

Classified
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: HALO

Report Number: P670563 (CONVERTED FROM TYPE C PHOTOMETRY)

Luminaire Tested: GFLL70FSUNVDBZK-60W-3000K

Issue Date: 4/3/2023

Test Information

Test Method: LM-79-2019
Report Number: P670563 (CONVERTED FROM TYPE C PHOTOMETRY)
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA ()
Test Lab: INNOVATION CENTER
Issue Date: 4/3/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: GFL70FSUNVDBZK-60W-3000K
Description: SLIM LED FLOODLIGHT
Light Source:
Ballast/Driver: -

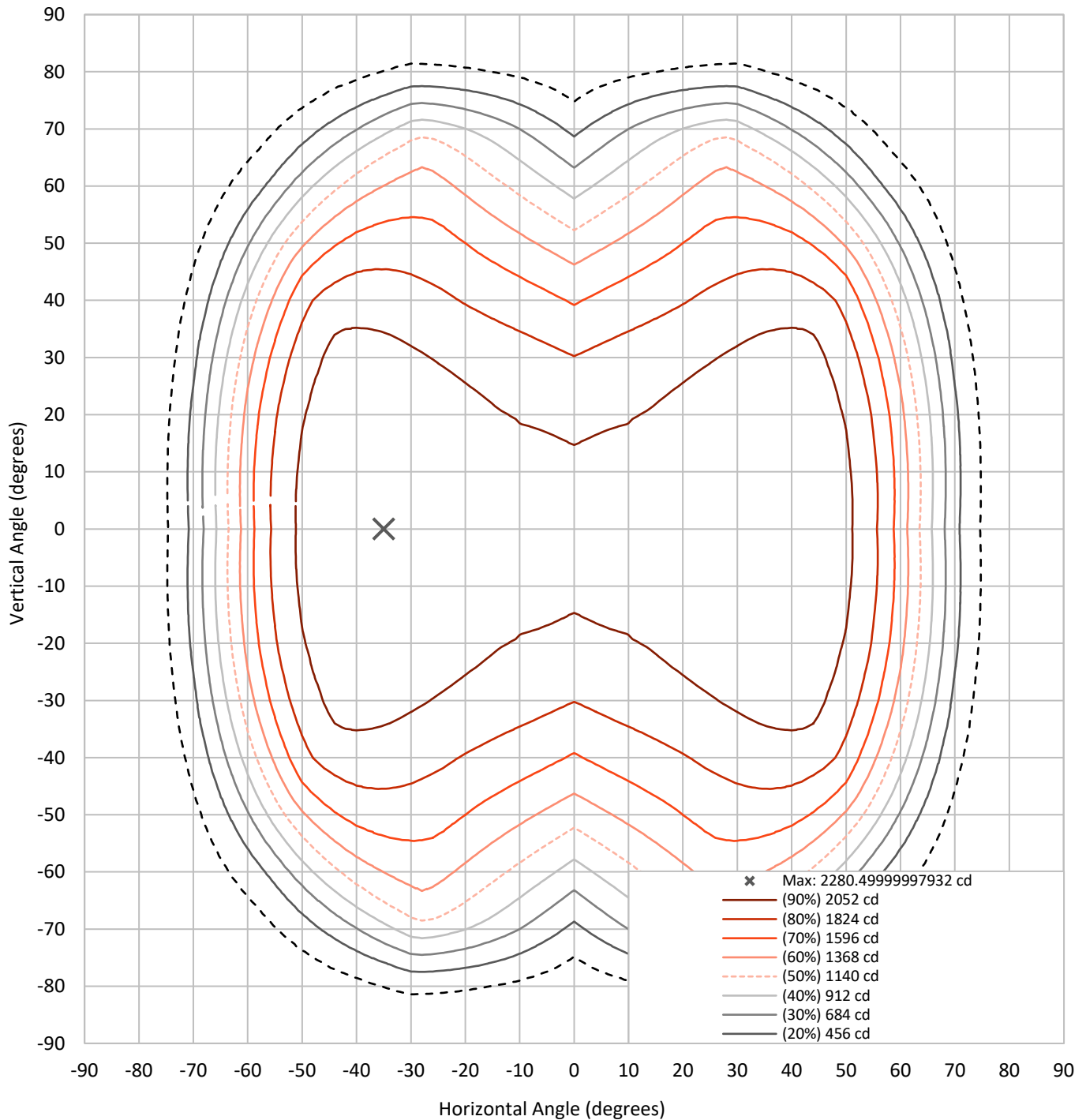
Summary

Lumens per Lamp:	N/A	NEMA Type:	7H x 7V
Luminaire Lumens:	7844.5 lumens	Max Intensity:	2280.5 candela
Efficiency:	N/A	Max Intensity Angle:	-35°H x 0°V
Efficacy:	135.2 lumens/watt		
Luminous Opening:	Rectangular w/ Sides (W: 0.33' x L: 0.56' x H: 0.18')		
Beam Angle (50%):	127°H x 130.8°V	Field Angle (10%):	149.3°H x 160.3°V
Beam Lumens:	6808.8 lumens	Field Lumens:	7749 lumens
Beam Efficiency:	86.8%	Field Efficiency:	98.8%
Input Watts (W):	58		
Input Voltage (V):	120		
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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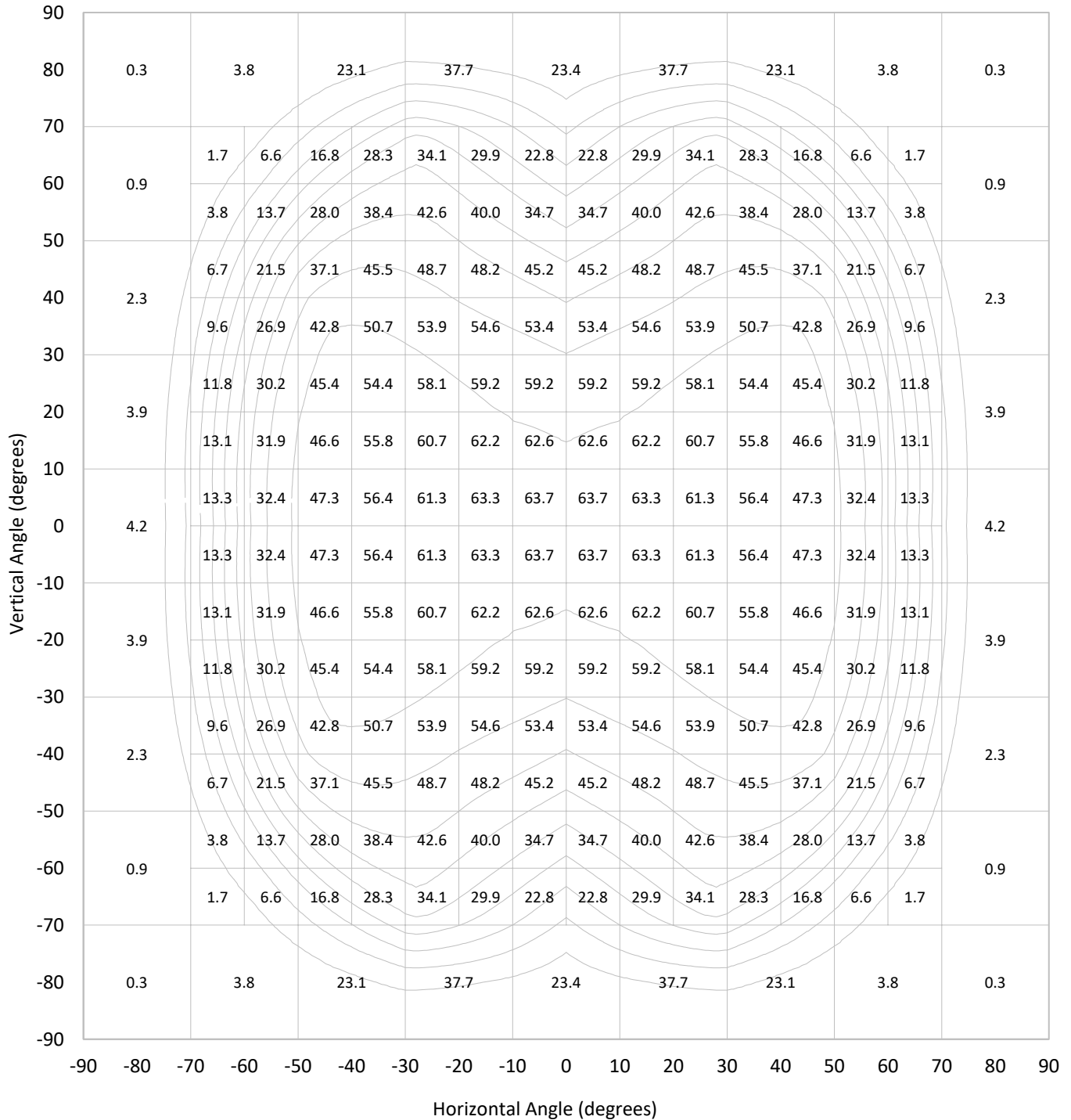
Iso-Candela Plot





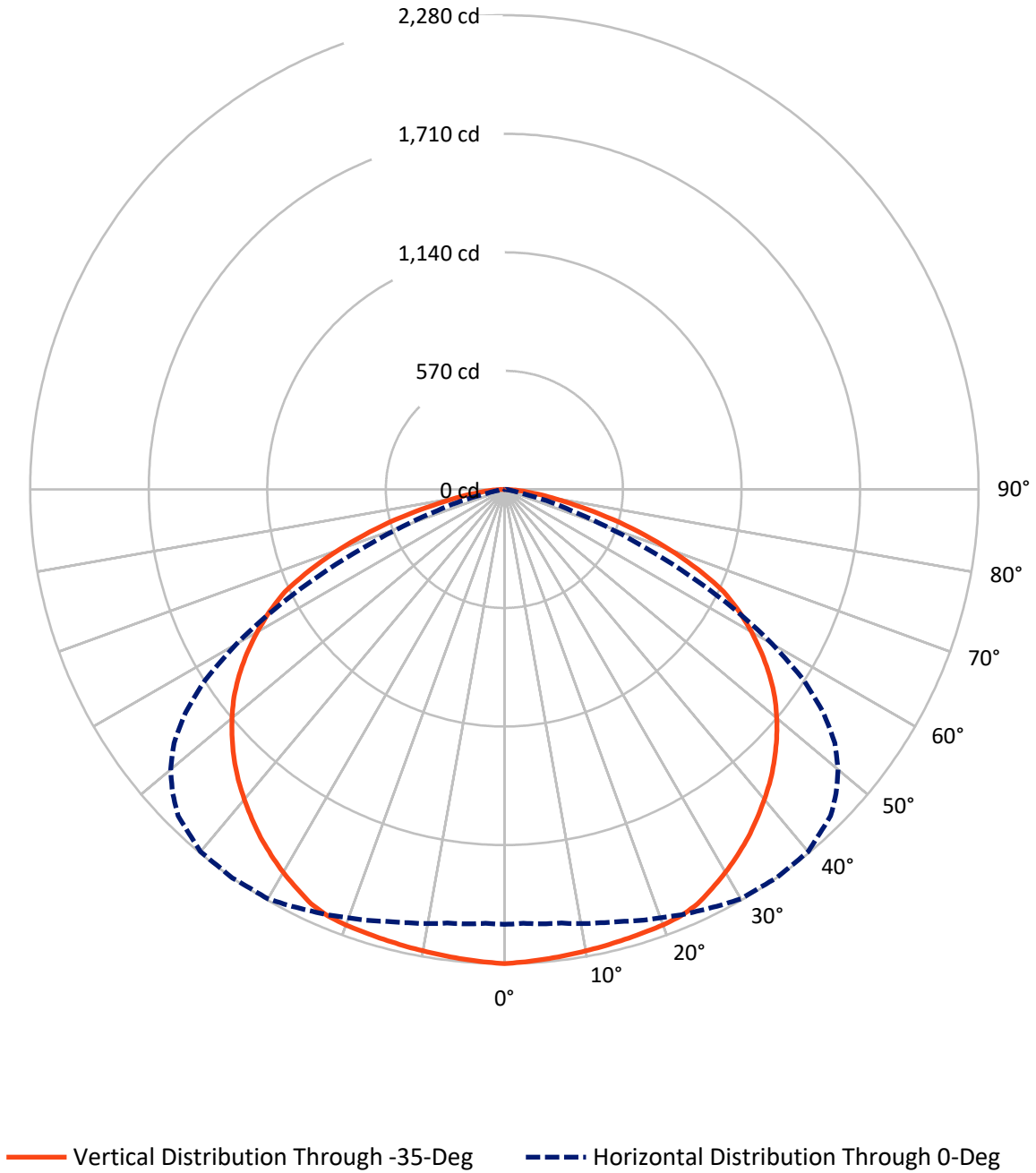
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Lumen Table



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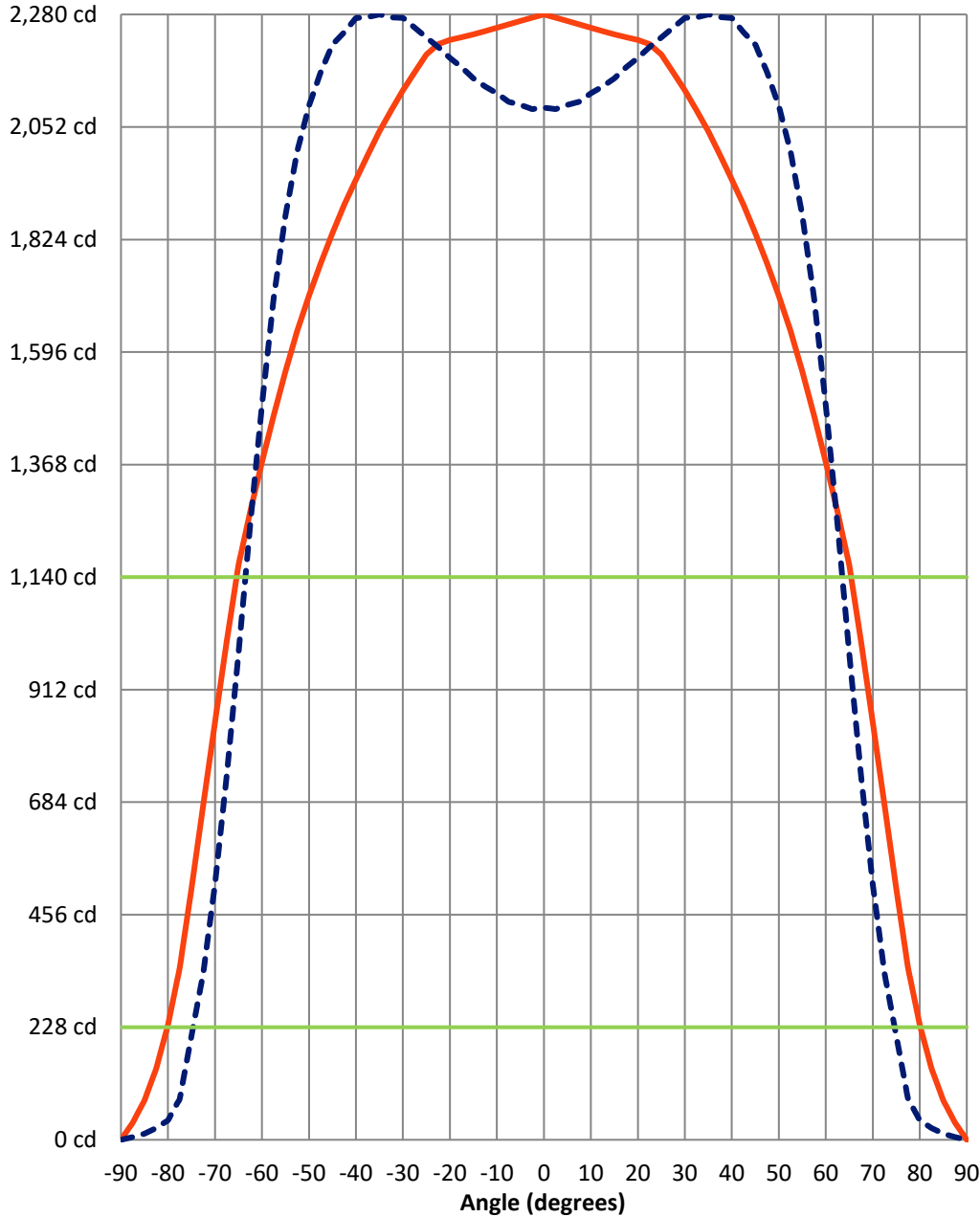
Luminous Intensity Polar Plot





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Luminous Intensity Plot



Beam:
 H Angle: 127°
 V Angle: 130.8°
 Lumens: 6808.8
 Efficiency: 86.8%

Field:
 H Angle: 149.3°
 V Angle: 160.3°
 Lumens: 7749
 Efficiency: 98.8%

Spill:
 Lumens: 95.5
 Efficiency: 1.2%

— Vertical Distribution through -35-Deg
 - - - Horizontal Distribution through 0-Deg

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FIELD
BEAM

CANDELA DISTRIBUTION:

	-90°	-87.5°	-85°	-82.5°	-80°	-77.5°	-75°	-72.5°	-70°	-67.5°	-65°
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.3	0.8	1.5	2.3	3.2	4.4	5.6	7.0	8.6	10.3
85°	0.0	0.6	1.6	2.9	4.5	6.5	8.7	11.3	14.0	17.2	20.5
82.5°	0.0	1.0	2.4	4.4	6.8	9.7	13.0	16.8	20.8	24.7	28.7
80°	0.0	1.3	3.2	5.8	9.0	12.8	17.1	21.3	25.7	30.5	35.5
77.5°	0.0	1.6	4.0	7.2	11.1	15.6	20.2	25.2	30.6	36.3	42.4
75°	0.0	1.9	4.7	8.5	13.2	18.0	23.3	29.0	35.3	42.3	49.6
72.5°	0.0	2.2	5.5	9.8	14.9	20.3	26.2	32.9	40.5	48.4	56.6
70°	0.0	2.5	6.2	11.1	16.5	22.5	29.2	37.2	45.6	54.5	73.3
67.5°	0.0	2.8	6.9	12.2	18.1	24.6	32.6	41.3	50.7	70.1	91.7
65°	0.0	3.1	7.6	13.2	19.6	27.0	35.9	45.3	63.1	85.1	114.9
62.5°	0.0	3.3	8.2	14.2	21.0	29.5	39.0	53.3	75.0	102.5	150.0
60°	0.0	3.6	8.8	15.2	22.4	31.9	42.0	62.5	86.2	131.4	183.5
57.5°	0.0	3.8	9.3	16.1	24.1	34.2	48.5	71.2	106.9	158.7	226.4
55°	0.0	4.0	9.9	16.9	25.8	36.4	55.1	79.3	128.8	188.0	273.1
52.5°	0.0	4.3	10.4	17.7	27.4	38.9	61.2	95.5	149.4	228.2	318.1
50°	0.0	4.5	10.8	18.4	28.9	43.4	66.8	111.8	172.9	266.8	376.3
47.5°	0.0	4.7	11.2	19.1	30.3	47.5	72.9	126.8	205.6	303.7	432.9
45°	0.0	4.8	11.6	20.1	31.6	51.2	84.5	140.5	236.6	350.3	485.6
42.5°	0.0	5.0	12.0	21.0	32.7	54.5	95.2	160.6	266.0	393.9	546.3
40°	0.0	5.1	12.3	21.8	34.4	57.5	104.8	184.7	296.1	434.0	604.5
37.5°	0.0	5.3	12.6	22.5	36.6	60.0	113.4	207.3	328.8	473.8	658.2
35°	0.0	5.4	12.8	23.1	38.5	65.1	120.9	228.3	358.5	518.0	710.0
32.5°	0.0	5.5	13.0	23.7	40.1	70.9	130.4	247.6	385.1	558.0	761.7
30°	0.0	5.6	13.2	24.2	41.4	76.0	145.6	266.1	408.6	593.8	808.2
27.5°	0.0	5.7	13.3	24.6	42.5	80.3	159.3	285.0	432.2	625.4	849.5
25°	0.0	5.7	13.4	24.9	43.3	83.8	171.5	301.4	457.5	656.5	885.6
22.5°	0.0	5.8	13.5	25.1	43.9	86.7	182.3	315.4	479.2	685.1	918.7
20°	0.0	5.8	13.5	25.3	44.3	88.8	191.5	326.8	497.2	709.0	946.8
17.5°	0.0	5.8	13.5	25.4	44.4	90.3	199.3	335.9	511.7	728.3	969.7
15°	0.0	5.8	13.4	25.4	44.3	91.0	205.5	342.6	522.6	743.0	987.5
12.5°	0.0	5.8	13.3	25.3	43.9	91.1	210.2	347.0	530.0	753.1	1000.0
10°	0.0	5.7	13.2	25.1	43.4	90.6	213.3	349.2	533.9	758.8	1007.3
7.5°	0.0	5.7	13.0	24.9	42.7	89.6	214.9	349.2	534.6	759.9	1009.4
5°	0.0	5.6	12.9	24.6	41.8	87.9	214.9	347.2	532.0	756.7	1006.4
2.5°	0.0	5.6	12.6	24.2	40.8	85.8	213.5	343.2	526.3	749.3	998.1
0°	0.0	5.5	12.4	23.8	39.6	83.2	210.5	337.3	517.6	737.8	984.8
-2.5°	0.0	5.6	12.6	24.2	40.8	85.8	213.5	343.2	526.3	749.3	998.1
-5°	0.0	5.6	12.9	24.6	41.8	87.9	214.9	347.2	532.0	756.7	1006.4
-7.5°	0.0	5.7	13.0	24.9	42.7	89.6	214.9	349.2	534.6	759.9	1009.4
-10°	0.0	5.7	13.2	25.1	43.4	90.6	213.3	349.2	533.9	758.8	1007.3
-12.5°	0.0	5.8	13.3	25.3	43.9	91.1	210.2	347.0	530.0	753.1	1000.0
-15°	0.0	5.8	13.4	25.4	44.3	91.0	205.5	342.6	522.6	743.0	987.5
-17.5°	0.0	5.8	13.5	25.4	44.4	90.3	199.3	335.9	511.7	728.3	969.7
-20°	0.0	5.8	13.5	25.3	44.3	88.8	191.5	326.8	497.2	709.0	946.8

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CANDELA DISTRIBUTION (continued):

	-90°	-87.5°	-85°	-82.5°	-80°	-77.5°	-75°	-72.5°	-70°	-67.5°	-65°
-22.5°	0.0	5.8	13.5	25.1	43.9	86.7	182.3	315.4	479.2	685.1	918.7
-25°	0.0	5.7	13.4	24.9	43.3	83.8	171.5	301.4	457.5	656.5	885.6
-27.5°	0.0	5.7	13.3	24.6	42.5	80.3	159.3	285.0	432.2	625.4	849.5
-30°	0.0	5.6	13.2	24.2	41.4	76.0	145.6	266.1	408.6	593.8	808.2
-32.5°	0.0	5.5	13.0	23.7	40.1	70.9	130.4	247.6	385.1	558.0	761.7
-35°	0.0	5.4	12.8	23.1	38.5	65.1	120.9	228.3	358.5	518.0	710.0
-37.5°	0.0	5.3	12.6	22.5	36.6	60.0	113.4	207.3	328.8	473.8	658.2
-40°	0.0	5.1	12.3	21.8	34.4	57.5	104.8	184.7	296.1	434.0	604.5
-42.5°	0.0	5.0	12.0	21.0	32.7	54.5	95.2	160.6	266.0	393.9	546.3
-45°	0.0	4.8	11.6	20.1	31.6	51.2	84.5	140.5	236.6	350.3	485.6
-47.5°	0.0	4.7	11.2	19.1	30.3	47.5	72.9	126.8	205.6	303.7	432.9
-50°	0.0	4.5	10.8	18.4	28.9	43.4	66.8	111.8	172.9	266.8	376.3
-52.5°	0.0	4.3	10.4	17.7	27.4	38.9	61.2	95.5	149.4	228.2	318.1
-55°	0.0	4.0	9.9	16.9	25.8	36.4	55.1	79.3	128.8	188.0	273.1
-57.5°	0.0	3.8	9.3	16.1	24.1	34.2	48.5	71.2	106.9	158.7	226.4
-60°	0.0	3.6	8.8	15.2	22.4	31.9	42.0	62.5	86.2	131.4	183.5
-62.5°	0.0	3.3	8.2	14.2	21.0	29.5	39.0	53.3	75.0	102.5	150.0
-65°	0.0	3.1	7.6	13.2	19.6	27.0	35.9	45.3	63.1	85.1	114.9
-67.5°	0.0	2.8	6.9	12.2	18.1	24.6	32.6	41.3	50.7	70.1	91.7
-70°	0.0	2.5	6.2	11.1	16.5	22.5	29.2	37.2	45.6	54.5	73.3
-72.5°	0.0	2.2	5.5	9.8	14.9	20.3	26.2	32.9	40.5	48.4	56.6
-75°	0.0	1.9	4.7	8.5	13.2	18.0	23.3	29.0	35.3	42.3	49.6
-77.5°	0.0	1.6	4.0	7.2	11.1	15.6	20.2	25.2	30.6	36.3	42.4
-80°	0.0	1.3	3.2	5.8	9.0	12.8	17.1	21.3	25.7	30.5	35.5
-82.5°	0.0	1.0	2.4	4.4	6.8	9.7	13.0	16.8	20.8	24.7	28.7
-85°	0.0	0.6	1.6	2.9	4.5	6.5	8.7	11.3	14.0	17.2	20.5
-87.5°	0.0	0.3	0.8	1.5	2.3	3.2	4.4	5.6	7.0	8.6	10.3
-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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 CATALOG NUMBER: GFLL70FSUNVDBZK-60W-3000K

CANDELA DISTRIBUTION (continued):

	-62.5°	-60°	-57.5°	-55°	-52.5°	-50°	-47.5°	-45°	-42.5°	-40°	-37.5°
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	12.1	14.1	15.9	17.8	19.8	21.8	23.8	25.9	28.1	30.3	32.5
85°	24.2	28.1	31.2	34.9	39.1	43.7	48.8	54.4	60.3	66.6	73.1
82.5°	32.9	37.3	43.2	49.9	57.5	65.7	75.1	86.9	99.8	113.8	128.7
80°	40.9	46.4	55.3	66.6	80.1	95.5	112.7	131.5	152.0	176.2	204.1
77.5°	49.0	55.8	68.1	84.6	104.8	133.0	163.4	195.9	230.3	266.4	304.1
75°	57.2	64.9	87.4	117.2	150.2	186.0	226.2	278.8	333.6	390.4	449.0
72.5°	71.6	90.5	117.5	153.7	206.1	263.5	324.1	387.7	456.7	529.3	603.2
70°	93.9	116.2	158.6	217.4	280.5	349.8	427.0	506.8	588.9	674.2	761.1
67.5°	119.0	162.6	212.4	281.6	362.2	446.3	533.7	633.7	731.8	827.4	920.6
65°	161.0	210.4	270.7	355.9	445.3	554.8	664.4	771.6	879.4	982.4	1079.7
62.5°	201.4	268.3	338.0	436.4	557.4	676.3	799.0	918.1	1031.0	1124.3	1204.3
60°	253.4	328.6	420.7	540.8	671.9	809.3	940.0	1057.4	1159.4	1247.7	1316.8
57.5°	306.8	402.5	518.3	649.3	799.6	943.0	1073.8	1189.4	1284.2	1362.9	1424.9
55°	366.7	486.4	618.8	769.0	927.3	1076.2	1206.7	1315.3	1407.2	1472.3	1523.7
52.5°	438.2	569.9	726.2	890.0	1059.0	1208.1	1335.0	1438.0	1516.3	1575.8	1612.9
50°	505.7	662.6	830.0	1011.6	1188.9	1337.2	1456.7	1551.5	1618.5	1666.3	1695.5
47.5°	580.9	750.2	936.2	1125.9	1310.7	1458.1	1572.2	1651.9	1712.7	1747.8	1771.4
45°	655.4	839.5	1036.6	1231.0	1416.9	1572.8	1671.6	1747.9	1793.0	1824.2	1835.1
42.5°	724.9	925.7	1129.0	1330.5	1509.0	1666.0	1767.2	1827.5	1869.4	1888.7	1896.2
40°	797.2	1006.1	1215.7	1412.7	1592.0	1737.4	1847.8	1905.3	1934.2	1949.2	1954.4
37.5°	865.1	1080.5	1294.7	1491.2	1657.1	1797.7	1913.1	1969.3	1994.8	2007.4	2004.1
35°	927.4	1149.6	1362.9	1556.6	1720.2	1850.2	1951.4	2028.4	2051.9	2056.7	2053.2
32.5°	984.9	1213.1	1426.9	1612.1	1768.8	1896.6	1988.7	2057.2	2102.2	2105.7	2099.9
30°	1037.6	1267.3	1483.0	1665.0	1815.0	1930.6	2018.2	2084.5	2129.6	2150.7	2142.3
27.5°	1085.0	1316.7	1527.3	1707.3	1856.5	1964.2	2045.3	2104.3	2147.2	2177.9	2182.5
25°	1127.0	1361.4	1568.4	1744.7	1885.1	1990.3	2069.7	2124.5	2163.6	2190.0	2204.6
22.5°	1162.9	1401.1	1605.8	1779.8	1912.4	2013.1	2087.1	2139.9	2177.9	2202.9	2212.8
20°	1193.3	1429.5	1635.5	1810.0	1938.2	2035.1	2104.1	2154.2	2189.9	2210.7	2221.7
17.5°	1218.7	1453.9	1659.2	1828.9	1956.0	2052.2	2119.6	2168.2	2202.3	2218.7	2231.3
15°	1239.1	1473.9	1679.3	1845.4	1970.8	2064.2	2130.3	2178.6	2211.6	2226.9	2241.3
12.5°	1254.2	1489.3	1695.5	1859.2	1983.5	2074.7	2139.9	2188.1	2218.3	2235.5	2246.8
10°	1263.9	1499.9	1707.5	1869.7	1993.8	2083.5	2148.3	2197.0	2224.7	2244.2	2252.4
7.5°	1268.1	1505.3	1714.9	1876.8	2001.2	2090.3	2155.2	2205.0	2230.8	2252.6	2258.1
5°	1266.6	1505.4	1717.3	1879.8	2005.5	2094.7	2160.1	2211.6	2236.1	2260.4	2263.8
2.5°	1259.3	1499.8	1714.4	1878.6	2006.1	2096.4	2163.0	2216.5	2240.7	2267.4	2269.5
0°	1246.2	1488.3	1705.8	1872.6	2002.7	2095.0	2163.4	2219.4	2244.3	2273.2	2275.2
-2.5°	1259.3	1499.8	1714.4	1878.6	2006.1	2096.4	2163.0	2216.5	2240.7	2267.4	2269.5
-5°	1266.6	1505.4	1717.3	1879.8	2005.5	2094.7	2160.1	2211.6	2236.1	2260.4	2263.8
-7.5°	1268.1	1505.3	1714.9	1876.8	2001.2	2090.3	2155.2	2205.0	2230.8	2252.6	2258.1
-10°	1263.9	1499.9	1707.5	1869.7	1993.8	2083.5	2148.3	2197.0	2224.7	2244.2	2252.4
-12.5°	1254.2	1489.3	1695.5	1859.2	1983.5	2074.7	2139.9	2188.1	2218.3	2235.5	2246.8
-15°	1239.1	1473.9	1679.3	1845.4	1970.8	2064.2	2130.3	2178.6	2211.6	2226.9	2241.3
-17.5°	1218.7	1453.9	1659.2	1828.9	1956.0	2052.2	2119.6	2168.2	2202.3	2218.7	2231.3
-20°	1193.3	1429.5	1635.5	1810.0	1938.2	2035.1	2104.1	2154.2	2189.9	2210.7	2221.7

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CATALOG NUMBER: GFLL70FSUNVDBZK-60W-3000K

CANDELA DISTRIBUTION (continued):

	-62.5°	-60°	-57.5°	-55°	-52.5°	-50°	-47.5°	-45°	-42.5°	-40°	-37.5°
-22.5°	1162.9	1401.1	1605.8	1779.8	1912.4	2013.1	2087.1	2139.9	2177.9	2202.9	2212.8
-25°	1127.0	1361.4	1568.4	1744.7	1885.1	1990.3	2069.7	2124.5	2163.6	2190.0	2204.6
-27.5°	1085.0	1316.7	1527.3	1707.3	1856.5	1964.2	2045.3	2104.3	2147.2	2177.9	2182.5
-30°	1037.6	1267.3	1483.0	1665.0	1815.0	1930.6	2018.2	2084.5	2129.6	2150.7	2142.3
-32.5°	984.9	1213.1	1426.9	1612.1	1768.8	1896.6	1988.7	2057.2	2102.2	2105.7	2099.9
-35°	927.4	1149.6	1362.9	1556.6	1720.2	1850.2	1951.4	2028.4	2051.9	2056.7	2053.2
-37.5°	865.1	1080.5	1294.7	1491.2	1657.1	1797.7	1913.1	1969.3	1994.8	2007.4	2004.1
-40°	797.2	1006.1	1215.7	1412.7	1592.0	1737.4	1847.8	1905.3	1934.2	1949.2	1954.4
-42.5°	724.9	925.7	1129.0	1330.5	1509.0	1666.0	1767.2	1827.5	1869.4	1888.7	1896.2
-45°	655.4	839.5	1036.6	1231.0	1416.9	1572.8	1671.6	1747.9	1793.0	1824.2	1835.1
-47.5°	580.9	750.2	936.2	1125.9	1310.7	1458.1	1572.2	1651.9	1712.7	1747.8	1771.4
-50°	505.7	662.6	830.0	1011.6	1188.9	1337.2	1456.7	1551.5	1618.5	1666.3	1695.5
-52.5°	438.2	569.9	726.2	890.0	1059.0	1208.1	1335.0	1438.0	1516.3	1575.8	1612.9
-55°	366.7	486.4	618.8	769.0	927.3	1076.2	1206.7	1315.3	1407.2	1472.3	1523.7
-57.5°	306.8	402.5	518.3	649.3	799.6	943.0	1073.8	1189.4	1284.2	1362.9	1424.9
-60°	253.4	328.6	420.7	540.8	671.9	809.3	940.0	1057.4	1159.4	1247.7	1316.8
-62.5°	201.4	268.3	338.0	436.4	557.4	676.3	799.0	918.1	1031.0	1124.3	1204.3
-65°	161.0	210.4	270.7	355.9	445.3	554.8	664.4	771.6	879.4	982.4	1079.7
-67.5°	119.0	162.6	212.4	281.6	362.2	446.3	533.7	633.7	731.8	827.4	920.6
-70°	93.9	116.2	158.6	217.4	280.5	349.8	427.0	506.8	588.9	674.2	761.1
-72.5°	71.6	90.5	117.5	153.7	206.1	263.5	324.1	387.7	456.7	529.3	603.2
-75°	57.2	64.9	87.4	117.2	150.2	186.0	226.2	278.8	333.6	390.4	449.0
-77.5°	49.0	55.8	68.1	84.6	104.8	133.0	163.4	195.9	230.3	266.4	304.1
-80°	40.9	46.4	55.3	66.6	80.1	95.5	112.7	131.5	152.0	176.2	204.1
-82.5°	32.9	37.3	43.2	49.9	57.5	65.7	75.1	86.9	99.8	113.8	128.7
-85°	24.2	28.1	31.2	34.9	39.1	43.7	48.8	54.4	60.3	66.6	73.1
-87.5°	12.1	14.1	15.9	17.8	19.8	21.8	23.8	25.9	28.1	30.3	32.5
-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: P670563 (CONVERTED FROM TYPE C PHOTOMETRY)
 CATALOG NUMBER: GFLL70FSUNVDBZK-60W-3000K

CANDELA DISTRIBUTION (continued):

	-35°	-32.5°	-30°	-27.5°	-25°	-22.5°	-20°	-17.5°	-15°	-12.5°	-10°
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	34.7	36.9	39.2	38.4	37.5	36.4	35.2	33.9	32.5	30.9	29.3
85°	80.0	87.1	94.3	92.3	89.4	86.1	82.2	77.9	73.2	68.2	62.9
82.5°	144.5	161.1	178.1	175.8	170.3	163.4	155.2	145.9	135.6	124.4	112.4
80°	232.9	262.6	292.9	292.1	283.3	272.0	258.4	242.7	225.1	205.8	185.2
77.5°	348.5	396.6	445.3	451.7	440.6	425.2	405.7	382.4	355.8	326.2	294.1
75°	508.9	570.5	634.2	647.2	629.3	605.9	577.5	544.4	507.0	465.8	421.3
72.5°	678.1	753.8	829.1	850.1	822.0	788.3	749.3	705.4	657.1	604.7	548.8
70°	845.6	927.6	1007.0	1041.2	1004.9	963.2	916.3	864.6	808.5	748.1	684.1
67.5°	1009.8	1094.1	1173.3	1222.7	1172.1	1113.7	1053.7	991.8	928.2	862.7	795.4
65°	1164.3	1229.2	1284.9	1327.1	1272.3	1212.6	1151.7	1089.5	1025.8	960.7	894.0
62.5°	1272.6	1326.8	1368.4	1400.2	1356.8	1298.7	1238.9	1178.2	1116.6	1053.7	989.3
60°	1373.1	1417.0	1445.2	1463.5	1433.5	1377.8	1320.4	1262.5	1203.8	1144.0	1082.8
57.5°	1467.9	1499.1	1517.9	1525.0	1505.3	1452.1	1397.6	1342.2	1286.6	1230.3	1173.0
55°	1557.0	1576.3	1586.4	1584.4	1569.7	1518.4	1467.4	1416.1	1364.7	1312.8	1260.0
52.5°	1639.0	1647.8	1647.9	1639.6	1623.4	1580.2	1533.3	1486.5	1439.7	1392.3	1344.0
50°	1710.2	1713.8	1706.0	1692.6	1673.3	1639.6	1596.9	1554.0	1510.6	1467.1	1423.1
47.5°	1775.9	1773.3	1762.1	1745.7	1724.0	1693.9	1653.8	1615.1	1577.6	1539.7	1500.7
45°	1837.3	1829.9	1816.5	1795.2	1770.5	1744.5	1711.6	1678.4	1643.4	1608.3	1572.9
42.5°	1894.6	1882.7	1865.2	1844.6	1821.8	1794.9	1763.1	1731.5	1701.4	1671.3	1640.4
40°	1945.7	1932.5	1915.3	1894.5	1867.5	1838.9	1810.9	1784.8	1758.7	1731.9	1704.2
37.5°	1995.4	1981.8	1961.8	1937.5	1912.1	1886.4	1859.5	1835.1	1812.1	1787.8	1762.9
35°	2043.5	2025.7	2004.2	1980.7	1956.8	1932.0	1906.0	1880.4	1859.4	1838.4	1817.0
32.5°	2086.1	2067.1	2045.0	2022.5	1999.7	1974.0	1948.4	1922.1	1903.1	1884.9	1865.7
30°	2126.7	2105.7	2084.5	2062.7	2037.6	2013.2	1988.8	1963.5	1942.1	1926.2	1910.2
27.5°	2163.4	2143.2	2122.4	2097.6	2074.1	2051.0	2026.0	2002.0	1978.5	1965.5	1950.9
25°	2199.2	2179.8	2155.3	2132.0	2109.2	2084.3	2060.3	2037.7	2014.4	1996.5	1984.2
22.5°	2220.3	2211.6	2187.7	2165.6	2139.9	2114.8	2091.4	2068.9	2045.5	2023.1	2013.0
20°	2228.8	2226.5	2220.0	2194.4	2167.8	2142.7	2120.4	2094.9	2071.9	2054.5	2041.7
17.5°	2234.4	2233.3	2230.3	2221.6	2193.3	2170.2	2142.6	2117.2	2100.0	2079.5	2059.8
15°	2240.2	2240.5	2234.2	2224.4	2214.4	2192.5	2160.6	2142.1	2119.0	2099.2	2085.6
12.5°	2246.7	2246.3	2238.5	2228.9	2218.9	2198.5	2183.7	2159.3	2135.3	2119.3	2102.1
10°	2253.5	2251.0	2243.5	2233.7	2218.9	2199.2	2188.3	2169.8	2151.9	2131.9	2115.1
7.5°	2260.4	2256.2	2249.7	2238.1	2219.5	2202.7	2186.5	2169.5	2156.4	2142.7	2125.0
5°	2267.3	2261.9	2257.0	2242.6	2222.2	2205.9	2186.3	2169.7	2153.2	2139.0	2126.8
2.5°	2274.0	2268.0	2265.0	2247.6	2227.0	2209.6	2188.3	2170.7	2151.0	2135.7	2122.3
0°	2280.5	2274.6	2273.5	2253.8	2233.9	2214.5	2192.5	2173.4	2151.0	2134.5	2120.7
-2.5°	2274.0	2268.0	2265.0	2247.6	2227.0	2209.6	2188.3	2170.7	2151.0	2135.7	2122.3
-5°	2267.3	2261.9	2257.0	2242.6	2222.2	2205.9	2186.3	2169.7	2153.2	2139.0	2126.8
-7.5°	2260.4	2256.2	2249.7	2238.1	2219.5	2202.7	2186.5	2169.5	2156.4	2142.7	2125.0
-10°	2253.5	2251.0	2243.5	2233.7	2218.9	2199.2	2188.3	2169.8	2151.9	2131.9	2115.1
-12.5°	2246.7	2246.3	2238.5	2228.9	2218.9	2198.5	2183.7	2159.3	2135.3	2119.3	2102.1
-15°	2240.2	2240.5	2234.2	2224.4	2214.4	2192.5	2160.6	2142.1	2119.0	2099.2	2085.6
-17.5°	2234.4	2233.3	2230.3	2221.6	2193.3	2170.2	2142.6	2117.2	2100.0	2079.5	2059.8
-20°	2228.8	2226.5	2220.0	2194.4	2167.8	2142.7	2120.4	2094.9	2071.9	2054.5	2041.7



REPORT NUMBER: P670563 (CONVERTED FROM TYPE C PHOTOMETRY)
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CANDELA DISTRIBUTION (continued):

	-35°	-32.5°	-30°	-27.5°	-25°	-22.5°	-20°	-17.5°	-15°	-12.5°	-10°
-22.5°	2220.3	2211.6	2187.7	2165.6	2139.9	2114.8	2091.4	2068.9	2045.5	2023.1	2013.0
-25°	2199.2	2179.8	2155.3	2132.0	2109.2	2084.3	2060.3	2037.7	2014.4	1996.5	1984.2
-27.5°	2163.4	2143.2	2122.4	2097.6	2074.1	2051.0	2026.0	2002.0	1978.5	1965.5	1950.9
-30°	2126.7	2105.7	2084.5	2062.7	2037.6	2013.2	1988.8	1963.5	1942.1	1926.2	1910.2
-32.5°	2086.1	2067.1	2045.0	2022.5	1999.7	1974.0	1948.4	1922.1	1903.1	1884.9	1865.7
-35°	2043.5	2025.7	2004.2	1980.7	1956.8	1932.0	1906.0	1880.4	1859.4	1838.4	1817.0
-37.5°	1995.4	1981.8	1961.8	1937.5	1912.1	1886.4	1859.5	1835.1	1812.1	1787.8	1762.9
-40°	1945.7	1932.5	1915.3	1894.5	1867.5	1838.9	1810.9	1784.8	1758.7	1731.9	1704.2
-42.5°	1894.6	1882.7	1865.2	1844.6	1821.8	1794.9	1763.1	1731.5	1701.4	1671.3	1640.4
-45°	1837.3	1829.9	1816.5	1795.2	1770.5	1744.5	1711.6	1678.4	1643.4	1608.3	1572.9
-47.5°	1775.9	1773.3	1762.1	1745.7	1724.0	1693.9	1653.8	1615.1	1577.6	1539.7	1500.7
-50°	1710.2	1713.8	1706.0	1692.6	1673.3	1639.6	1596.9	1554.0	1510.6	1467.1	1423.1
-52.5°	1639.0	1647.8	1647.9	1639.6	1623.4	1580.2	1533.3	1486.5	1439.7	1392.3	1344.0
-55°	1557.0	1576.3	1586.4	1584.4	1569.7	1518.4	1467.4	1416.1	1364.7	1312.8	1260.0
-57.5°	1467.9	1499.1	1517.9	1525.0	1505.3	1452.1	1397.6	1342.2	1286.6	1230.3	1173.0
-60°	1373.1	1417.0	1445.2	1463.5	1433.5	1377.8	1320.4	1262.5	1203.8	1144.0	1082.8
-62.5°	1272.6	1326.8	1368.4	1400.2	1356.8	1298.7	1238.9	1178.2	1116.6	1053.7	989.3
-65°	1164.3	1229.2	1284.9	1327.1	1272.3	1212.6	1151.7	1089.5	1025.8	960.7	894.0
-67.5°	1009.8	1094.1	1173.3	1222.7	1172.1	1113.7	1053.7	991.8	928.2	862.7	795.4
-70°	845.6	927.6	1007.0	1041.2	1004.9	963.2	916.3	864.6	808.5	748.1	684.1
-72.5°	678.1	753.8	829.1	850.1	822.0	788.3	749.3	705.4	657.1	604.7	548.8
-75°	508.9	570.5	634.2	647.2	629.3	605.9	577.5	544.4	507.0	465.8	421.3
-77.5°	348.5	396.6	445.3	451.7	440.6	425.2	405.7	382.4	355.8	326.2	294.1
-80°	232.9	262.6	292.9	292.1	283.3	272.0	258.4	242.7	225.1	205.8	185.2
-82.5°	144.5	161.1	178.1	175.8	170.3	163.4	155.2	145.9	135.6	124.4	112.4
-85°	80.0	87.1	94.3	92.3	89.4	86.1	82.2	77.9	73.2	68.2	62.9
-87.5°	34.7	36.9	39.2	38.4	37.5	36.4	35.2	33.9	32.5	30.9	29.3
-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: P670563 (CONVERTED FROM TYPE C PHOTOMETRY)
 CATALOG NUMBER: GFLL70FSUNVDBZK-60W-3000K

CANDELA DISTRIBUTION (continued):

	-7.5°	-5°	-2.5°	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	27.5	25.7	23.8	21.9	23.8	25.7	27.5	29.3	30.9	32.5	33.9
85°	57.3	51.4	45.5	39.4	45.5	51.4	57.3	62.9	68.2	73.2	77.9
82.5°	99.8	86.7	73.2	59.5	73.2	86.7	99.8	112.4	124.4	135.6	145.9
80°	163.3	140.4	116.8	92.7	116.8	140.4	163.3	185.2	205.8	225.1	242.7
77.5°	259.7	223.5	186.0	147.5	186.0	223.5	259.7	294.1	326.2	355.8	382.4
75°	373.9	324.2	272.6	219.7	272.6	324.2	373.9	421.3	465.8	507.0	544.4
72.5°	489.7	428.0	364.2	298.9	364.2	428.0	489.7	548.8	604.7	657.1	705.4
70°	616.7	546.5	473.7	398.9	473.7	546.5	616.7	684.1	748.1	808.5	864.6
67.5°	726.2	655.1	582.0	507.0	582.0	655.1	726.2	795.4	862.7	928.2	991.8
65°	825.5	755.2	682.9	608.8	682.9	755.2	825.5	894.0	960.7	1025.8	1089.5
62.5°	923.4	855.6	785.8	713.8	785.8	855.6	923.4	989.3	1053.7	1116.6	1178.2
60°	1020.0	955.3	888.5	819.2	888.5	955.3	1020.0	1082.8	1144.0	1203.8	1262.5
57.5°	1114.3	1053.8	991.2	925.9	991.2	1053.8	1114.3	1173.0	1230.3	1286.6	1342.2
55°	1205.9	1149.9	1091.6	1030.6	1091.6	1149.9	1205.9	1260.0	1312.8	1364.7	1416.1
52.5°	1294.2	1242.5	1188.4	1131.4	1188.4	1242.5	1294.2	1344.0	1392.3	1439.7	1486.5
50°	1377.8	1330.7	1281.4	1229.0	1281.4	1330.7	1377.8	1423.1	1467.1	1510.6	1554.0
47.5°	1460.3	1417.7	1372.4	1323.9	1372.4	1417.7	1460.3	1500.7	1539.7	1577.6	1615.1
45°	1536.6	1498.6	1458.0	1414.3	1458.0	1498.6	1536.6	1572.9	1608.3	1643.4	1678.4
42.5°	1608.0	1573.5	1536.3	1495.8	1536.3	1573.5	1608.0	1640.4	1671.3	1701.4	1731.5
40°	1675.2	1644.0	1610.2	1573.1	1610.2	1644.0	1675.2	1704.2	1731.9	1758.7	1784.8
37.5°	1737.0	1709.2	1678.8	1645.0	1678.8	1709.2	1737.0	1762.9	1787.8	1812.1	1835.1
35°	1794.5	1770.3	1743.5	1713.2	1743.5	1770.3	1794.5	1817.0	1838.4	1859.4	1880.4
32.5°	1845.3	1823.2	1798.6	1770.8	1798.6	1823.2	1845.3	1865.7	1884.9	1903.1	1922.1
30°	1893.4	1875.1	1854.2	1829.8	1854.2	1875.1	1893.4	1910.2	1926.2	1942.1	1963.5
27.5°	1936.4	1921.0	1903.5	1882.9	1903.5	1921.0	1936.4	1950.9	1965.5	1978.5	2002.0
25°	1970.8	1956.2	1939.5	1920.1	1939.5	1956.2	1970.8	1984.2	1996.5	2014.4	2037.7
22.5°	2003.6	1993.0	1980.3	1964.0	1980.3	1993.0	2003.6	2013.0	2023.1	2045.5	2068.9
20°	2032.5	2024.6	2016.3	2005.4	2016.3	2024.6	2032.5	2041.7	2054.5	2071.9	2094.9
17.5°	2055.0	2048.9	2040.0	2028.3	2040.0	2048.9	2055.0	2059.8	2079.5	2100.0	2117.2
15°	2074.1	2066.6	2058.8	2049.2	2058.8	2066.6	2074.1	2085.6	2099.2	2119.0	2142.1
12.5°	2087.9	2083.1	2079.1	2073.0	2079.1	2083.1	2087.9	2102.1	2119.3	2135.3	2159.3
10°	2103.5	2091.2	2084.0	2076.8	2084.0	2091.2	2103.5	2115.1	2131.9	2151.9	2169.8
7.5°	2108.6	2097.3	2094.8	2094.7	2094.8	2097.3	2108.6	2125.0	2142.7	2156.4	2169.5
5°	2114.5	2104.0	2100.3	2095.5	2100.3	2104.0	2114.5	2126.8	2139.0	2153.2	2169.7
2.5°	2110.6	2101.9	2097.3	2099.9	2097.3	2101.9	2110.6	2122.3	2135.7	2151.0	2170.7
0°	2103.6	2097.2	2088.8	2091.6	2088.8	2097.2	2103.6	2120.7	2134.5	2151.0	2173.4
-2.5°	2110.6	2101.9	2097.3	2099.9	2097.3	2101.9	2110.6	2122.3	2135.7	2151.0	2170.7
-5°	2114.5	2104.0	2100.3	2095.5	2100.3	2104.0	2114.5	2126.8	2139.0	2153.2	2169.7
-7.5°	2108.6	2097.3	2094.8	2094.7	2094.8	2097.3	2108.6	2125.0	2142.7	2156.4	2169.5
-10°	2103.5	2091.2	2084.0	2076.8	2084.0	2091.2	2103.5	2115.1	2131.9	2151.9	2169.8
-12.5°	2087.9	2083.1	2079.1	2073.0	2079.1	2083.1	2087.9	2102.1	2119.3	2135.3	2159.3
-15°	2074.1	2066.6	2058.8	2049.2	2058.8	2066.6	2074.1	2085.6	2099.2	2119.0	2142.1
-17.5°	2055.0	2048.9	2040.0	2028.3	2040.0	2048.9	2055.0	2059.8	2079.5	2100.0	2117.2
-20°	2032.5	2024.6	2016.3	2005.4	2016.3	2024.6	2032.5	2041.7	2054.5	2071.9	2094.9



REPORT NUMBER: P670563 (CONVERTED FROM TYPE C PHOTOMETRY)
 CATALOG NUMBER: GFLL70FSUNVDBZK-60W-3000K

CANDELA DISTRIBUTION (continued):

	-7.5°	-5°	-2.5°	0°	2.5°	5°	7.5°	10°	12.5°	15°	17.5°
-22.5°	2003.6	1993.0	1980.3	1964.0	1980.3	1993.0	2003.6	2013.0	2023.1	2045.5	2068.9
-25°	1970.8	1956.2	1939.5	1920.1	1939.5	1956.2	1970.8	1984.2	1996.5	2014.4	2037.7
-27.5°	1936.4	1921.0	1903.5	1882.9	1903.5	1921.0	1936.4	1950.9	1965.5	1978.5	2002.0
-30°	1893.4	1875.1	1854.2	1829.8	1854.2	1875.1	1893.4	1910.2	1926.2	1942.1	1963.5
-32.5°	1845.3	1823.2	1798.6	1770.8	1798.6	1823.2	1845.3	1865.7	1884.9	1903.1	1922.1
-35°	1794.5	1770.3	1743.5	1713.2	1743.5	1770.3	1794.5	1817.0	1838.4	1859.4	1880.4
-37.5°	1737.0	1709.2	1678.8	1645.0	1678.8	1709.2	1737.0	1762.9	1787.8	1812.1	1835.1
-40°	1675.2	1644.0	1610.2	1573.1	1610.2	1644.0	1675.2	1704.2	1731.9	1758.7	1784.8
-42.5°	1608.0	1573.5	1536.3	1495.8	1536.3	1573.5	1608.0	1640.4	1671.3	1701.4	1731.5
-45°	1536.6	1498.6	1458.0	1414.3	1458.0	1498.6	1536.6	1572.9	1608.3	1643.4	1678.4
-47.5°	1460.3	1417.7	1372.4	1323.9	1372.4	1417.7	1460.3	1500.7	1539.7	1577.6	1615.1
-50°	1377.8	1330.7	1281.4	1229.0	1281.4	1330.7	1377.8	1423.1	1467.1	1510.6	1554.0
-52.5°	1294.2	1242.5	1188.4	1131.4	1188.4	1242.5	1294.2	1344.0	1392.3	1439.7	1486.5
-55°	1205.9	1149.9	1091.6	1030.6	1091.6	1149.9	1205.9	1260.0	1312.8	1364.7	1416.1
-57.5°	1114.3	1053.8	991.2	925.9	991.2	1053.8	1114.3	1173.0	1230.3	1286.6	1342.2
-60°	1020.0	955.3	888.5	819.2	888.5	955.3	1020.0	1082.8	1144.0	1203.8	1262.5
-62.5°	923.4	855.6	785.8	713.8	785.8	855.6	923.4	989.3	1053.7	1116.6	1178.2
-65°	825.5	755.2	682.9	608.8	682.9	755.2	825.5	894.0	960.7	1025.8	1089.5
-67.5°	726.2	655.1	582.0	507.0	582.0	655.1	726.2	795.4	862.7	928.2	991.8
-70°	616.7	546.5	473.7	398.9	473.7	546.5	616.7	684.1	748.1	808.5	864.6
-72.5°	489.7	428.0	364.2	298.9	364.2	428.0	489.7	548.8	604.7	657.1	705.4
-75°	373.9	324.2	272.6	219.7	272.6	324.2	373.9	421.3	465.8	507.0	544.4
-77.5°	259.7	223.5	186.0	147.5	186.0	223.5	259.7	294.1	326.2	355.8	382.4
-80°	163.3	140.4	116.8	92.7	116.8	140.4	163.3	185.2	205.8	225.1	242.7
-82.5°	99.8	86.7	73.2	59.5	73.2	86.7	99.8	112.4	124.4	135.6	145.9
-85°	57.3	51.4	45.5	39.4	45.5	51.4	57.3	62.9	68.2	73.2	77.9
-87.5°	27.5	25.7	23.8	21.9	23.8	25.7	27.5	29.3	30.9	32.5	33.9
-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: P670563 (CONVERTED FROM TYPE C PHOTOMETRY)
 CATALOG NUMBER: GFLL70FSUNVDBZK-60W-3000K

CANDELA DISTRIBUTION (continued):

	20°	22.5°	25°	27.5°	30°	32.5°	35°	37.5°	40°	42.5°	45°
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	35.2	36.4	37.5	38.4	39.2	36.9	34.7	32.5	30.3	28.1	25.9
85°	82.2	86.1	89.4	92.3	94.3	87.1	80.0	73.1	66.6	60.3	54.4
82.5°	155.2	163.4	170.3	175.8	178.1	161.1	144.5	128.7	113.8	99.8	86.9
80°	258.4	272.0	283.3	292.1	292.9	262.6	232.9	204.1	176.2	152.0	131.5
77.5°	405.7	425.2	440.6	451.7	445.3	396.6	348.5	304.1	266.4	230.3	195.9
75°	577.5	605.9	629.3	647.2	634.2	570.5	508.9	449.0	390.4	333.6	278.8
72.5°	749.3	788.3	822.0	850.1	829.1	753.8	678.1	603.2	529.3	456.7	387.7
70°	916.3	963.2	1004.9	1041.2	1007.0	927.6	845.6	761.1	674.2	588.9	506.8
67.5°	1053.7	1113.7	1172.1	1222.7	1173.3	1094.1	1009.8	920.6	827.4	731.8	633.7
65°	1151.7	1212.6	1272.3	1327.1	1284.9	1229.2	1164.3	1079.7	982.4	879.4	771.6
62.5°	1238.9	1298.7	1356.8	1400.2	1368.4	1326.8	1272.6	1204.3	1124.3	1031.0	918.1
60°	1320.4	1377.8	1433.5	1463.5	1445.2	1417.0	1373.1	1316.8	1247.7	1159.4	1057.4
57.5°	1397.6	1452.1	1505.3	1525.0	1517.9	1499.1	1467.9	1424.9	1362.9	1284.2	1189.4
55°	1467.4	1518.4	1569.7	1584.4	1586.4	1576.3	1557.0	1523.7	1472.3	1407.2	1315.3
52.5°	1533.3	1580.2	1623.4	1639.6	1647.9	1647.8	1639.0	1612.9	1575.8	1516.3	1438.0
50°	1596.9	1639.6	1673.3	1692.6	1706.0	1713.8	1710.2	1695.5	1666.3	1618.5	1551.5
47.5°	1653.8	1693.9	1724.0	1745.7	1762.1	1773.3	1775.9	1771.4	1747.8	1712.7	1651.9
45°	1711.6	1744.5	1770.5	1795.2	1816.5	1829.9	1837.3	1835.1	1824.2	1793.0	1747.9
42.5°	1763.1	1794.9	1821.8	1844.6	1865.2	1882.7	1894.6	1896.2	1888.7	1869.4	1827.5
40°	1810.9	1838.9	1867.5	1894.5	1915.3	1932.5	1945.7	1954.4	1949.2	1934.2	1905.3
37.5°	1859.5	1886.4	1912.1	1937.5	1961.8	1981.8	1995.4	2004.1	2007.4	1994.8	1969.3
35°	1906.0	1932.0	1956.8	1980.7	2004.2	2025.7	2043.5	2053.2	2056.7	2051.9	2028.4
32.5°	1948.4	1974.0	1999.7	2022.5	2045.0	2067.1	2086.1	2099.9	2105.7	2102.2	2057.2
30°	1988.8	2013.2	2037.6	2062.7	2084.5	2105.7	2126.7	2142.3	2150.7	2129.6	2084.5
27.5°	2026.0	2051.0	2074.1	2097.6	2122.4	2143.2	2163.4	2182.5	2177.9	2147.2	2104.3
25°	2060.3	2084.3	2109.2	2132.0	2155.3	2179.8	2199.2	2204.6	2190.0	2163.6	2124.5
22.5°	2091.4	2114.8	2139.9	2165.6	2187.7	2211.6	2220.3	2212.8	2202.9	2177.9	2139.9
20°	2120.4	2142.7	2167.8	2194.4	2220.0	2226.5	2228.8	2221.7	2210.7	2189.9	2154.2
17.5°	2142.6	2170.2	2193.3	2221.6	2230.3	2233.3	2234.4	2231.3	2218.7	2202.3	2168.2
15°	2160.6	2192.5	2214.4	2224.4	2234.2	2240.5	2240.2	2241.3	2226.9	2211.6	2178.6
12.5°	2183.7	2198.5	2218.9	2228.9	2238.5	2246.3	2246.7	2246.8	2235.5	2218.3	2188.1
10°	2188.3	2199.2	2218.9	2233.7	2243.5	2251.0	2253.5	2252.4	2244.2	2224.7	2197.0
7.5°	2186.5	2202.7	2219.5	2238.1	2249.7	2256.2	2260.4	2258.1	2252.6	2230.8	2205.0
5°	2186.3	2205.9	2222.2	2242.6	2257.0	2261.9	2267.3	2263.8	2260.4	2236.1	2211.6
2.5°	2188.3	2209.6	2227.0	2247.6	2265.0	2268.0	2274.0	2269.5	2267.4	2240.7	2216.5
0°	2192.5	2214.5	2233.9	2253.8	2273.5	2274.6	2280.5	2275.2	2273.2	2244.3	2219.4
-2.5°	2188.3	2209.6	2227.0	2247.6	2265.0	2268.0	2274.0	2269.5	2267.4	2240.7	2216.5
-5°	2186.3	2205.9	2222.2	2242.6	2257.0	2261.9	2267.3	2263.8	2260.4	2236.1	2211.6
-7.5°	2186.5	2202.7	2219.5	2238.1	2249.7	2256.2	2260.4	2258.1	2252.6	2230.8	2205.0
-10°	2188.3	2199.2	2218.9	2233.7	2243.5	2251.0	2253.5	2252.4	2244.2	2224.7	2197.0
-12.5°	2183.7	2198.5	2218.9	2228.9	2238.5	2246.3	2246.7	2246.8	2235.5	2218.3	2188.1
-15°	2160.6	2192.5	2214.4	2224.4	2234.2	2240.5	2240.2	2241.3	2226.9	2211.6	2178.6
-17.5°	2142.6	2170.2	2193.3	2221.6	2230.3	2233.3	2234.4	2231.3	2218.7	2202.3	2168.2
-20°	2120.4	2142.7	2167.8	2194.4	2220.0	2226.5	2228.8	2221.7	2210.7	2189.9	2154.2



REPORT NUMBER: P670563 (CONVERTED FROM TYPE C PHOTOMETRY)
 CATALOG NUMBER: GFLL70FSUNVDBZK-60W-3000K

CANDELA DISTRIBUTION (continued):

	20°	22.5°	25°	27.5°	30°	32.5°	35°	37.5°	40°	42.5°	45°
-22.5°	2091.4	2114.8	2139.9	2165.6	2187.7	2211.6	2220.3	2212.8	2202.9	2177.9	2139.9
-25°	2060.3	2084.3	2109.2	2132.0	2155.3	2179.8	2199.2	2204.6	2190.0	2163.6	2124.5
-27.5°	2026.0	2051.0	2074.1	2097.6	2122.4	2143.2	2163.4	2182.5	2177.9	2147.2	2104.3
-30°	1988.8	2013.2	2037.6	2062.7	2084.5	2105.7	2126.7	2142.3	2150.7	2129.6	2084.5
-32.5°	1948.4	1974.0	1999.7	2022.5	2045.0	2067.1	2086.1	2099.9	2105.7	2102.2	2057.2
-35°	1906.0	1932.0	1956.8	1980.7	2004.2	2025.7	2043.5	2053.2	2056.7	2051.9	2028.4
-37.5°	1859.5	1886.4	1912.1	1937.5	1961.8	1981.8	1995.4	2004.1	2007.4	1994.8	1969.3
-40°	1810.9	1838.9	1867.5	1894.5	1915.3	1932.5	1945.7	1954.4	1949.2	1934.2	1905.3
-42.5°	1763.1	1794.9	1821.8	1844.6	1865.2	1882.7	1894.6	1896.2	1888.7	1869.4	1827.5
-45°	1711.6	1744.5	1770.5	1795.2	1816.5	1829.9	1837.3	1835.1	1824.2	1793.0	1747.9
-47.5°	1653.8	1693.9	1724.0	1745.7	1762.1	1773.3	1775.9	1771.4	1747.8	1712.7	1651.9
-50°	1596.9	1639.6	1673.3	1692.6	1706.0	1713.8	1710.2	1695.5	1666.3	1618.5	1551.5
-52.5°	1533.3	1580.2	1623.4	1639.6	1647.9	1647.8	1639.0	1612.9	1575.8	1516.3	1438.0
-55°	1467.4	1518.4	1569.7	1584.4	1586.4	1576.3	1557.0	1523.7	1472.3	1407.2	1315.3
-57.5°	1397.6	1452.1	1505.3	1525.0	1517.9	1499.1	1467.9	1424.9	1362.9	1284.2	1189.4
-60°	1320.4	1377.8	1433.5	1463.5	1445.2	1417.0	1373.1	1316.8	1247.7	1159.4	1057.4
-62.5°	1238.9	1298.7	1356.8	1400.2	1368.4	1326.8	1272.6	1204.3	1124.3	1031.0	918.1
-65°	1151.7	1212.6	1272.3	1327.1	1284.9	1229.2	1164.3	1079.7	982.4	879.4	771.6
-67.5°	1053.7	1113.7	1172.1	1222.7	1173.3	1094.1	1009.8	920.6	827.4	731.8	633.7
-70°	916.3	963.2	1004.9	1041.2	1007.0	927.6	845.6	761.1	674.2	588.9	506.8
-72.5°	749.3	788.3	822.0	850.1	829.1	753.8	678.1	603.2	529.3	456.7	387.7
-75°	577.5	605.9	629.3	647.2	634.2	570.5	508.9	449.0	390.4	333.6	278.8
-77.5°	405.7	425.2	440.6	451.7	445.3	396.6	348.5	304.1	266.4	230.3	195.9
-80°	258.4	272.0	283.3	292.1	292.9	262.6	232.9	204.1	176.2	152.0	131.5
-82.5°	155.2	163.4	170.3	175.8	178.1	161.1	144.5	128.7	113.8	99.8	86.9
-85°	82.2	86.1	89.4	92.3	94.3	87.1	80.0	73.1	66.6	60.3	54.4
-87.5°	35.2	36.4	37.5	38.4	39.2	36.9	34.7	32.5	30.3	28.1	25.9
-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: P670563 (CONVERTED FROM TYPE C PHOTOMETRY)
 CATALOG NUMBER: GFLL70FSUNVDBZK-60W-3000K

CANDELA DISTRIBUTION (continued):

	47.5°	50°	52.5°	55°	57.5°	60°	62.5°	65°	67.5°	70°	72.5°
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	23.8	21.8	19.8	17.8	15.9	14.1	12.1	10.3	8.6	7.0	5.6
85°	48.8	43.7	39.1	34.9	31.2	28.1	24.2	20.5	17.2	14.0	11.3
82.5°	75.1	65.7	57.5	49.9	43.2	37.3	32.9	28.7	24.7	20.8	16.8
80°	112.7	95.5	80.1	66.6	55.3	46.4	40.9	35.5	30.5	25.7	21.3
77.5°	163.4	133.0	104.8	84.6	68.1	55.8	49.0	42.4	36.3	30.6	25.2
75°	226.2	186.0	150.2	117.2	87.4	64.9	57.2	49.6	42.3	35.3	29.0
72.5°	324.1	263.5	206.1	153.7	117.5	90.5	71.6	56.6	48.4	40.5	32.9
70°	427.0	349.8	280.5	217.4	158.6	116.2	93.9	73.3	54.5	45.6	37.2
67.5°	533.7	446.3	362.2	281.6	212.4	162.6	119.0	91.7	70.1	50.7	41.3
65°	664.4	554.8	445.3	355.9	270.7	210.4	161.0	114.9	85.1	63.1	45.3
62.5°	799.0	676.3	557.4	436.4	338.0	268.3	201.4	150.0	102.5	75.0	53.3
60°	940.0	809.3	671.9	540.8	420.7	328.6	253.4	183.5	131.4	86.2	62.5
57.5°	1073.8	943.0	799.6	649.3	518.3	402.5	306.8	226.4	158.7	106.9	71.2
55°	1206.7	1076.2	927.3	769.0	618.8	486.4	366.7	273.1	188.0	128.8	79.3
52.5°	1335.0	1208.1	1059.0	890.0	726.2	569.9	438.2	318.1	228.2	149.4	95.5
50°	1456.7	1337.2	1188.9	1011.6	830.0	662.6	505.7	376.3	266.8	172.9	111.8
47.5°	1572.2	1458.1	1310.7	1125.9	936.2	750.2	580.9	432.9	303.7	205.6	126.8
45°	1671.6	1572.8	1416.9	1231.0	1036.6	839.5	655.4	485.6	350.3	236.6	140.5
42.5°	1767.2	1666.0	1509.0	1330.5	1129.0	925.7	724.9	546.3	393.9	266.0	160.6
40°	1847.8	1737.4	1592.0	1412.7	1215.7	1006.1	797.2	604.5	434.0	296.1	184.7
37.5°	1913.1	1797.7	1657.1	1491.2	1294.7	1080.5	865.1	658.2	473.8	328.8	207.3
35°	1951.4	1850.2	1720.2	1556.6	1362.9	1149.6	927.4	710.0	518.0	358.5	228.3
32.5°	1988.7	1896.6	1768.8	1612.1	1426.9	1213.1	984.9	761.7	558.0	385.1	247.6
30°	2018.2	1930.6	1815.0	1665.0	1483.0	1267.3	1037.6	808.2	593.8	408.6	266.1
27.5°	2045.3	1964.2	1856.5	1707.3	1527.3	1316.7	1085.0	849.5	625.4	432.2	285.0
25°	2069.7	1990.3	1885.1	1744.7	1568.4	1361.4	1127.0	885.6	656.5	457.5	301.4
22.5°	2087.1	2013.1	1912.4	1779.8	1605.8	1401.1	1162.9	918.7	685.1	479.2	315.4
20°	2104.1	2035.1	1938.2	1810.0	1635.5	1429.5	1193.3	946.8	709.0	497.2	326.8
17.5°	2119.6	2052.2	1956.0	1828.9	1659.2	1453.9	1218.7	969.7	728.3	511.7	335.9
15°	2130.3	2064.2	1970.8	1845.4	1679.3	1473.9	1239.1	987.5	743.0	522.6	342.6
12.5°	2139.9	2074.7	1983.5	1859.2	1695.5	1489.3	1254.2	1000.0	753.1	530.0	347.0
10°	2148.3	2083.5	1993.8	1869.7	1707.5	1499.9	1263.9	1007.3	758.8	533.9	349.2
7.5°	2155.2	2090.3	2001.2	1876.8	1714.9	1505.3	1268.1	1009.4	759.9	534.6	349.2
5°	2160.1	2094.7	2005.5	1879.8	1717.3	1505.4	1266.6	1006.4	756.7	532.0	347.2
2.5°	2163.0	2096.4	2006.1	1878.6	1714.4	1499.8	1259.3	998.1	749.3	526.3	343.2
0°	2163.4	2095.0	2002.7	1872.6	1705.8	1488.3	1246.2	984.8	737.8	517.6	337.3
-2.5°	2163.0	2096.4	2006.1	1878.6	1714.4	1499.8	1259.3	998.1	749.3	526.3	343.2
-5°	2160.1	2094.7	2005.5	1879.8	1717.3	1505.4	1266.6	1006.4	756.7	532.0	347.2
-7.5°	2155.2	2090.3	2001.2	1876.8	1714.9	1505.3	1268.1	1009.4	759.9	534.6	349.2
-10°	2148.3	2083.5	1993.8	1869.7	1707.5	1499.9	1263.9	1007.3	758.8	533.9	349.2
-12.5°	2139.9	2074.7	1983.5	1859.2	1695.5	1489.3	1254.2	1000.0	753.1	530.0	347.0
-15°	2130.3	2064.2	1970.8	1845.4	1679.3	1473.9	1239.1	987.5	743.0	522.6	342.6
-17.5°	2119.6	2052.2	1956.0	1828.9	1659.2	1453.9	1218.7	969.7	728.3	511.7	335.9
-20°	2104.1	2035.1	1938.2	1810.0	1635.5	1429.5	1193.3	946.8	709.0	497.2	326.8



REPORT NUMBER: P670563 (CONVERTED FROM TYPE C PHOTOMETRY)
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CANDELA DISTRIBUTION (continued):

	47.5°	50°	52.5°	55°	57.5°	60°	62.5°	65°	67.5°	70°	72.5°
-22.5°	2087.1	2013.1	1912.4	1779.8	1605.8	1401.1	1162.9	918.7	685.1	479.2	315.4
-25°	2069.7	1990.3	1885.1	1744.7	1568.4	1361.4	1127.0	885.6	656.5	457.5	301.4
-27.5°	2045.3	1964.2	1856.5	1707.3	1527.3	1316.7	1085.0	849.5	625.4	432.2	285.0
-30°	2018.2	1930.6	1815.0	1665.0	1483.0	1267.3	1037.6	808.2	593.8	408.6	266.1
-32.5°	1988.7	1896.6	1768.8	1612.1	1426.9	1213.1	984.9	761.7	558.0	385.1	247.6
-35°	1951.4	1850.2	1720.2	1556.6	1362.9	1149.6	927.4	710.0	518.0	358.5	228.3
-37.5°	1913.1	1797.7	1657.1	1491.2	1294.7	1080.5	865.1	658.2	473.8	328.8	207.3
-40°	1847.8	1737.4	1592.0	1412.7	1215.7	1006.1	797.2	604.5	434.0	296.1	184.7
-42.5°	1767.2	1666.0	1509.0	1330.5	1129.0	925.7	724.9	546.3	393.9	266.0	160.6
-45°	1671.6	1572.8	1416.9	1231.0	1036.6	839.5	655.4	485.6	350.3	236.6	140.5
-47.5°	1572.2	1458.1	1310.7	1125.9	936.2	750.2	580.9	432.9	303.7	205.6	126.8
-50°	1456.7	1337.2	1188.9	1011.6	830.0	662.6	505.7	376.3	266.8	172.9	111.8
-52.5°	1335.0	1208.1	1059.0	890.0	726.2	569.9	438.2	318.1	228.2	149.4	95.5
-55°	1206.7	1076.2	927.3	769.0	618.8	486.4	366.7	273.1	188.0	128.8	79.3
-57.5°	1073.8	943.0	799.6	649.3	518.3	402.5	306.8	226.4	158.7	106.9	71.2
-60°	940.0	809.3	671.9	540.8	420.7	328.6	253.4	183.5	131.4	86.2	62.5
-62.5°	799.0	676.3	557.4	436.4	338.0	268.3	201.4	150.0	102.5	75.0	53.3
-65°	664.4	554.8	445.3	355.9	270.7	210.4	161.0	114.9	85.1	63.1	45.3
-67.5°	533.7	446.3	362.2	281.6	212.4	162.6	119.0	91.7	70.1	50.7	41.3
-70°	427.0	349.8	280.5	217.4	158.6	116.2	93.9	73.3	54.5	45.6	37.2
-72.5°	324.1	263.5	206.1	153.7	117.5	90.5	71.6	56.6	48.4	40.5	32.9
-75°	226.2	186.0	150.2	117.2	87.4	64.9	57.2	49.6	42.3	35.3	29.0
-77.5°	163.4	133.0	104.8	84.6	68.1	55.8	49.0	42.4	36.3	30.6	25.2
-80°	112.7	95.5	80.1	66.6	55.3	46.4	40.9	35.5	30.5	25.7	21.3
-82.5°	75.1	65.7	57.5	49.9	43.2	37.3	32.9	28.7	24.7	20.8	16.8
-85°	48.8	43.7	39.1	34.9	31.2	28.1	24.2	20.5	17.2	14.0	11.3
-87.5°	23.8	21.8	19.8	17.8	15.9	14.1	12.1	10.3	8.6	7.0	5.6
-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):

	75°	77.5°	80°	82.5°	85°	87.5°	90°
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	4.4	3.2	2.3	1.5	0.8	0.3	0.0
85°	8.7	6.5	4.5	2.9	1.6	0.6	0.0
82.5°	13.0	9.7	6.8	4.4	2.4	1.0	0.0
80°	17.1	12.8	9.0	5.8	3.2	1.3	0.0
77.5°	20.2	15.6	11.1	7.2	4.0	1.6	0.0
75°	23.3	18.0	13.2	8.5	4.7	1.9	0.0
72.5°	26.2	20.3	14.9	9.8	5.5	2.2	0.0
70°	29.2	22.5	16.5	11.1	6.2	2.5	0.0
67.5°	32.6	24.6	18.1	12.2	6.9	2.8	0.0
65°	35.9	27.0	19.6	13.2	7.6	3.1	0.0
62.5°	39.0	29.5	21.0	14.2	8.2	3.3	0.0
60°	42.0	31.9	22.4	15.2	8.8	3.6	0.0
57.5°	48.5	34.2	24.1	16.1	9.3	3.8	0.0
55°	55.1	36.4	25.8	16.9	9.9	4.0	0.0
52.5°	61.2	38.9	27.4	17.7	10.4	4.3	0.0
50°	66.8	43.4	28.9	18.4	10.8	4.5	0.0
47.5°	72.9	47.5	30.3	19.1	11.2	4.7	0.0
45°	84.5	51.2	31.6	20.1	11.6	4.8	0.0
42.5°	95.2	54.5	32.7	21.0	12.0	5.0	0.0
40°	104.8	57.5	34.4	21.8	12.3	5.1	0.0
37.5°	113.4	60.0	36.6	22.5	12.6	5.3	0.0
35°	120.9	65.1	38.5	23.1	12.8	5.4	0.0
32.5°	130.4	70.9	40.1	23.7	13.0	5.5	0.0
30°	145.6	76.0	41.4	24.2	13.2	5.6	0.0
27.5°	159.3	80.3	42.5	24.6	13.3	5.7	0.0
25°	171.5	83.8	43.3	24.9	13.4	5.7	0.0
22.5°	182.3	86.7	43.9	25.1	13.5	5.8	0.0
20°	191.5	88.8	44.3	25.3	13.5	5.8	0.0
17.5°	199.3	90.3	44.4	25.4	13.5	5.8	0.0
15°	205.5	91.0	44.3	25.4	13.4	5.8	0.0
12.5°	210.2	91.1	43.9	25.3	13.3	5.8	0.0
10°	213.3	90.6	43.4	25.1	13.2	5.7	0.0
7.5°	214.9	89.6	42.7	24.9	13.0	5.7	0.0
5°	214.9	87.9	41.8	24.6	12.9	5.6	0.0
2.5°	213.5	85.8	40.8	24.2	12.6	5.6	0.0
0°	210.5	83.2	39.6	23.8	12.4	5.5	0.0
-2.5°	213.5	85.8	40.8	24.2	12.6	5.6	0.0
-5°	214.9	87.9	41.8	24.6	12.9	5.6	0.0
-7.5°	214.9	89.6	42.7	24.9	13.0	5.7	0.0
-10°	213.3	90.6	43.4	25.1	13.2	5.7	0.0
-12.5°	210.2	91.1	43.9	25.3	13.3	5.8	0.0
-15°	205.5	91.0	44.3	25.4	13.4	5.8	0.0
-17.5°	199.3	90.3	44.4	25.4	13.5	5.8	0.0
-20°	191.5	88.8	44.3	25.3	13.5	5.8	0.0

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CANDELA DISTRIBUTION (continued):

	75°	77.5°	80°	82.5°	85°	87.5°	90°
-22.5°	182.3	86.7	43.9	25.1	13.5	5.8	0.0
-25°	171.5	83.8	43.3	24.9	13.4	5.7	0.0
-27.5°	159.3	80.3	42.5	24.6	13.3	5.7	0.0
-30°	145.6	76.0	41.4	24.2	13.2	5.6	0.0
-32.5°	130.4	70.9	40.1	23.7	13.0	5.5	0.0
-35°	120.9	65.1	38.5	23.1	12.8	5.4	0.0
-37.5°	113.4	60.0	36.6	22.5	12.6	5.3	0.0
-40°	104.8	57.5	34.4	21.8	12.3	5.1	0.0
-42.5°	95.2	54.5	32.7	21.0	12.0	5.0	0.0
-45°	84.5	51.2	31.6	20.1	11.6	4.8	0.0
-47.5°	72.9	47.5	30.3	19.1	11.2	4.7	0.0
-50°	66.8	43.4	28.9	18.4	10.8	4.5	0.0
-52.5°	61.2	38.9	27.4	17.7	10.4	4.3	0.0
-55°	55.1	36.4	25.8	16.9	9.9	4.0	0.0
-57.5°	48.5	34.2	24.1	16.1	9.3	3.8	0.0
-60°	42.0	31.9	22.4	15.2	8.8	3.6	0.0
-62.5°	39.0	29.5	21.0	14.2	8.2	3.3	0.0
-65°	35.9	27.0	19.6	13.2	7.6	3.1	0.0
-67.5°	32.6	24.6	18.1	12.2	6.9	2.8	0.0
-70°	29.2	22.5	16.5	11.1	6.2	2.5	0.0
-72.5°	26.2	20.3	14.9	9.8	5.5	2.2	0.0
-75°	23.3	18.0	13.2	8.5	4.7	1.9	0.0
-77.5°	20.2	15.6	11.1	7.2	4.0	1.6	0.0
-80°	17.1	12.8	9.0	5.8	3.2	1.3	0.0
-82.5°	13.0	9.7	6.8	4.4	2.4	1.0	0.0
-85°	8.7	6.5	4.5	2.9	1.6	0.6	0.0
-87.5°	4.4	3.2	2.3	1.5	0.8	0.3	0.0
-90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)