

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: P851813

Luminaire Tested: RLFRC4FS-3000K

Issue Date: 7/3/2024

Test Information

Test Method: LM-79-2019
Report Number: P851813
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (UTC2404001E-A1)
Test Lab: INNOVATION CENTER
Issue Date: 7/3/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: RLFRC4FS-3000K
Description: 4" Fire Rated Canless, 3000K CCT 900lms,WH
Light Source: -
Ballast/Driver:

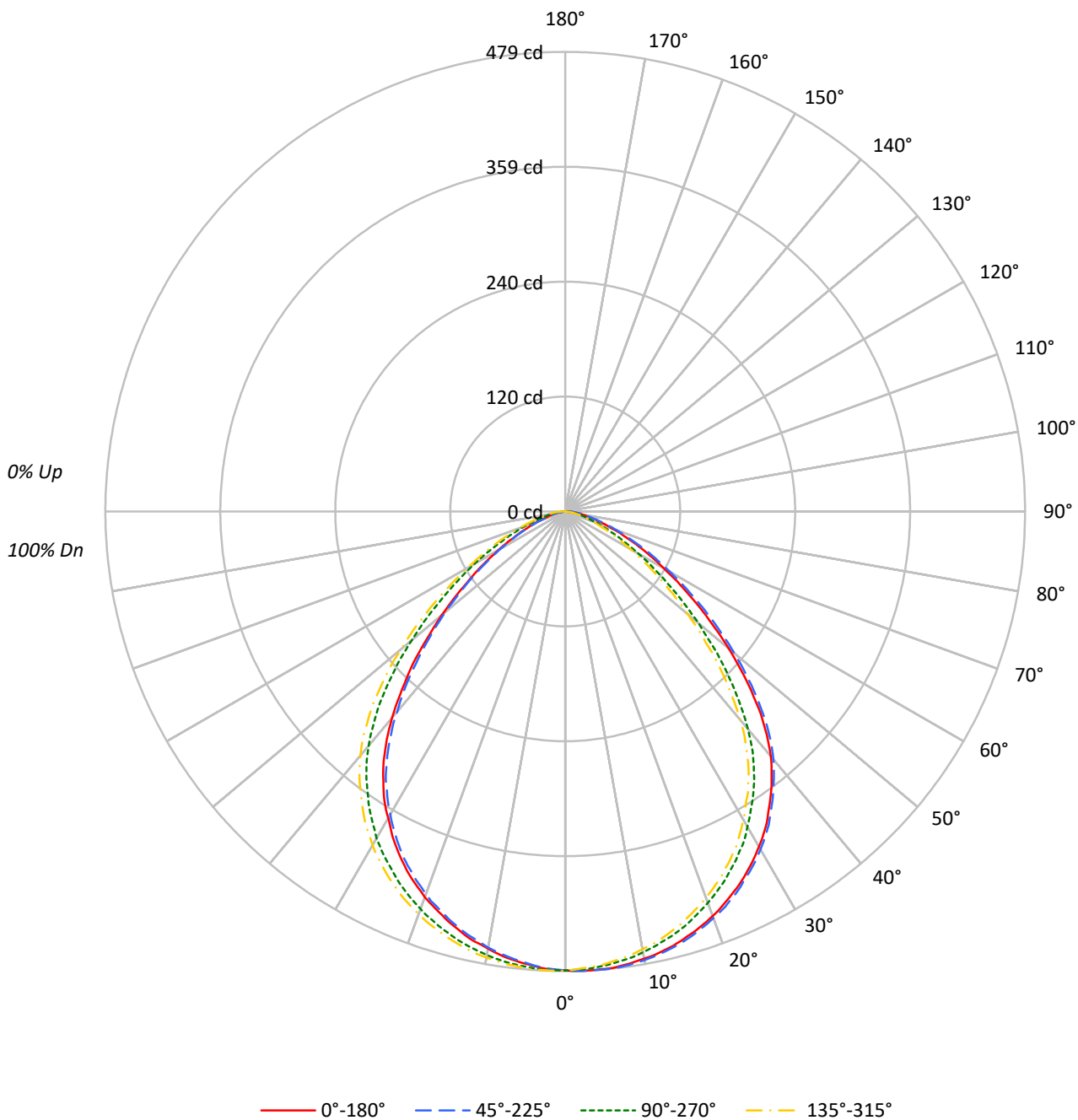
Summary

Lumens per Lamp: 1009.3 (1 lamp)
Luminaire Lumens: 1005.0 lumens
Efficiency: 99.6%
Efficacy: 95.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.2 / 1.26
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 10.5
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: 24 FT

TEST NUMBER: P851813
CATALOG NUMBER: RLFRC4FS-3000K

Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20					20	
RC	80					70					50					30					10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100	100	
1	110	106	103	100	108	104	101	98	100	97	95	96	94	92	93	91	89	87	87	87	87	
2	102	95	89	84	99	93	88	83	90	85	81	87	83	80	84	81	78	76	76	76	76	
3	94	85	78	72	92	83	77	72	81	75	71	78	73	69	76	72	68	66	66	66	66	
4	87	76	69	63	85	75	68	62	73	67	62	71	65	61	69	64	60	58	58	58	58	
5	81	69	61	55	79	68	61	55	66	59	54	64	58	54	62	57	53	51	51	51	51	
6	75	63	55	49	73	62	54	49	60	53	48	59	53	48	57	52	48	46	46	46	46	
7	70	57	49	44	68	57	49	44	55	48	43	54	48	43	52	47	43	41	41	41	41	
8	65	53	45	40	64	52	45	39	51	44	39	50	43	39	48	43	39	37	37	37	37	
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35	34	34	34	34	
10	57	45	38	33	56	45	37	33	44	37	33	43	37	32	42	36	32	31	31	31	31	

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	60207	60207	60207	60207
5°	60462	60007	59792	60171
10°	60496	59627	59129	59998
15°	60415	59047	58291	59620
20°	60093	58151	57280	59035
25°	59599	56946	55780	58196
30°	58636	55134	53594	57110
35°	57060	52758	50791	55063
40°	54740	48678	46066	52308
45°	49994	42519	39849	47396
50°	43504	35535	32736	40841
55°	36598	28304	25978	33855
60°	29902	22426	20086	27435
65°	24508	17033	15128	21441
70°	19208	13063	10634	16558
75°	15609	9822	8169	12497
80°	13263	8190	6160	10944
85°	12562	4187	0	9241

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 53483 cd/sqm



TEST NUMBER: P851813
 CATALOG NUMBER: RLFRC4FS-3000K

ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	45.2	4.5	4.5
10°-20°	128.4	12.8	12.7
20°-30°	190.9	19.0	18.9
30°-40°	218.4	21.7	21.6
40°-50°	194.0	19.3	19.2
50°-60°	128.8	12.8	12.8
60°-70°	66.5	6.6	6.6
70°-80°	26.3	2.6	2.6
80°-90°	6.4	0.6	0.6
90°-100°	0.1	0.0	0.0
100°-110°	0.0	0.0	0.0
110°-120°	0.0	0.0	0.0
120°-130°	0.0	0.0	0.0
130°-140°	0.0	0.0	0.0
140°-150°	0.0	0.0	0.0
150°-160°	0.0	0.0	0.0
160°-170°	0.0	0.0	0.0
170°-180°	0.0	0.0	0.0
0°-30°	364.5	36.3	36.1
0°-40°	582.9	58.0	57.8
0°-60°	905.7	90.1	89.7
0°-90°	1004.9	100.0	99.6
90°-120°	0.1	0.0	0.0
90°-150°	0.1	0.0	0.0
90°-180°	0.0	0.0	0.0
0°-180°	1005.0	100.0	99.6

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	478	478	478	478	478	
5°	479	475	473	476	479	46
15°	464	453	447	458	464	131
25°	429	410	402	419	429	197
35°	371	343	331	358	371	232
45°	281	239	224	266	281	216
55°	167	129	118	154	167	150
65°	82	57	51	72	82	82
75°	32	20	17	26	32	35
85°	9	3	0	6	9	10
90°	2	0	0	0	2	1
95°	0	0	0	0	0	0
105°	0	0	0	0	0	0
115°	0	0	0	0	0	0
125°	0	0	0	0	0	0
135°	0	0	0	0	0	0
145°	0	0	0	0	0	0
155°	0	0	0	0	0	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P851813
 CATALOG NUMBER: RLFR4FS-3000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	478.4	478.4	478.4	478.4	478.4	478.4	478.4	478.4	478.4	478.4	478.4
1°	478.7	478.8	479.1	479.6	477.9	478.2	477.8	477.9	477.9	477.5	477.6
2°	479.1	478.9	479.2	480.1	477.5	477.3	476.6	477.1	477.5	476.9	476.8
3°	479.1	479.0	479.2	480.2	477.1	476.8	475.7	476.2	476.3	476.4	475.6
4°	478.7	478.8	479.0	480.3	476.2	475.6	474.8	474.9	474.8	475.2	474.2
5°	478.6	478.1	479.2	480.8	475.0	474.8	473.6	473.5	473.3	473.5	472.3
6°	478.3	477.9	478.8	480.2	473.8	473.1	471.7	472.6	471.7	472.1	470.6
7°	477.1	477.1	478.2	480.0	472.1	471.6	469.9	470.6	470.0	470.3	468.6
8°	476.1	476.0	477.3	479.4	470.7	469.7	468.0	469.1	467.9	468.2	466.3
9°	474.5	474.6	476.2	478.5	468.9	467.9	465.9	466.7	465.4	465.8	464.0
10°	473.4	472.9	474.8	477.3	466.6	465.6	463.2	464.1	462.7	463.9	461.5
11°	472.0	471.3	473.5	475.9	464.3	463.1	461.0	462.0	459.9	460.7	458.3
12°	470.3	469.8	471.7	474.4	461.8	460.5	458.4	459.1	457.8	457.8	455.3
13°	468.1	467.7	469.8	473.1	458.8	457.4	455.3	456.4	454.8	455.1	452.6
14°	466.3	465.4	467.9	470.9	456.3	454.1	452.0	452.9	451.0	451.7	448.9
15°	463.7	462.9	465.7	468.6	453.2	451.4	448.7	449.5	447.4	448.4	445.3
16°	460.8	460.4	463.2	466.8	450.1	447.5	445.2	445.7	444.0	444.6	441.4
17°	458.3	457.2	460.5	464.4	446.2	444.2	440.9	442.3	439.6	440.6	437.4
18°	455.2	454.4	457.3	461.5	442.2	439.9	437.1	438.5	435.9	436.8	433.0
19°	452.2	451.3	454.5	458.4	438.2	435.6	433.0	434.5	431.8	432.6	429.5
20°	448.7	447.6	451.0	455.6	434.2	431.1	428.5	430.3	427.7	428.0	424.1
21°	445.4	444.1	447.9	452.1	430.0	426.9	424.1	425.7	422.4	423.5	419.2
22°	441.3	440.3	444.4	448.9	425.2	422.5	419.2	420.7	418.0	418.7	414.5
23°	437.2	436.2	440.1	445.1	420.8	417.8	414.5	415.9	413.2	414.0	408.7
24°	433.1	432.1	436.2	440.8	415.5	412.4	408.4	410.5	407.5	408.9	403.7
25°	429.2	427.5	431.8	437.2	410.1	407.4	403.5	404.9	401.7	402.7	398.0
26°	424.3	422.6	426.5	432.7	405.0	401.3	397.6	399.4	395.9	397.9	391.8
27°	419.4	418.0	422.2	428.3	399.0	395.5	392.0	394.0	389.8	391.1	385.5
28°	414.4	412.9	417.4	423.5	393.7	389.3	385.2	386.7	383.3	384.1	378.6
29°	409.2	407.8	412.5	418.4	387.2	382.8	378.1	380.4	375.8	378.0	372.0
30°	403.5	402.4	406.7	413.4	379.4	375.0	371.0	373.4	368.8	370.5	364.3
31°	398.2	396.3	401.2	407.4	372.7	368.6	363.9	366.5	362.5	363.8	357.6
32°	391.9	389.7	395.3	402.1	365.1	360.9	355.8	359.1	355.3	356.9	349.7
33°	386.0	383.0	389.3	396.3	358.4	354.3	349.5	352.0	347.3	348.7	341.8
34°	378.4	376.2	382.0	390.1	350.9	346.3	341.1	345.1	338.9	341.3	334.4
35°	371.4	368.5	374.9	383.5	343.4	338.2	333.2	335.8	330.6	332.2	324.5
36°	364.5	361.2	367.9	375.9	334.5	329.4	324.2	327.5	321.7	323.9	315.2
37°	357.2	353.8	360.1	368.9	325.8	319.7	314.5	317.6	311.7	314.0	305.6
38°	349.0	346.6	353.0	361.5	316.8	310.8	305.0	308.3	301.8	303.5	294.8
39°	341.6	338.3	345.3	353.9	306.8	301.3	295.2	298.7	291.1	292.7	284.2
40°	333.2	329.9	337.4	346.0	296.3	290.1	283.2	288.0	280.4	282.1	272.4
41°	323.6	320.9	328.5	338.1	285.4	278.9	272.2	276.9	269.2	270.4	261.8
42°	314.1	310.1	319.1	330.0	273.9	266.7	260.2	264.9	257.2	259.3	250.5
43°	303.6	299.7	309.4	320.2	262.0	255.6	249.1	253.8	245.6	248.9	239.8
44°	293.2	289.0	298.8	310.6	250.5	243.0	237.1	242.0	235.0	236.8	227.2



TEST NUMBER: P851813
 CATALOG NUMBER: RLFRC4FS-3000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
45°	280.9	277.8	287.4	300.5	238.9	232.6	225.6	230.5	223.9	225.9	215.9
46°	269.7	265.7	276.0	289.5	227.2	219.7	214.1	217.7	211.8	214.3	205.3
47°	258.2	254.7	265.0	277.3	216.1	208.2	200.5	206.3	200.1	202.4	193.9
48°	245.7	243.2	253.0	266.5	203.1	195.6	189.6	195.1	187.8	191.6	183.6
49°	234.1	231.8	241.9	255.1	191.3	183.9	177.8	183.6	177.9	181.4	172.8
50°	222.2	218.9	230.2	242.4	181.5	173.9	166.9	172.7	167.2	171.6	162.8
51°	211.0	207.7	219.0	231.3	169.7	162.8	156.5	161.7	157.0	160.4	151.9
52°	198.8	197.0	206.8	220.4	159.6	151.4	146.3	151.0	146.6	149.5	142.5
53°	187.5	186.5	196.6	208.5	149.2	141.7	135.9	141.0	137.1	141.0	132.7
54°	177.6	175.4	185.5	196.9	138.8	131.5	127.1	132.0	126.7	131.6	124.4
55°	166.8	164.8	174.5	186.0	129.0	122.7	117.2	121.8	118.4	123.0	115.6
56°	156.6	154.8	164.5	175.3	120.6	113.4	109.2	114.1	110.9	113.8	106.8
57°	146.4	144.4	153.9	165.2	111.3	105.2	101.0	105.7	102.3	105.2	99.0
58°	137.4	135.4	144.9	153.9	104.4	97.7	92.6	97.4	94.0	97.9	90.9
59°	127.3	126.6	134.8	144.2	96.2	89.6	85.4	89.5	87.0	90.0	84.5
60°	118.8	117.7	126.2	134.1	89.1	82.8	79.0	82.0	79.8	82.8	77.6
61°	111.1	110.0	117.7	125.7	81.4	76.0	72.0	75.9	73.6	76.4	70.7
62°	103.3	102.0	109.7	117.4	74.2	69.4	65.7	69.4	67.4	69.8	64.5
63°	96.0	95.0	102.4	109.2	68.2	63.1	60.3	63.3	60.0	63.3	58.9
64°	88.7	87.6	94.6	101.2	63.1	58.3	53.9	56.9	55.5	57.2	53.0
65°	82.3	80.5	87.5	93.0	57.2	52.9	50.2	52.0	50.8	52.3	48.1
66°	75.7	74.5	80.3	86.6	52.3	49.0	45.0	48.1	44.7	47.5	43.8
67°	68.7	69.1	73.7	79.8	47.7	42.9	40.5	42.7	40.6	42.2	39.1
68°	63.5	62.9	67.6	73.4	41.8	39.2	37.0	38.7	36.5	38.8	34.8
69°	58.3	57.1	62.5	66.8	38.6	35.6	33.0	34.7	32.3	34.1	30.8
70°	52.2	52.6	56.6	61.4	35.5	32.1	29.3	30.4	28.9	30.1	27.3
71°	48.5	48.0	52.0	56.0	31.2	28.5	26.3	27.6	25.5	26.8	23.9
72°	43.6	42.8	47.2	51.0	27.6	25.3	23.2	24.3	22.4	23.5	21.4
73°	39.6	38.5	42.2	46.3	24.9	22.6	20.9	21.7	19.8	21.1	19.0
74°	35.5	34.6	37.9	41.6	22.2	20.5	19.0	19.6	18.3	18.8	17.4
75°	32.1	31.5	34.3	37.4	20.2	18.5	16.9	18.0	16.8	17.1	15.5
76°	28.5	28.3	30.5	33.6	18.5	16.9	16.2	16.4	14.6	15.4	13.8
77°	25.2	24.7	27.4	30.1	17.0	15.3	14.1	14.0	13.4	13.0	12.7
78°	21.9	21.5	23.5	27.2	14.3	13.0	11.4	12.5	11.6	11.7	10.1
79°	19.8	20.0	21.1	24.0	13.0	11.7	10.3	10.6	9.8	10.2	8.9
80°	18.3	17.6	19.6	21.7	11.3	9.0	9.3	9.1	8.5	8.8	4.3
81°	16.6	16.5	17.8	19.3	9.6	8.2	7.2	7.6	6.4	7.5	5.4
82°	15.3	14.5	16.0	18.3	8.4	6.9	5.5	6.3	5.2	5.2	3.7
83°	13.0	13.6	14.6	15.7	6.1	5.4	3.3	5.0	3.8	3.6	2.0
84°	10.3	10.6	12.3	13.8	4.4	3.5	2.3	3.2	2.1	2.2	0.0
85°	8.7	9.3	11.0	12.3	2.9	1.8	1.2	2.1	0.0	1.0	0.0
86°	8.0	7.8	8.7	10.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87°	6.8	6.6	7.3	8.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
88°	5.5	4.8	6.4	7.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
89°	4.4	3.2	4.6	5.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P851813
 CATALOG NUMBER: RLFRC4FS-3000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
90°	2.3	2.0	2.6	4.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
91°	0.0	0.0	1.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
92°	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
93°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
94°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
96°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
97°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
98°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
99°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
101°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
102°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
103°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
104°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
105°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
106°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
107°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
108°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
109°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
111°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
112°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
113°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
114°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
115°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
116°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
117°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
118°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
119°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
121°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
122°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
123°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
124°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
126°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
127°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
128°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
129°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
131°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
133°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
134°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P851813
 CATALOG NUMBER: RLFRC4FS-3000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
135°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
136°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
138°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
139°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
141°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
143°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
144°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
146°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
148°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
149°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
151°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
153°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
154°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
156°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
158°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
159°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
161°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
163°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
164°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
166°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
168°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
169°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
171°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
173°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
174°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
176°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
178°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
179°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P851813
CATALOG NUMBER: RLFRC4FS-3000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P851813
 CATALOG NUMBER: RLFRC4FS-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	478.4	478.4	478.4	478.4	478.4	478.4
1°	477.6	478.2	478.8	478.7	478.8	478.7
2°	476.2	478.1	479.0	478.7	478.4	479.1
3°	475.0	478.1	478.7	478.6	478.2	479.1
4°	473.4	477.1	478.0	478.3	478.0	478.7
5°	471.5	476.3	477.6	477.5	477.5	478.6
6°	469.5	475.3	476.4	476.8	476.9	478.3
7°	466.9	474.2	475.5	476.1	475.5	477.1
8°	464.6	472.9	474.2	475.1	474.9	476.1
9°	462.0	471.4	472.8	473.6	473.2	474.5
10°	459.4	469.5	471.3	472.1	471.6	473.4
11°	456.3	467.4	469.7	470.8	470.0	472.0
12°	453.1	465.3	467.4	468.9	468.0	470.3
13°	450.0	463.1	465.5	466.2	465.8	468.1
14°	446.4	460.4	462.4	464.2	463.6	466.3
15°	442.5	457.6	459.9	461.7	461.0	463.7
16°	438.1	454.5	456.9	459.0	458.5	460.8
17°	433.9	451.5	454.4	456.0	455.3	458.3
18°	429.7	447.9	451.1	453.3	452.2	455.2
19°	425.1	445.0	447.6	450.0	448.9	452.2
20°	420.0	440.8	444.0	446.5	445.7	448.7
21°	415.4	436.8	440.2	443.2	441.7	445.4
22°	409.7	433.0	436.3	439.3	438.0	441.3
23°	404.6	428.6	432.3	435.5	433.8	437.2
24°	399.1	424.1	428.0	430.9	429.9	433.1
25°	392.6	419.1	423.6	426.6	425.5	429.2
26°	386.2	414.0	418.3	422.0	420.4	424.3
27°	379.1	409.1	413.5	416.9	416.1	419.4
28°	372.1	404.0	408.9	412.1	410.6	414.4
29°	364.9	398.6	403.4	407.3	405.2	409.2
30°	357.8	393.0	397.4	401.5	400.0	403.5
31°	350.8	386.0	391.9	395.3	394.0	398.2
32°	343.0	379.8	385.9	389.7	387.6	391.9
33°	333.8	373.1	378.6	383.5	380.9	386.0
34°	325.5	366.4	372.0	376.5	373.9	378.4
35°	315.9	358.4	364.9	369.3	366.8	371.4
36°	306.4	351.5	358.0	362.1	359.6	364.5
37°	296.1	344.2	350.0	355.4	352.1	357.2
38°	284.1	336.2	342.3	348.1	344.6	349.0
39°	274.2	327.7	335.1	340.1	337.1	341.6
40°	262.2	318.4	325.6	332.0	327.7	333.2
41°	251.9	309.2	316.7	323.2	318.1	323.6
42°	239.7	298.3	307.1	314.1	308.8	314.1
43°	227.9	288.2	297.5	302.9	298.1	303.6
44°	216.1	278.1	285.8	293.1	286.5	293.2



TEST NUMBER: P851813
 CATALOG NUMBER: RLFRC4FS-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
45°	204.3	266.3	275.4	282.5	275.8	280.9
46°	193.9	254.7	264.2	270.3	263.4	269.7
47°	183.6	243.4	252.9	259.0	251.8	258.2
48°	171.8	232.4	240.4	247.4	240.4	245.7
49°	161.7	219.7	229.0	235.9	228.6	234.1
50°	151.7	208.6	217.1	223.1	216.6	222.2
51°	141.5	197.3	204.7	211.6	204.6	211.0
52°	132.2	186.6	193.4	200.7	193.1	198.8
53°	123.2	175.2	182.7	188.2	181.9	187.5
54°	115.0	164.2	171.9	177.2	171.3	177.6
55°	106.9	154.3	160.5	166.3	160.2	166.8
56°	98.8	144.0	150.0	156.2	149.9	156.6
57°	90.6	134.4	140.7	145.2	140.4	146.4
58°	83.8	125.7	130.9	135.3	130.6	137.4
59°	77.2	117.2	122.0	126.7	122.0	127.3
60°	70.6	109.0	113.4	117.3	114.0	118.8
61°	64.3	100.9	105.3	109.1	105.9	111.1
62°	58.6	93.0	97.0	101.0	97.5	103.3
63°	52.4	85.2	89.7	94.2	90.2	96.0
64°	48.3	79.0	82.4	86.6	83.8	88.7
65°	43.2	72.0	75.3	79.4	77.2	82.3
66°	38.9	66.4	69.6	73.5	70.9	75.7
67°	34.5	60.0	63.6	67.5	64.8	68.7
68°	30.2	54.4	58.4	60.6	59.4	63.5
69°	27.7	49.6	52.6	55.9	53.8	58.3
70°	24.0	45.0	47.9	51.2	49.7	52.2
71°	21.3	40.8	43.4	46.5	44.0	48.5
72°	19.2	36.3	39.2	41.1	40.7	43.6
73°	17.2	32.6	34.9	37.4	36.4	39.6
74°	15.5	28.5	31.4	34.4	33.3	35.5
75°	13.5	25.7	28.0	30.2	29.8	32.1
76°	12.2	23.0	24.5	27.5	26.2	28.5
77°	10.0	20.0	21.6	24.4	24.0	25.2
78°	9.3	18.2	19.6	21.4	20.5	21.9
79°	7.3	16.4	17.6	19.5	18.8	19.8
80°	5.5	15.1	16.3	17.5	17.0	18.3
81°	3.3	13.0	14.5	15.7	15.3	16.6
82°	2.4	11.2	12.8	14.7	13.7	15.3
83°	1.0	9.3	11.1	11.6	11.8	13.0
84°	0.0	7.6	9.4	10.6	10.1	10.3
85°	0.0	6.4	7.1	9.1	9.0	8.7
86°	0.0	4.5	5.0	7.0	7.0	8.0
87°	0.0	2.7	4.6	6.3	5.2	6.8
88°	0.0	1.3	3.4	4.5	4.2	5.5
89°	0.0	0.0	1.8	3.3	2.9	4.4



TEST NUMBER: P851813
 CATALOG NUMBER: RLFRC4FS-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
90°	0.0	0.0	0.0	1.8	1.5	2.3
91°	0.0	0.0	0.0	0.0	0.0	0.0
92°	0.0	0.0	0.0	0.0	0.0	0.0
93°	0.0	0.0	0.0	0.0	0.0	0.0
94°	0.0	0.0	0.0	0.0	0.0	0.0
95°	0.0	0.0	0.0	0.0	0.0	0.0
96°	0.0	0.0	0.0	0.0	0.0	0.0
97°	0.0	0.0	0.0	0.0	0.0	0.0
98°	0.0	0.0	0.0	0.0	0.0	0.0
99°	0.0	0.0	0.0	0.0	0.0	0.0
100°	0.0	0.0	0.0	0.0	0.0	0.0
101°	0.0	0.0	0.0	0.0	0.0	0.0
102°	0.0	0.0	0.0	0.0	0.0	0.0
103°	0.0	0.0	0.0	0.0	0.0	0.0
104°	0.0	0.0	0.0	0.0	0.0	0.0
105°	0.0	0.0	0.0	0.0	0.0	0.0
106°	0.0	0.0	0.0	0.0	0.0	0.0
107°	0.0	0.0	0.0	0.0	0.0	0.0
108°	0.0	0.0	0.0	0.0	0.0	0.0
109°	0.0	0.0	0.0	0.0	0.0	0.0
110°	0.0	0.0	0.0	0.0	0.0	0.0
111°	0.0	0.0	0.0	0.0	0.0	0.0
112°	0.0	0.0	0.0	0.0	0.0	0.0
113°	0.0	0.0	0.0	0.0	0.0	0.0
114°	0.0	0.0	0.0	0.0	0.0	0.0
115°	0.0	0.0	0.0	0.0	0.0	0.0
116°	0.0	0.0	0.0	0.0	0.0	0.0
117°	0.0	0.0	0.0	0.0	0.0	0.0
118°	0.0	0.0	0.0	0.0	0.0	0.0
119°	0.0	0.0	0.0	0.0	0.0	0.0
120°	0.0	0.0	0.0	0.0	0.0	0.0
121°	0.0	0.0	0.0	0.0	0.0	0.0
122°	0.0	0.0	0.0	0.0	0.0	0.0
123°	0.0	0.0	0.0	0.0	0.0	0.0
124°	0.0	0.0	0.0	0.0	0.0	0.0
125°	0.0	0.0	0.0	0.0	0.0	0.0
126°	0.0	0.0	0.0	0.0	0.0	0.0
127°	0.0	0.0	0.0	0.0	0.0	0.0
128°	0.0	0.0	0.0	0.0	0.0	0.0
129°	0.0	0.0	0.0	0.0	0.0	0.0
130°	0.0	0.0	0.0	0.0	0.0	0.0
131°	0.0	0.0	0.0	0.0	0.0	0.0
132°	0.0	0.0	0.0	0.0	0.0	0.0
133°	0.0	0.0	0.0	0.0	0.0	0.0
134°	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P851813
 CATALOG NUMBER: RLFRC4FS-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
135°	0.0	0.0	0.0	0.0	0.0	0.0
136°	0.0	0.0	0.0	0.0	0.0	0.0
137°	0.0	0.0	0.0	0.0	0.0	0.0
138°	0.0	0.0	0.0	0.0	0.0	0.0
139°	0.0	0.0	0.0	0.0	0.0	0.0
140°	0.0	0.0	0.0	0.0	0.0	0.0
141°	0.0	0.0	0.0	0.0	0.0	0.0
142°	0.0	0.0	0.0	0.0	0.0	0.0
143°	0.0	0.0	0.0	0.0	0.0	0.0
144°	0.0	0.0	0.0	0.0	0.0	0.0
145°	0.0	0.0	0.0	0.0	0.0	0.0
146°	0.0	0.0	0.0	0.0	0.0	0.0
147°	0.0	0.0	0.0	0.0	0.0	0.0
148°	0.0	0.0	0.0	0.0	0.0	0.0
149°	0.0	0.0	0.0	0.0	0.0	0.0
150°	0.0	0.0	0.0	0.0	0.0	0.0
151°	0.0	0.0	0.0	0.0	0.0	0.0
152°	0.0	0.0	0.0	0.0	0.0	0.0
153°	0.0	0.0	0.0	0.0	0.0	0.0
154°	0.0	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0	0.0
156°	0.0	0.0	0.0	0.0	0.0	0.0
157°	0.0	0.0	0.0	0.0	0.0	0.0
158°	0.0	0.0	0.0	0.0	0.0	0.0
159°	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0
161°	0.0	0.0	0.0	0.0	0.0	0.0
162°	0.0	0.0	0.0	0.0	0.0	0.0
163°	0.0	0.0	0.0	0.0	0.0	0.0
164°	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0
166°	0.0	0.0	0.0	0.0	0.0	0.0
167°	0.0	0.0	0.0	0.0	0.0	0.0
168°	0.0	0.0	0.0	0.0	0.0	0.0
169°	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0
171°	0.0	0.0	0.0	0.0	0.0	0.0
172°	0.0	0.0	0.0	0.0	0.0	0.0
173°	0.0	0.0	0.0	0.0	0.0	0.0
174°	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0
176°	0.0	0.0	0.0	0.0	0.0	0.0
177°	0.0	0.0	0.0	0.0	0.0	0.0
178°	0.0	0.0	0.0	0.0	0.0	0.0
179°	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P851813
CATALOG NUMBER: RLFRC4FS-3000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
180°	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)