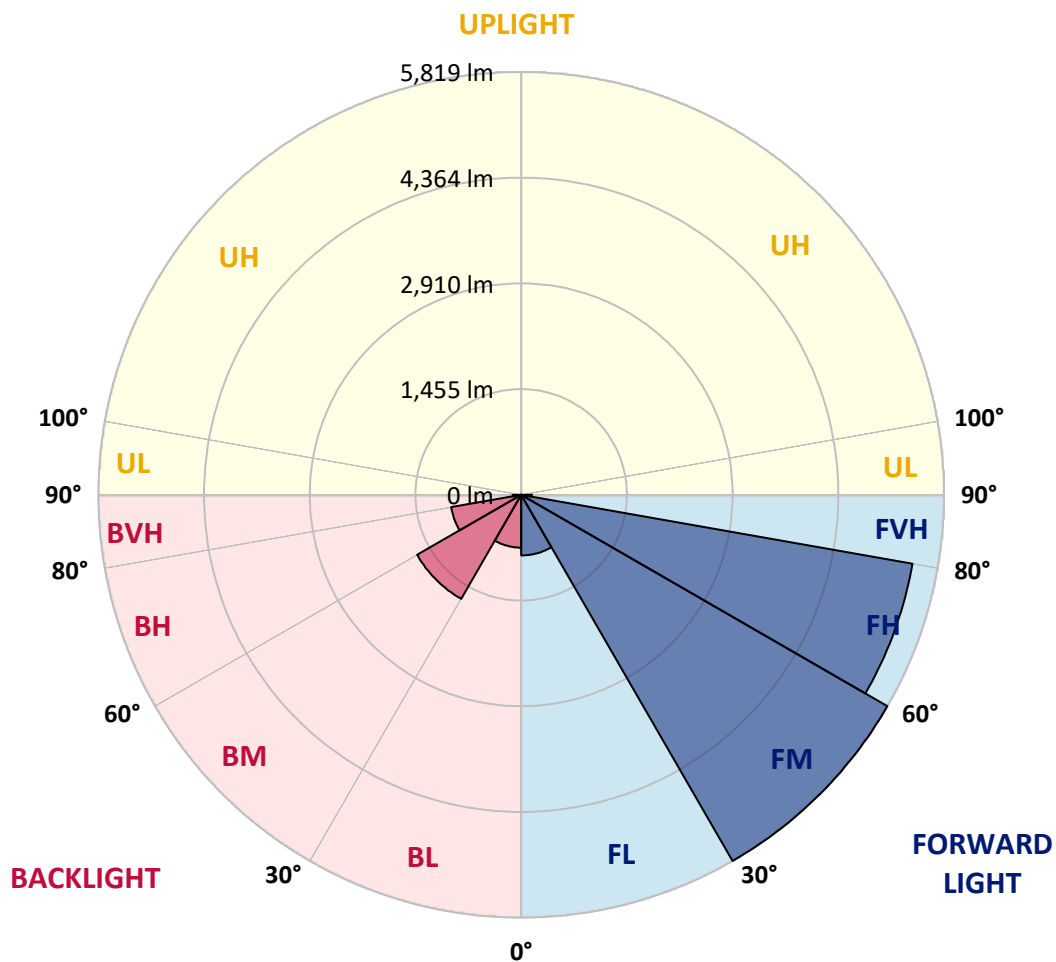
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	833.7	5.3			
FM	(30°-60°)	5819.3	37.0			
FH	(60°-80°)	5468.8	34.7			G3/7500
FVH	(80°-90°)	146.5	0.9			G2/225
BL	(0°-30°)	727.5	4.6	B2/1000		
BM	(30°-60°)	1653.3	10.5	B2/2500		
BH	(60°-80°)	978.8	6.2	B2/1000		G2/1000
BVH	(80°-90°)	114.1	0.7			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G3

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	57°	65°	75°	85°
0°	1945.1	1945.1	1945.1	1945.1	1945.1	1945.1	1945.1	1945.1	1945.1	1945.1	1945.1
2.5°	1934.1	1934.1	1939.0	1939.0	1939.0	1937.0	1930.9	1933.1	1928.9	1926.0	1920.8
5°	1894.6	1896.7	1902.7	1904.8	1907.8	1908.8	1908.8	1907.8	1908.8	1908.8	1905.8
7.5°	1840.3	1842.2	1849.3	1853.4	1862.5	1870.5	1874.6	1874.6	1879.6	1883.6	1884.6
10°	1807.0	1807.0	1811.1	1811.1	1818.1	1822.1	1835.2	1834.2	1848.4	1861.4	1867.4
12.5°	1803.0	1803.0	1800.9	1793.9	1789.9	1788.9	1802.0	1803.9	1825.1	1848.4	1859.4
15°	1816.1	1816.1	1810.1	1795.9	1780.8	1773.8	1786.9	1791.0	1814.0	1841.3	1858.5
17.5°	1858.5	1857.3	1844.3	1816.1	1789.9	1778.7	1782.9	1786.9	1808.0	1839.3	1860.4
20°	1952.1	1952.1	1923.9	1872.4	1827.2	1800.9	1795.0	1798.0	1813.0	1842.2	1869.6
22.5°	2116.3	2119.5	2069.1	1984.4	1906.8	1851.3	1827.2	1830.1	1837.3	1865.5	1895.8
25°	2358.3	2350.2	2278.7	2158.7	2037.7	1943.0	1893.6	1896.7	1896.7	1922.9	1954.2
27.5°	2614.2	2616.3	2513.5	2384.6	2225.2	2084.2	2005.6	2004.6	2003.5	2028.7	2062.0
30°	2903.5	2904.5	2785.6	2636.4	2454.0	2273.6	2155.8	2154.8	2145.6	2176.9	2220.3
32.5°	3220.0	3218.9	3080.8	2912.6	2709.9	2505.5	2352.2	2351.3	2344.1	2386.4	2438.9
35°	3570.7	3570.7	3433.6	3226.1	3007.3	2779.5	2602.2	2601.1	2605.2	2662.7	2712.1
37.5°	3993.0	4001.9	3836.8	3584.7	3345.9	3103.0	2896.4	2890.3	2860.2	2957.0	3038.5
40°	4433.3	4458.6	4287.3	3993.0	3735.0	3483.9	3256.3	3252.3	3226.1	3328.8	3460.8
42.5°	4910.0	4967.4	4777.0	4476.8	4195.5	3924.4	3695.6	3684.6	3583.8	3744.0	3950.7
45°	5534.8	5572.1	5296.0	5024.0	4759.0	4449.5	4177.4	4117.9	4017.1	4222.8	4490.7
47.5°	5960.3	5942.1	5769.8	5587.3	5417.0	5120.7	4702.4	4626.9	4503.9	4776.0	5071.3
50°	6224.3	6237.3	6140.6	6131.6	6122.5	5915.9	5295.0	5204.3	5062.2	5384.7	5729.4
52.5°	6398.5	6339.1	6356.2	6561.8	6810.8	6712.0	5965.3	5864.4	5718.3	6040.8	6429.9
55°	6326.0	6247.4	6405.6	6810.8	7396.4	7418.6	6700.9	6597.2	6472.2	6738.2	7272.4
57.5°	6025.7	6064.9	6314.9	6878.3	7796.4	8051.4	7546.5	7440.8	7194.7	7464.8	8072.6
60°	5603.4	5683.0	6064.9	6771.5	8076.7	8544.1	8474.7	8404.2	7980.8	8172.3	8913.2
62.5°	5150.0	5228.6	5698.2	6589.1	7950.5	8980.5	9385.8	9342.5	8848.6	8853.6	9446.1
65°	4479.7	4511.9	4991.7	6091.1	7600.9	9374.6	10297.8	10259.5	9678.0	9435.1	9595.3
67.5°	3383.2	3423.5	3817.5	4808.3	6536.6	9161.0	11026.4	11020.3	10176.9	9650.9	9240.7
69°	2498.4	2547.8	2869.2	3732.9	5404.9	8346.7	11060.7	11142.3	10312.0	9628.7	8640.9
70°	1828.2	1884.6	2182.0	2963.0	4501.9	7447.7	10767.4	10942.9	10260.5	9488.5	8173.4
72.5°	777.0	796.2	942.3	1337.3	2283.8	4490.7	8819.4	9188.3	9266.8	8501.9	6385.5
75°	486.8	492.8	550.2	686.3	1015.9	1857.3	5711.2	6214.1	6918.7	6596.2	4275.2
77.5°	366.9	371.9	405.1	472.7	630.9	693.4	2649.6	3159.5	3962.8	3880.0	2127.5
80°	281.2	284.3	306.4	343.6	444.4	434.4	859.7	1080.4	1653.8	1459.2	752.8
82.5°	220.8	221.7	240.8	247.9	310.5	292.3	431.4	480.8	668.2	555.3	367.9
85°	195.6	198.5	217.7	181.4	198.5	176.3	236.9	256.9	354.7	334.6	139.1
87.5°	99.8	104.8	182.4	155.1	99.8	83.6	103.8	111.8	144.1	156.2	67.6
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):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1945.1	1945.1	1945.1	1945.1	1945.1	1945.1	1945.1	1945.1	1945.1	1945.1	1945.1
2.5°	1922.0	1922.9	1926.0	1930.9	1939.0	1949.1	1961.2	1973.2	1980.4	1985.3	1983.4
5°	1905.8	1906.8	1912.9	1922.0	1932.0	1947.0	1967.3	1982.4	1993.5	2000.5	1999.4
7.5°	1885.6	1888.6	1900.8	1910.9	1924.9	1937.0	1953.2	1967.3	1978.3	1985.3	1984.4
10°	1870.5	1873.5	1888.6	1901.7	1913.7	1915.8	1912.9	1908.8	1907.8	1912.9	1910.9
12.5°	1863.4	1869.6	1883.6	1892.6	1887.6	1868.5	1846.2	1837.3	1834.2	1844.3	1845.3
15°	1865.5	1870.5	1882.6	1876.6	1849.3	1817.1	1805.0	1812.1	1818.1	1824.2	1825.1
17.5°	1870.5	1873.5	1876.6	1854.5	1816.1	1795.0	1791.0	1783.9	1765.7	1755.6	1754.6
20°	1879.6	1883.6	1878.5	1843.3	1809.0	1780.8	1732.4	1689.2	1647.9	1625.7	1616.5
22.5°	1910.9	1913.7	1898.7	1864.4	1812.1	1720.3	1622.6	1548.0	1484.4	1450.3	1437.2
25°	1972.3	1977.3	1956.1	1912.9	1775.8	1615.5	1477.4	1376.7	1297.1	1255.7	1244.6
27.5°	2080.1	2085.1	2062.0	1949.1	1691.1	1475.5	1308.1	1208.4	1139.8	1104.6	1099.5
30°	2241.5	2248.4	2227.3	1948.2	1562.2	1297.1	1142.9	1084.4	1045.1	1021.0	1019.8
32.5°	2465.0	2491.3	2404.7	1913.7	1402.9	1116.7	1017.9	997.7	978.6	962.4	962.4
35°	2749.4	2810.7	2580.0	1842.2	1227.5	993.7	948.3	929.1	905.0	887.9	885.9
37.5°	3088.9	3184.8	2704.9	1715.4	1076.3	934.2	906.0	874.8	836.5	803.3	795.2
40°	3555.5	3577.7	2766.4	1508.8	963.4	902.0	866.8	827.3	779.0	741.7	737.7
42.5°	4024.1	3951.6	2754.4	1287.0	898.9	872.8	826.4	783.1	739.8	708.6	708.6
45°	4557.3	4278.2	2662.7	1064.2	840.5	839.5	789.2	747.7	714.5	691.3	686.3
47.5°	5067.2	4571.5	2504.5	900.0	780.1	806.3	764.9	731.7	701.4	679.3	675.3
50°	5686.1	4911.0	2336.1	785.1	721.6	777.0	754.8	737.7	708.6	670.1	666.2
52.5°	6300.8	5308.2	2206.1	698.4	670.1	753.9	761.0	762.9	735.7	661.2	656.1
55°	6961.0	5732.4	2069.1	630.9	627.8	742.8	775.0	773.0	759.8	663.2	655.0
57.5°	7588.8	6158.7	1864.4	583.4	594.6	731.7	778.0	745.9	722.5	673.2	660.2
60°	8108.8	6511.5	1564.0	550.2	566.4	709.5	757.9	709.5	670.1	671.3	659.0
62.5°	8361.9	6610.3	1196.3	511.9	543.3	673.2	728.6	682.4	646.1	675.3	668.2
65°	8169.4	6329.1	852.6	476.7	515.0	630.9	711.5	659.0	633.9	695.4	687.4
67.5°	7478.0	5563.2	618.8	445.5	487.8	587.5	679.3	637.9	621.8	710.5	692.4
69°	6743.2	4803.2	536.2	427.4	468.6	564.3	658.1	626.8	612.7	689.3	663.2
70°	6132.5	4217.7	494.8	416.3	452.4	551.3	642.0	619.8	603.8	664.1	632.9
72.5°	4397.1	2726.1	416.3	382.9	410.2	522.0	606.6	593.6	569.4	599.7	579.4
75°	2656.6	1423.0	353.8	348.7	365.8	481.8	565.4	549.3	525.1	528.2	518.1
77.5°	1220.4	657.1	296.4	308.4	319.4	431.4	515.0	496.9	474.7	466.6	467.6
80°	535.1	383.9	247.9	263.1	269.1	388.0	460.7	440.3	416.3	459.6	426.2
82.5°	289.3	222.7	193.6	203.6	220.8	337.7	400.1	374.0	350.7	408.2	329.6
85°	116.9	113.8	131.1	141.2	153.3	242.9	334.6	307.4	279.2	250.0	243.9
87.5°	50.3	54.3	64.5	68.5	81.7	151.2	224.8	196.5	197.5	169.3	166.2
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)