

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: P197271

Luminaire Tested: **NAV-AF-03-D-UNV-T3-8030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197271
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-T3-8030
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 80 CRI, 3000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14785 lumens
Efficiency: N/A
Efficacy: 89.1 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

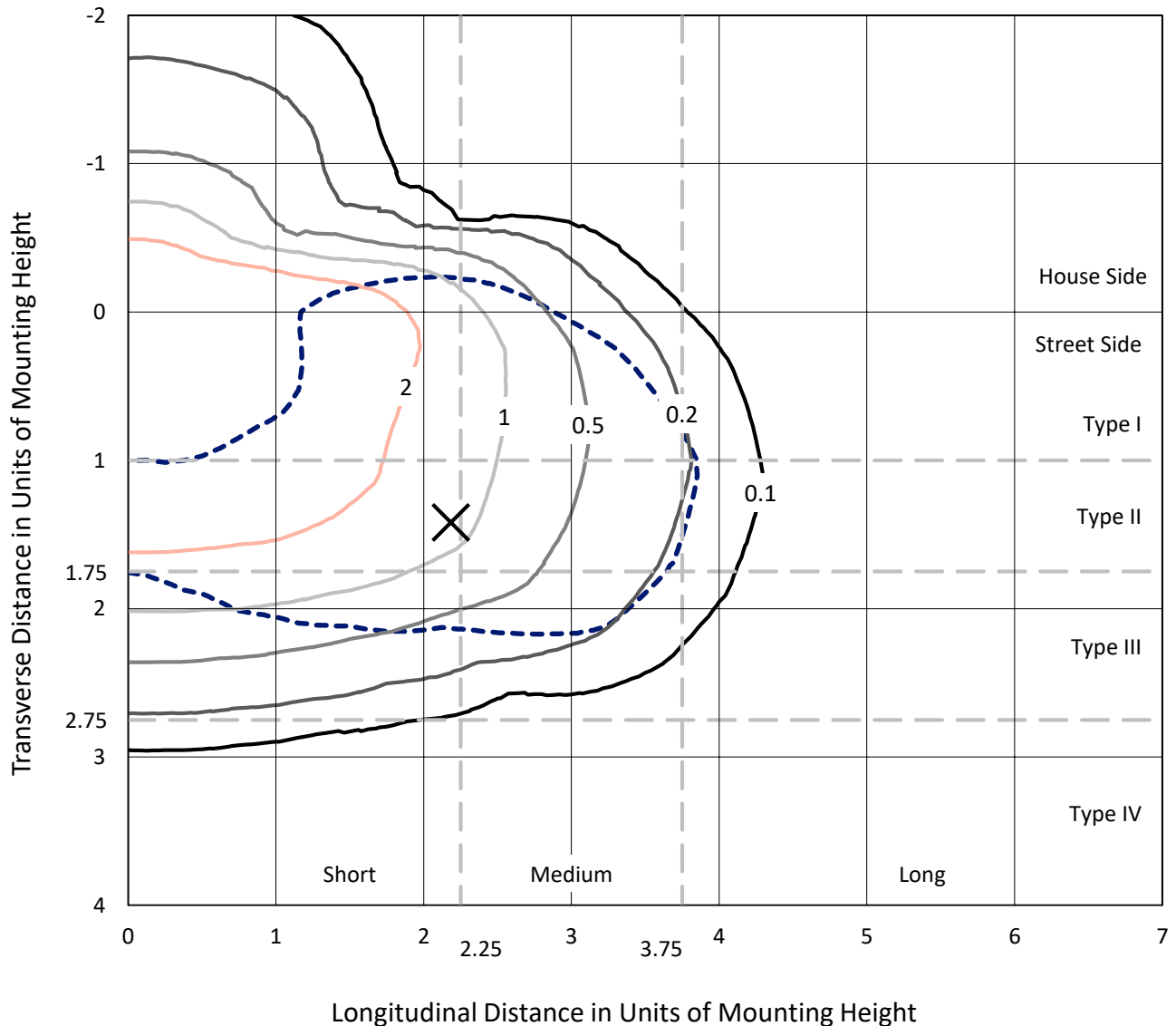
Input Watts (W): 166
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

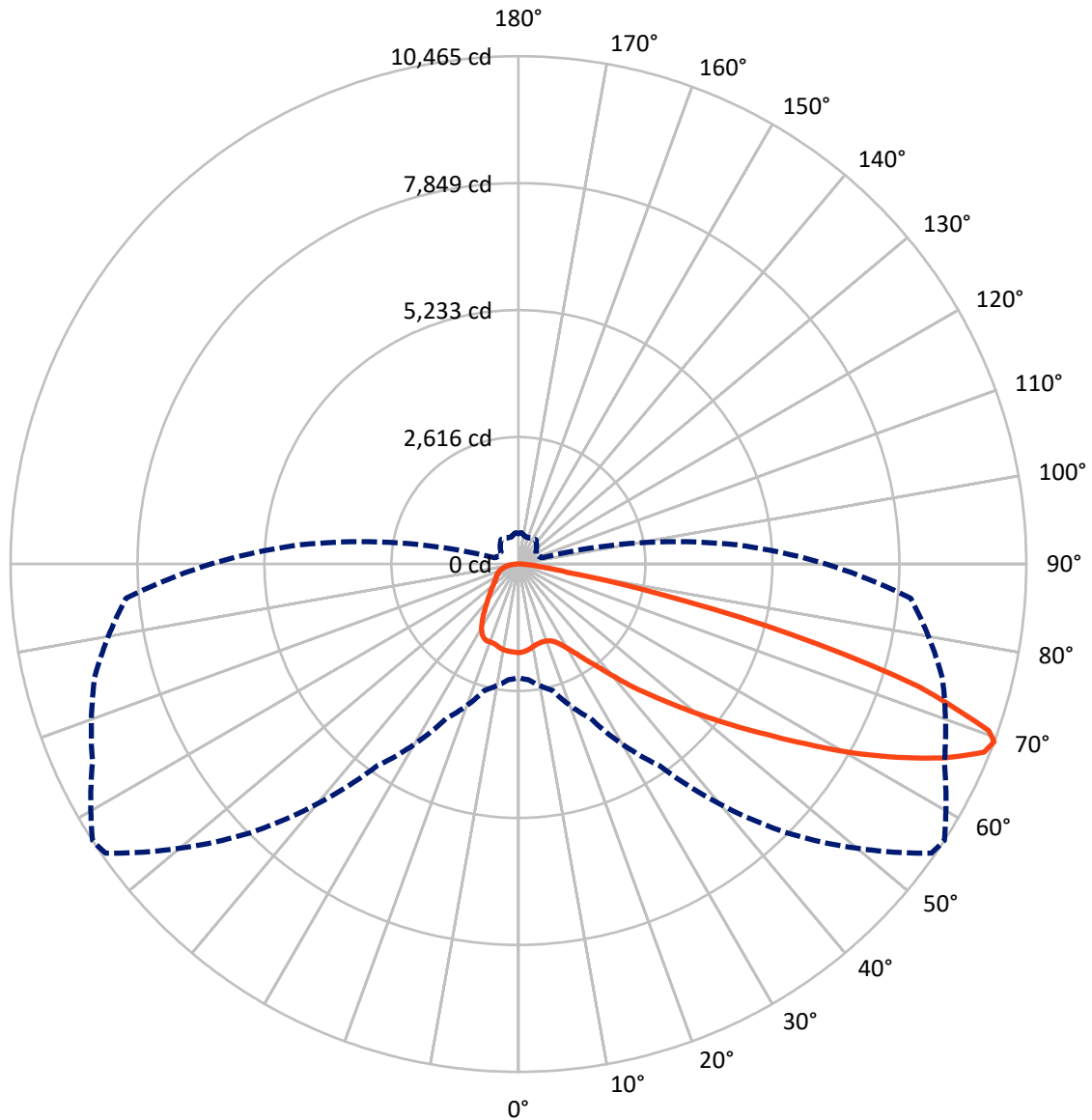
✕ Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 4.7 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	3262.5	0.0	3262.5
	% Fixture	22.1	0.0	22.1
Street Side	Lumens	11522.5	0.0	11522.5
	% Fixture	77.9	0.0	77.9
Total	Lumens	14785.0	0.0	14785.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	171.0	1.2
10°-20°	486.3	3.3
20°-30°	808.9	5.5
30°-40°	1320.9	8.9
40°-50°	2229.4	15.1
50°-60°	3468.0	23.5
60°-70°	4131.1	27.9
70°-80°	1924.5	13.0
80°-90°	244.8	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°	14785.0	100.0
0°-180°	14785.0	100.0



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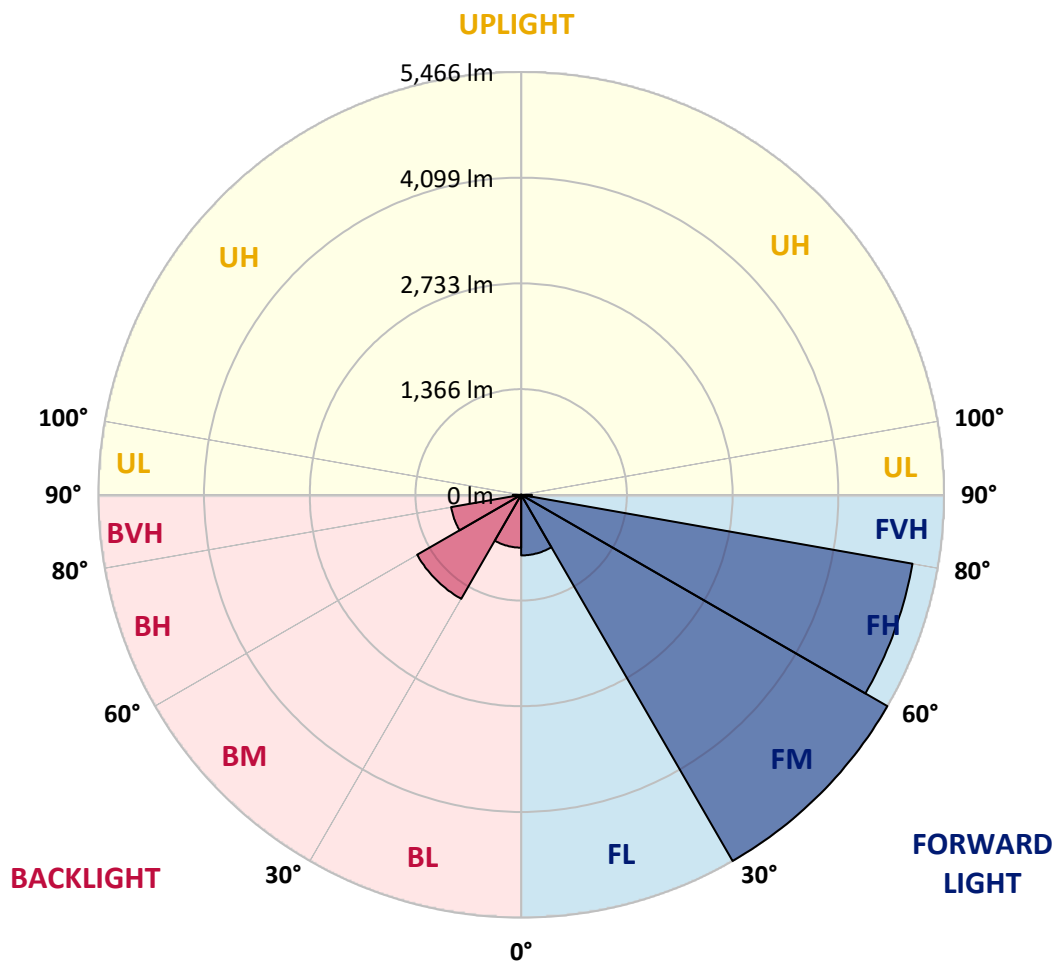
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	783.0	5.3			
FM	(30°-60°)	5465.6	37.0			
FH	(60°-80°)	5136.3	34.7			G3/7500
FVH	(80°-90°)	137.6	0.9			G2/225
BL	(0°-30°)	683.2	4.6	B2/1000		
BM	(30°-60°)	1552.8	10.5	B2/2500		
BH	(60°-80°)	919.3	6.2	B2/1000		G2/1000
BVH	(80°-90°)	107.2	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°	1826.8	1826.8	1826.8	1826.8	1826.8	1826.8	1826.8	1826.8	1826.8	1826.8	1826.8
2.5°	1816.4	1816.4	1821.2	1821.2	1821.2	1819.3	1813.6	1815.5	1811.7	1808.8	1804.1
5°	1779.5	1781.4	1787.1	1789.0	1791.8	1792.8	1792.8	1791.8	1792.8	1792.8	1789.9
7.5°	1728.4	1730.3	1736.9	1740.7	1749.2	1756.8	1760.6	1760.6	1765.3	1769.1	1770.0
10°	1697.2	1697.2	1700.9	1700.9	1707.6	1711.4	1723.7	1722.7	1736.0	1748.3	1753.9
12.5°	1693.4	1693.4	1691.5	1684.8	1681.1	1680.1	1692.4	1694.3	1714.2	1736.0	1746.4
15°	1705.7	1705.7	1700.0	1686.7	1672.5	1665.9	1678.2	1682.0	1703.8	1729.3	1745.4
17.5°	1745.4	1744.5	1732.2	1705.7	1681.1	1670.7	1674.4	1678.2	1698.1	1727.4	1747.3
20°	1833.5	1833.5	1807.0	1758.7	1716.1	1691.5	1685.8	1688.6	1702.8	1730.3	1755.8
22.5°	1987.7	1990.6	1943.3	1863.7	1790.9	1738.8	1716.1	1718.9	1725.6	1752.1	1780.5
25°	2214.9	2207.3	2140.1	2027.5	1913.9	1824.9	1778.6	1781.4	1781.4	1806.0	1835.3
27.5°	2455.3	2457.2	2360.7	2239.5	2090.0	1957.5	1883.6	1882.7	1881.7	1905.4	1936.6
30°	2727.0	2727.9	2616.2	2476.2	2304.8	2135.4	2024.7	2023.7	2015.2	2044.5	2085.2
32.5°	3024.2	3023.3	2893.6	2735.5	2545.3	2353.1	2209.2	2208.3	2201.7	2241.4	2290.6
35°	3353.6	3353.6	3224.9	3029.9	2824.5	2610.6	2444.0	2443.0	2446.8	2500.8	2547.2
37.5°	3750.2	3758.7	3603.5	3366.9	3142.5	2914.4	2720.4	2714.7	2686.3	2777.2	2853.8
40°	4163.8	4187.5	4026.6	3750.2	3507.9	3272.2	3058.3	3054.5	3029.9	3126.4	3250.4
42.5°	4611.6	4665.5	4486.6	4204.6	3940.5	3685.8	3471.0	3460.6	3365.9	3516.4	3710.5
45°	5198.4	5233.4	4974.1	4718.5	4469.6	4179.0	3923.4	3867.6	3772.9	3966.0	4217.8
47.5°	5597.9	5580.8	5419.0	5247.6	5087.7	4809.4	4416.6	4345.6	4230.1	4485.7	4763.0
50°	5845.9	5858.2	5767.3	5758.8	5750.3	5556.2	4973.1	4888.0	4754.5	5057.4	5381.1
52.5°	6009.6	5953.8	5969.9	6163.0	6396.7	6304.0	5602.6	5507.9	5370.7	5673.6	6039.0
55°	5941.5	5867.6	6016.2	6396.7	6946.7	6967.5	6293.6	6196.1	6078.7	6328.6	6830.3
57.5°	5659.4	5696.3	5931.0	6460.2	7322.5	7561.9	7087.7	6988.3	6757.4	7011.1	7581.8
60°	5262.8	5337.6	5696.3	6359.8	7585.6	8024.8	7959.5	7893.2	7495.7	7675.5	8371.2
62.5°	4836.8	4910.7	5351.8	6188.5	7467.3	8434.7	8815.2	8774.5	8310.7	8315.4	8872.0
65°	4207.4	4237.7	4688.2	5720.9	7138.8	8804.8	9671.8	9635.8	9089.7	8861.5	9012.1
67.5°	3177.5	3215.4	3585.5	4516.0	6139.3	8604.1	10356.1	10350.5	9558.2	9064.1	8678.9
69°	2346.5	2392.9	2694.8	3506.0	5076.3	7839.3	10388.3	10465.0	9685.0	9043.3	8115.7
70°	1717.0	1770.0	2049.3	2782.8	4228.2	6995.0	10112.9	10277.6	9636.8	8911.7	7676.5
72.5°	729.8	747.8	885.0	1256.1	2144.9	4217.8	8283.2	8629.6	8703.5	7985.0	5997.3
75°	457.2	462.9	516.8	644.6	954.1	1744.5	5364.1	5836.4	6498.0	6195.1	4015.2
77.5°	344.5	349.3	380.5	443.9	592.5	651.2	2488.5	2967.4	3721.8	3644.2	1998.2
80°	264.1	266.9	287.7	322.8	417.4	408.0	807.4	1014.7	1553.3	1370.6	707.1
82.5°	207.3	208.2	226.2	232.8	291.5	274.5	405.1	451.5	627.6	521.5	345.5
85°	183.6	186.5	204.5	170.4	186.5	165.6	222.4	241.4	333.2	314.3	130.6
87.5°	93.7	98.4	171.3	145.8	93.7	78.6	97.5	105.1	135.4	146.7	63.4
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°	1826.8	1826.8	1826.8	1826.8	1826.8	1826.8	1826.8	1826.8	1826.8	1826.8	1826.8
2.5°	1805.1	1806.0	1808.8	1813.6	1821.2	1830.6	1842.0	1853.3	1860.0	1864.7	1862.8
5°	1789.9	1790.9	1796.5	1805.1	1814.5	1828.7	1847.7	1861.9	1872.3	1878.9	1877.9
7.5°	1771.0	1773.8	1785.2	1794.6	1807.9	1819.3	1834.4	1847.7	1858.1	1864.7	1863.7
10°	1756.8	1759.6	1773.8	1786.1	1797.5	1799.4	1796.5	1792.8	1791.8	1796.5	1794.6
12.5°	1750.2	1755.8	1769.1	1777.6	1772.9	1754.9	1734.1	1725.6	1722.7	1732.2	1733.1
15°	1752.1	1756.8	1768.1	1762.5	1736.9	1706.6	1695.3	1701.9	1707.6	1713.2	1714.2
17.5°	1756.8	1759.6	1762.5	1741.6	1705.7	1685.8	1682.0	1675.4	1658.3	1648.9	1647.9
20°	1765.3	1769.1	1764.4	1731.2	1699.0	1672.5	1627.1	1586.4	1547.6	1526.8	1518.3
22.5°	1794.6	1797.5	1783.3	1751.1	1701.9	1615.8	1523.9	1453.9	1394.3	1362.1	1349.8
25°	1852.4	1857.1	1837.2	1796.5	1667.8	1517.3	1387.6	1293.0	1218.2	1179.4	1169.0
27.5°	1953.7	1958.4	1936.6	1830.6	1588.3	1385.7	1228.6	1134.9	1070.5	1037.4	1032.7
30°	2105.1	2111.7	2091.9	1829.7	1467.1	1218.2	1073.4	1018.5	981.6	958.8	957.9
32.5°	2315.2	2339.9	2258.5	1797.5	1317.6	1048.8	956.0	937.1	919.1	904.0	904.0
35°	2582.2	2639.9	2423.2	1730.3	1152.9	933.3	890.7	872.7	850.0	833.9	832.0
37.5°	2901.2	2991.1	2540.5	1611.0	1010.9	877.4	850.9	821.6	785.6	754.4	746.8
40°	3339.4	3360.2	2598.3	1417.0	904.9	847.2	814.0	777.1	731.7	696.7	692.9
42.5°	3779.6	3711.4	2586.9	1208.7	844.3	819.7	776.2	735.5	694.8	665.4	665.4
45°	4280.3	4018.1	2500.8	999.6	789.4	788.5	741.1	702.3	671.1	649.3	644.6
47.5°	4759.2	4293.5	2352.2	845.3	732.6	757.2	718.4	687.2	658.8	638.0	634.2
50°	5340.4	4612.5	2194.1	737.4	677.7	729.8	709.0	692.9	665.4	629.5	625.7
52.5°	5917.8	4985.4	2072.0	656.0	629.5	708.0	714.6	716.5	691.0	620.9	616.2
55°	6537.8	5383.9	1943.3	592.5	589.7	697.6	727.9	726.0	713.7	622.8	615.3
57.5°	7127.5	5784.3	1751.1	548.0	558.5	687.2	730.7	700.4	678.7	632.3	620.0
60°	7615.9	6115.6	1469.0	516.8	532.0	666.4	711.8	666.4	629.5	630.4	619.0
62.5°	7853.5	6208.4	1123.5	480.8	510.2	632.3	684.4	640.8	606.7	634.2	627.6
65°	7672.7	5944.3	800.8	447.7	483.7	592.5	668.3	619.0	595.4	653.1	645.5
67.5°	7023.4	5224.9	581.2	418.4	458.1	551.8	638.0	599.2	584.0	667.3	650.3
69°	6333.3	4511.2	503.6	401.3	440.1	530.1	618.1	588.8	575.5	647.4	622.8
70°	5759.7	3961.3	464.8	390.9	425.0	517.8	602.9	582.1	567.0	623.8	594.4
72.5°	4129.8	2560.4	390.9	359.7	385.2	490.3	569.8	557.5	534.8	563.2	544.3
75°	2495.1	1336.5	332.2	327.5	343.6	452.4	531.0	515.9	493.1	496.0	486.5
77.5°	1146.3	617.1	278.3	289.6	300.1	405.1	483.7	466.6	445.8	438.3	439.2
80°	502.6	360.6	232.8	247.0	252.7	364.4	432.6	413.6	390.9	431.6	400.4
82.5°	271.7	209.2	181.7	191.2	207.3	317.1	375.8	351.2	329.4	383.4	309.5
85°	109.8	107.0	123.1	132.5	143.9	228.1	314.3	288.7	262.2	234.7	229.1
87.5°	47.3	51.1	60.6	64.4	76.7	142.0	211.1	184.6	185.5	159.0	156.2
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)