

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: P270475

Luminaire Tested: **NAV-AF-03-D-UNV-T4FT-7027-800**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P270475  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24256)  
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-T4FT-7027-800  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(3) 70 CRI, 2700K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV FORWARD THROW OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 12816.2 lumens  
Efficiency: N/A  
Efficacy: 103.4 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')  
IES Classification: Type IV - Short - Non-Cutoff  
BUG Rating: B2 - U0 - G3

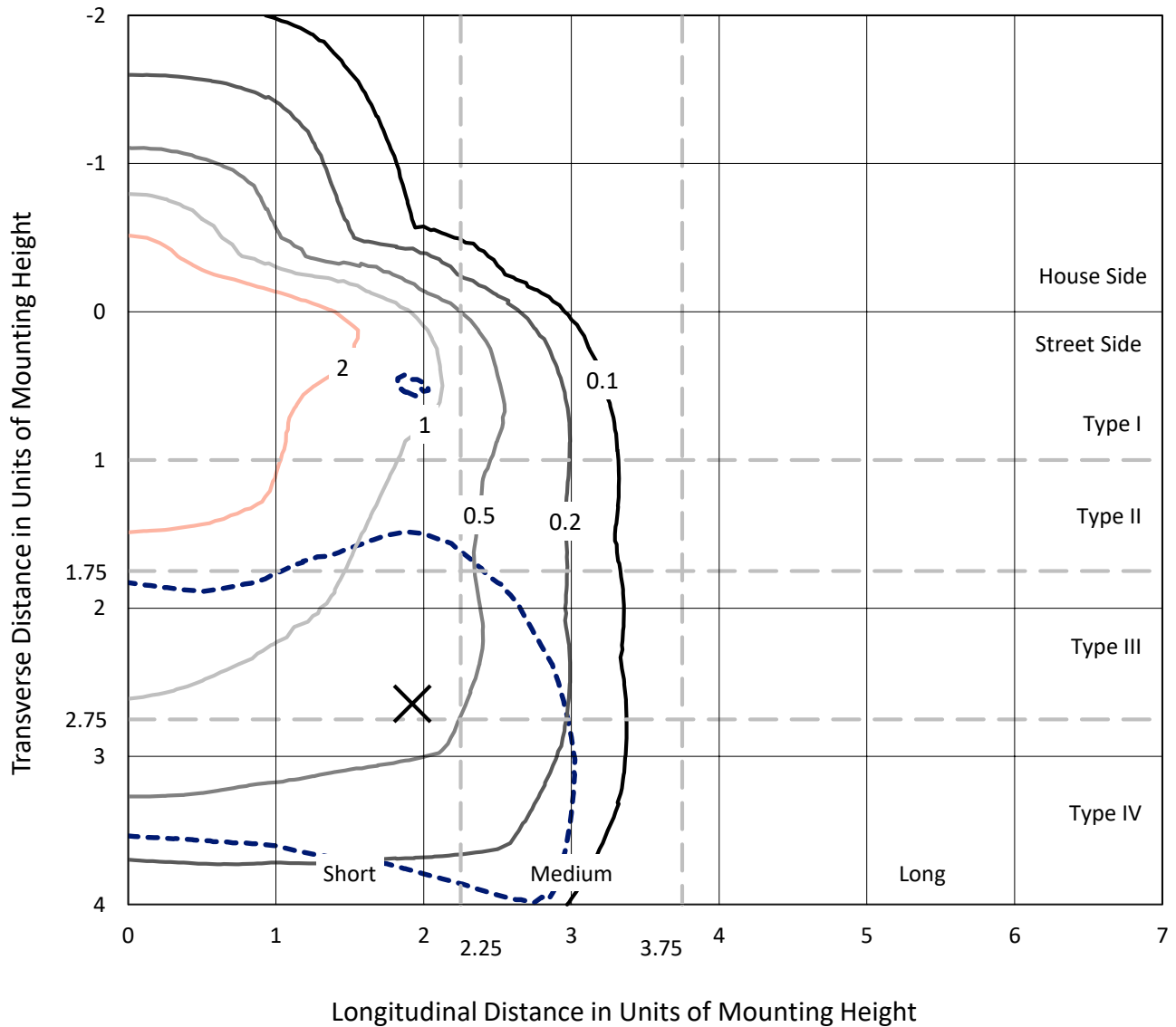
Input Watts (W): 124  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

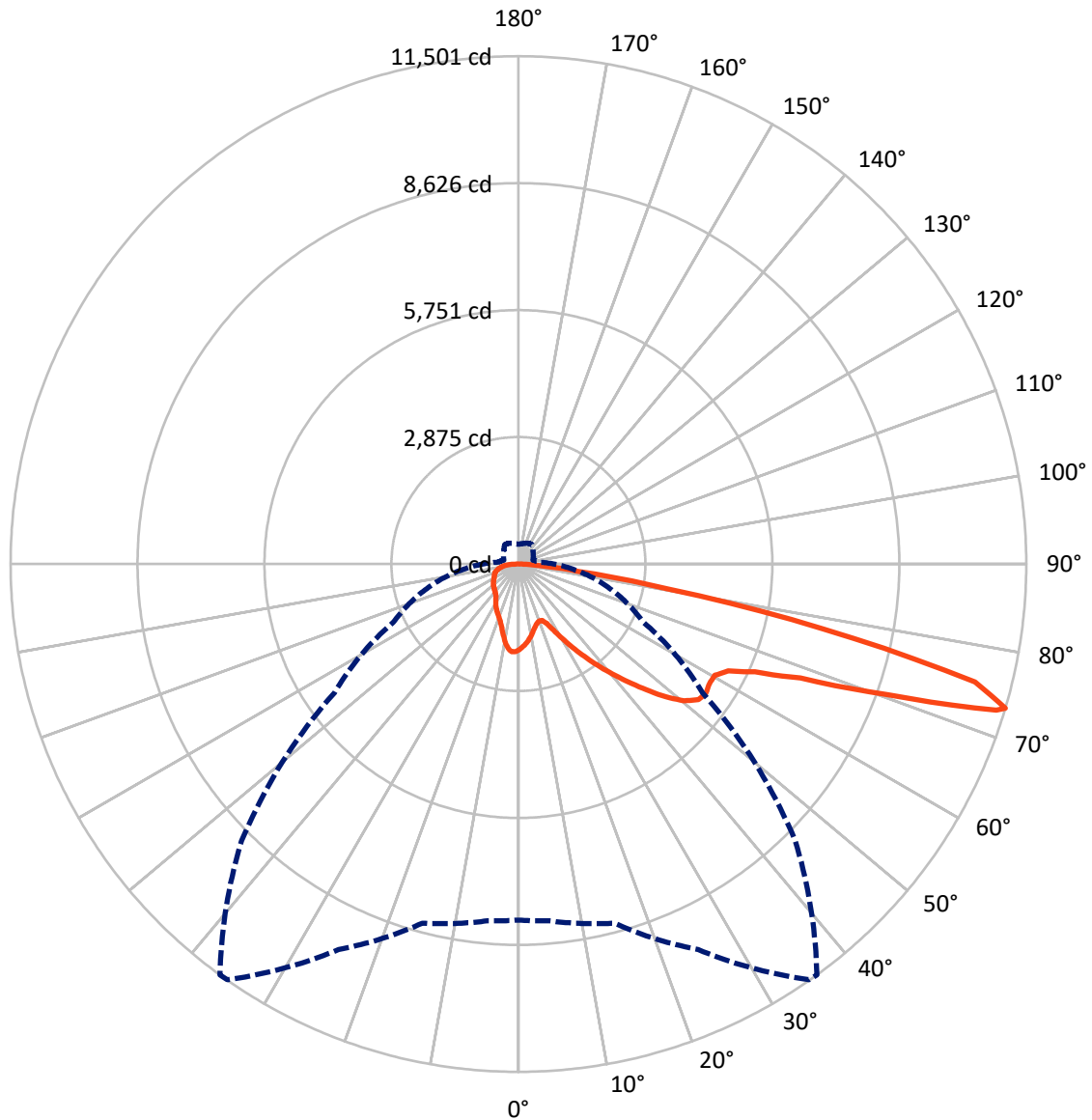
× Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 4.9 fc  
 Type IV - Short - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 36-Deg Lateral    - - - Horizontal Cone Through 73-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2471.4	0.0	2471.4
	% Fixture	19.3	0.0	19.3
<b>Street Side</b>	Lumens	10344.8	0.0	10344.8
	% Fixture	80.7	0.0	80.7
<b>Total</b>	Lumens	12816.2	0.0	12816.2
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	176.3	1.4
10°-20°	442.8	3.5
20°-30°	710.0	5.5
30°-40°	1174.4	9.2
40°-50°	1817.2	14.2
50°-60°	2432.7	19.0
60°-70°	3177.9	24.8
70°-80°	2595.8	20.3
80°-90°	288.9	2.3
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°	12816.2	100.0
0°-180°	12816.2	100.0

**Coefficient of Utilization**



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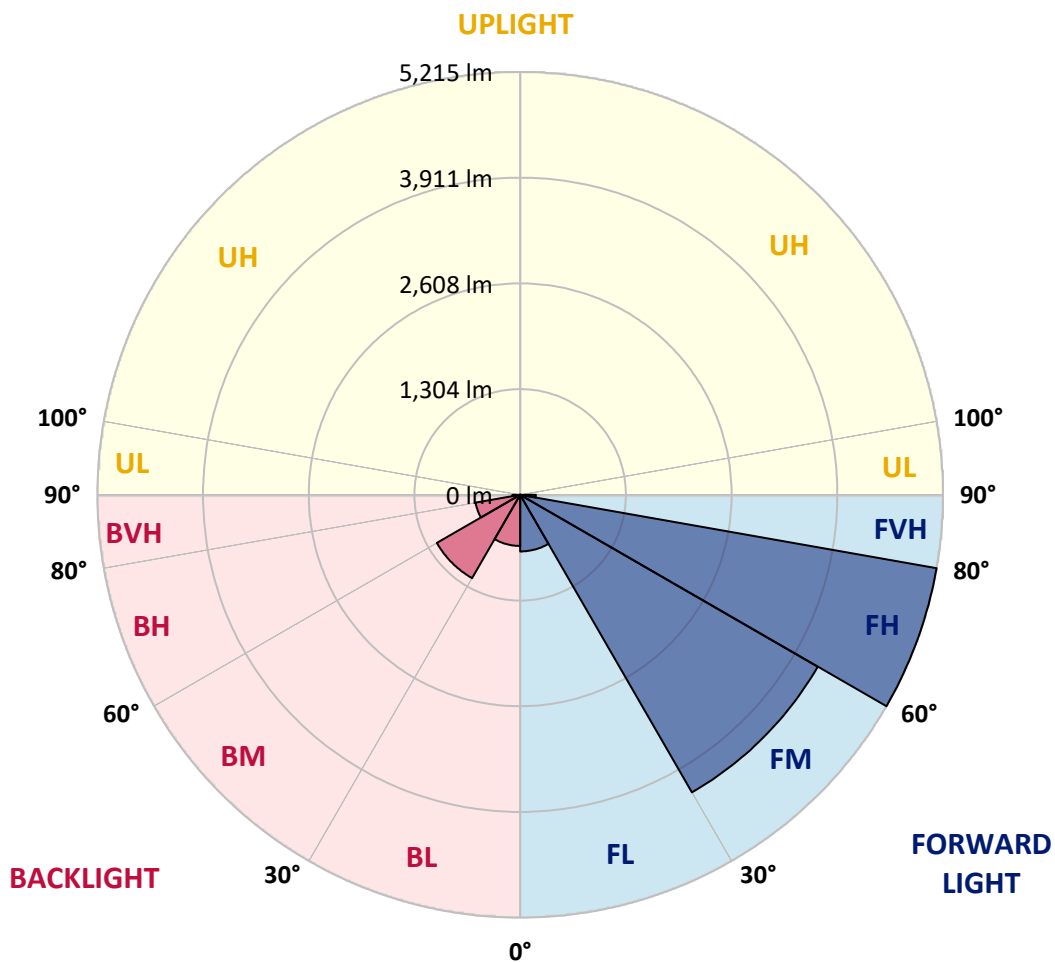
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	698.3	5.4			
FM	(30°-60°)	4237.5	33.1			
FH	(60°-80°)	5215.2	40.7			G3/7500
FVH	(80°-90°)	193.8	1.5			G2/225
BL	(0°-30°)	630.8	4.9	B2/1000		
BM	(30°-60°)	1186.9	9.3	B2/2500		
BH	(60°-80°)	558.5	4.4	B2/1000		G2/1000
BVH	(80°-90°)	95.2	0.7			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G3**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	1941.2	1941.2	1941.2	1941.2	1941.2	1941.2	1941.2	1941.2	1941.2	1941.2	1941.2
2.5°	1867.1	1872.1	1872.8	1878.5	1878.5	1877.7	1880.2	1889.9	1894.9	1906.3	1916.1
5°	1775.2	1780.9	1783.3	1793.0	1805.4	1806.1	1815.0	1833.8	1851.6	1877.0	1898.1
7.5°	1671.7	1678.3	1684.9	1705.2	1723.0	1724.7	1741.8	1771.8	1795.5	1826.4	1864.7
10°	1571.6	1573.2	1579.7	1605.8	1629.3	1631.9	1656.2	1690.5	1722.2	1765.3	1808.6
12.5°	1489.3	1494.2	1492.7	1512.1	1532.5	1534.1	1566.7	1609.9	1656.2	1705.2	1756.5
15°	1460.9	1460.0	1442.9	1442.0	1451.1	1452.6	1484.4	1534.9	1587.0	1647.3	1713.2
17.5°	1480.3	1473.8	1429.2	1401.4	1395.6	1397.4	1420.9	1476.4	1531.7	1600.9	1679.9
20°	1587.8	1562.6	1457.6	1390.8	1372.2	1372.2	1385.9	1430.7	1491.7	1572.5	1671.7
22.5°	1842.8	1803.6	1579.7	1460.9	1394.9	1388.4	1377.8	1412.0	1479.6	1576.4	1705.2
25°	2163.6	2144.9	1803.6	1647.3	1511.3	1490.2	1420.1	1432.3	1504.8	1620.5	1796.3
27.5°	2460.7	2428.2	2097.6	1918.5	1726.4	1693.8	1545.5	1495.9	1565.0	1701.8	1928.2
30°	2634.2	2612.2	2399.7	2228.8	1999.8	1958.3	1745.9	1621.4	1672.6	1836.2	2115.6
32.5°	2823.2	2810.2	2702.6	2547.1	2296.2	2248.3	2004.7	1825.6	1837.0	2014.5	2341.2
35°	3006.4	3023.4	2962.4	2848.3	2615.5	2570.7	2352.5	2092.7	2039.8	2215.0	2582.1
37.5°	3226.3	3230.3	3192.0	3117.9	2951.0	2914.3	2734.4	2377.8	2260.4	2428.2	2815.0
40°	3665.2	3600.9	3451.0	3392.4	3292.9	3270.2	3064.9	2639.1	2465.7	2647.2	3034.8
42.5°	4139.8	4039.7	3805.2	3709.1	3669.1	3648.0	3340.3	2813.4	2657.8	2866.3	3250.6
45°	4522.5	4441.2	4211.6	4092.7	4097.4	4063.4	3580.5	2968.9	2866.3	3086.1	3491.7
47.5°	4899.6	4763.6	4506.3	4489.2	4546.2	4495.7	3810.2	3124.5	3083.7	3325.5	3732.7
50°	4924.0	4800.3	4696.0	4832.8	4930.5	4867.8	4018.6	3328.0	3309.3	3615.5	4043.8
52.5°	4626.8	4608.9	4767.8	4998.1	5160.1	5104.0	4188.7	3537.3	3539.7	3977.9	4422.4
55°	4518.6	4495.7	4686.3	4969.7	5188.7	5155.4	4315.7	3773.4	3795.3	4417.5	4828.7
57.5°	4700.9	4643.9	4681.3	4916.0	5122.0	5102.4	4447.7	4035.6	4075.5	4924.0	5204.2
60°	5266.9	5150.4	4951.7	4995.7	5124.3	5113.0	4636.6	4327.9	4394.8	5451.8	5441.9
62.5°	6114.6	5982.6	5577.9	5382.5	5354.0	5332.0	4948.5	4687.0	4720.5	5832.8	5303.6
65°	7044.5	6902.8	6421.5	6101.5	5933.8	5886.6	5451.8	5120.2	4911.0	5831.9	4764.4
67.5°	8088.3	7938.5	7458.9	7153.7	6971.9	6891.3	6268.5	5470.4	4849.1	5338.4	3812.5
70°	9157.5	9015.1	8795.1	8901.8	8981.7	8858.7	7555.0	5586.9	4404.5	4185.5	2560.1
72.5°	8590.0	8578.6	8745.4	9756.9	11295.1	11319.5	8840.0	5257.9	3402.9	2487.6	1364.7
73°	8063.1	8111.2	8420.6	9630.6	11492.9	11501.1	8865.3	5087.7	3124.5	2143.3	1198.7
75°	4177.4	4503.1	5651.1	7809.1	10642.0	10680.3	7814.7	3851.7	1862.2	1190.6	807.8
77.5°	1118.8	1104.1	1820.8	3804.4	7095.0	7044.5	4938.0	1864.7	892.5	746.8	566.7
80°	383.5	388.3	619.7	1391.7	3311.7	3429.8	2143.3	813.4	587.1	520.4	401.5
82.5°	195.4	201.9	324.1	592.1	1385.1	1355.8	689.7	478.7	393.3	315.9	224.8
85°	104.3	107.4	178.4	307.0	508.1	513.8	242.6	255.7	250.0	179.1	110.8
87.5°	51.4	52.9	85.5	135.1	188.1	181.5	84.7	110.8	123.0	101.0	61.1
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°	1941.2	1941.2	1941.2	1941.2	1941.2	1941.2	1941.2	1941.2	1941.2	1941.2	1941.2
2.5°	1928.2	1928.2	1938.8	1956.8	1969.8	1982.0	1990.1	2003.2	2010.4	2009.7	2008.9
5°	1915.2	1923.5	1944.6	1966.5	1981.2	1991.0	1991.0	1996.7	1996.7	1994.1	1991.0
7.5°	1885.2	1898.9	1929.9	1949.4	1953.5	1942.9	1921.7	1905.5	1885.2	1874.6	1870.5
10°	1837.0	1855.0	1894.0	1903.0	1881.8	1844.4	1793.0	1749.1	1710.1	1692.0	1686.4
12.5°	1789.9	1813.5	1850.1	1836.2	1785.7	1712.4	1633.5	1573.2	1529.3	1512.1	1506.5
15°	1750.7	1779.3	1807.7	1764.6	1676.6	1574.9	1487.8	1431.4	1398.1	1385.1	1381.9
17.5°	1724.7	1758.1	1767.9	1687.2	1565.0	1451.1	1373.7	1337.0	1322.5	1316.7	1315.1
20°	1726.4	1763.7	1740.1	1612.3	1457.6	1342.7	1291.5	1281.0	1281.0	1281.0	1280.1
22.5°	1771.1	1803.6	1728.8	1542.3	1354.1	1251.6	1229.6	1238.6	1245.1	1245.1	1244.2
25°	1864.0	1881.8	1737.0	1474.7	1257.3	1172.6	1173.4	1190.6	1196.3	1196.3	1194.6
27.5°	2005.6	1991.0	1751.5	1399.7	1162.0	1101.0	1112.3	1127.8	1131.9	1129.3	1128.6
30°	2183.2	2124.5	1763.7	1311.9	1072.4	1034.2	1043.9	1052.9	1049.6	1043.9	1043.1
32.5°	2381.9	2260.4	1756.5	1213.3	993.4	964.9	970.7	975.5	970.7	956.8	956.8
35°	2578.9	2383.5	1716.5	1105.9	930.7	898.1	897.3	912.8	912.0	895.7	896.6
37.5°	2751.5	2480.3	1639.1	1007.3	876.9	849.3	852.6	862.4	867.3	845.2	842.8
40°	2902.2	2547.1	1530.1	923.4	833.8	835.5	826.5	811.0	805.3	795.5	793.9
42.5°	3043.8	2593.5	1414.4	853.4	811.9	830.7	800.5	763.7	748.4	757.4	763.0
45°	3183.1	2645.7	1302.9	795.5	784.2	815.9	774.3	733.6	715.8	719.8	725.6
47.5°	3353.3	2718.1	1168.5	733.6	741.8	789.0	758.1	714.2	687.3	670.9	666.2
50°	3577.2	2823.2	994.2	666.9	697.1	759.7	744.2	685.6	656.3	623.8	615.6
52.5°	3857.3	2922.5	818.4	613.2	660.4	734.5	721.5	661.2	625.4	586.4	579.8
55°	4136.6	2936.4	666.9	566.7	618.8	700.3	693.9	641.7	591.2	559.5	552.8
57.5°	4332.0	2805.2	565.2	527.7	579.0	658.0	668.6	618.0	562.7	538.3	534.2
60°	4335.3	2491.8	503.2	501.7	548.9	621.3	642.5	590.4	544.7	528.5	525.1
62.5°	3990.9	2008.0	463.3	482.1	526.9	591.2	623.0	574.8	540.7	534.2	530.9
65°	3345.1	1483.6	431.5	464.2	506.5	565.9	606.6	570.1	539.1	536.6	534.2
67.5°	2469.8	1017.1	404.6	441.3	483.6	539.9	591.2	562.7	529.3	539.1	535.7
70°	1553.7	679.1	379.4	415.2	453.6	509.8	570.9	549.7	517.1	511.3	500.7
72.5°	876.9	491.1	349.4	381.9	414.5	469.9	543.1	527.7	489.3	466.6	456.0
73°	792.3	465.0	342.1	373.8	405.6	461.6	536.6	521.1	481.2	456.0	446.3
75°	579.8	380.3	308.6	340.4	368.0	424.3	505.7	488.6	445.4	415.2	408.8
77.5°	420.1	293.1	265.4	293.9	318.4	372.2	459.3	439.7	397.4	381.2	374.6
80°	302.9	222.3	219.8	247.6	268.8	323.3	409.5	389.2	348.5	396.5	386.0
82.5°	180.7	142.6	161.2	192.1	214.2	271.2	355.9	332.3	293.1	296.4	252.5
85°	86.2	80.6	100.2	126.2	141.8	185.7	296.4	277.7	234.5	192.1	188.1
87.5°	38.3	36.7	48.0	56.1	75.7	111.6	202.7	180.0	170.1	101.8	79.8
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)