

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: FAIL-SAFE

Report Number: 168P179

Luminaire Tested: **FCT-X-332-80/86**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: 168P179
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FCT-X-332-80/86
Description: FAIL-SAFE FCT SERIES LUMINAIRE
Light Source: THREE - FO32/35K - 2800 LUMENS EA. - 32 WATTS EA.
Ballast/Driver: ADVANCE REL-3P32-SC

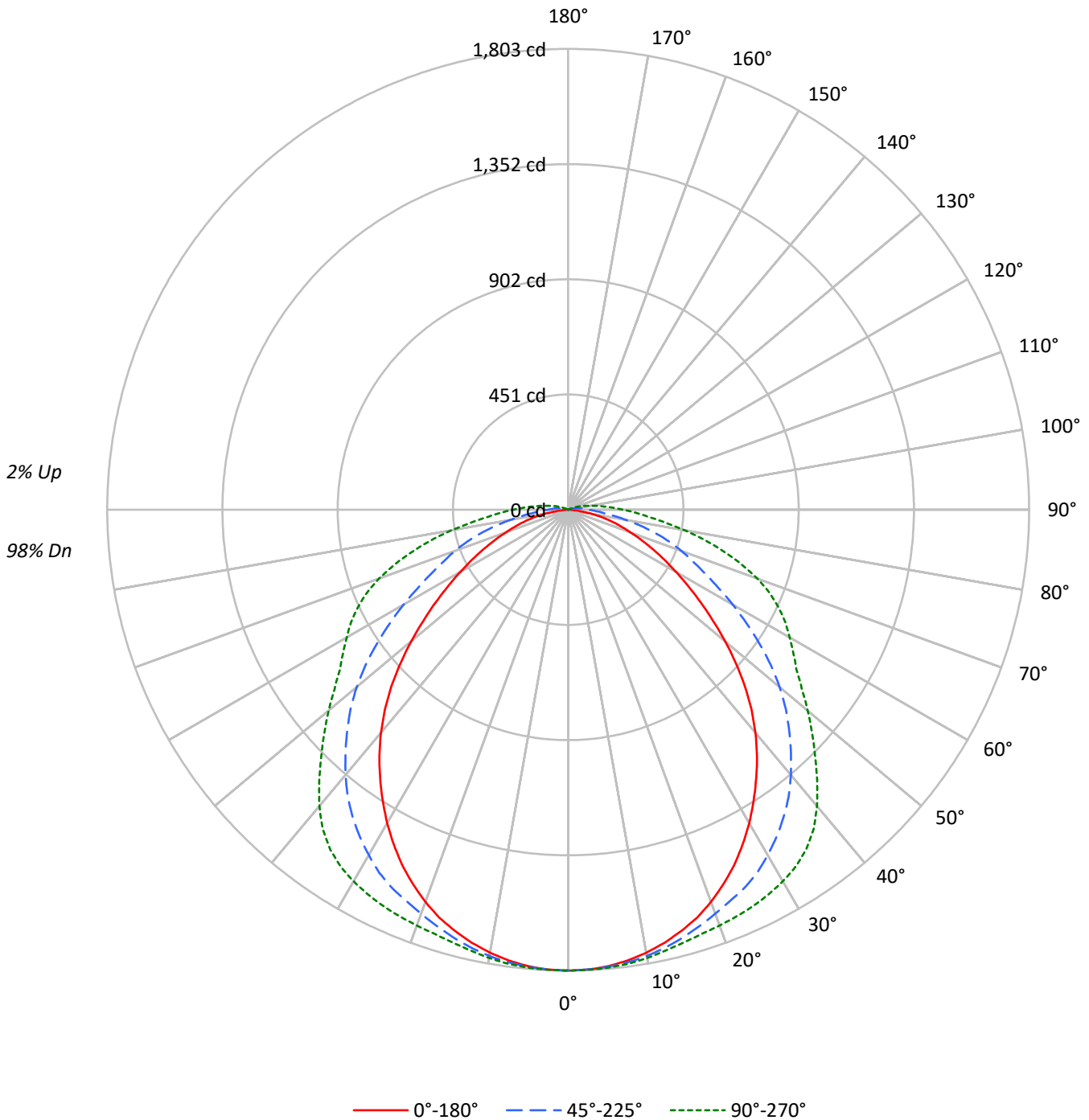
Summary

Lumens per Lamp: 2800 (3 lamps)
Luminaire Lumens: 5315.5 lumens
Efficiency: 63.3%
Efficacy: 64.8 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 1.39 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 1.02' x L: 3.83' x H: 0.19')
CIE Type: Direct

Input Watts (W): 82
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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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	0
RCR																		
0	75	75	75	75	73	73	73	73	70	70	70	66	66	66	64	64	64	62
1	68	65	62	60	66	63	61	58	60	58	56	58	56	54	55	54	53	51
2	62	57	52	48	60	55	51	48	53	49	46	51	48	45	48	46	44	42
3	56	50	44	40	55	48	44	40	46	42	39	45	41	38	43	40	37	36
4	52	44	38	34	50	43	38	34	41	37	33	40	36	33	38	35	32	31
5	47	39	34	29	46	38	33	29	37	32	29	36	31	28	34	31	28	26
6	44	35	30	26	43	35	29	25	33	29	25	32	28	25	31	27	24	23
7	41	32	26	23	39	31	26	22	30	26	22	29	25	22	28	25	22	20
8	38	29	24	20	37	29	24	20	28	23	20	27	23	20	26	22	19	18
9	35	27	22	18	34	26	21	18	26	21	18	25	21	18	24	20	18	16
10	33	25	20	16	32	24	20	16	24	19	16	23	19	16	22	19	16	15

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4968	4968	4968
5°	4938	4893	4896
10°	4881	4819	4824
15°	4805	4732	4760
20°	4703	4650	4753
25°	4561	4603	4786
30°	4380	4527	4823
35°	4167	4424	4829
40°	3933	4275	4709
45°	3631	4081	4487
50°	3242	3862	4290
55°	2840	3542	4136
60°	2466	3177	4166
65°	2151	2833	4235
70°	1836	2602	4194
75°	1572	2316	3950
80°	1114	1875	3557
85°	444	1468	3152



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ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	170.6	3.2	2.0	0°	1803	1803	1803	1803	1803	
10°-20°	489.0	9.2	5.8	5°	1793	1793	1795	1798	1799	170
20°-30°	749.0	14.1	8.9	15°	1707	1717	1733	1746	1752	481
30°-40°	912.2	17.2	10.9	25°	1535	1558	1632	1688	1711	706
40°-50°	922.9	17.4	11.0	35°	1282	1345	1469	1579	1623	801
50°-60°	795.4	15.0	9.5	45°	978	1052	1222	1341	1366	751
60°-70°	608.2	11.4	7.2	55°	633	740	913	1033	1090	569
70°-80°	396.9	7.5	4.7	65°	365	417	590	804	909	363
80°-90°	178.9	3.4	2.1	75°	175	205	353	549	629	184
90°-100°	67.5	1.3	0.8	85°	22	75	135	250	312	33
100°-110°	21.5	0.4	0.3	90°	1	36	78	157	214	1
110°-120°	3.2	0.1	0.0	95°	1	14	53	100	141	1
120°-130°	0.2	0.0	0.0	105°	1	0	11	38	54	1
130°-140°	0.0	0.0	0.0	115°	2	1	1	3	6	2
140°-150°	0.0	0.0	0.0	125°	0	0	0	0	0	0
150°-160°	0.0	0.0	0.0	135°	0	0	0	0	0	0
160°-170°	0.0	0.0	0.0	145°	0	0	0	0	0	0
170°-180°	0.0	0.0	0.0	155°	0	0	0	0	0	0
0°-30°	1408.7	26.5	16.8	165°	0	0	0	0	0	0
0°-40°	2320.9	43.7	27.6	175°	0	0	0	0	0	0
0°-60°	4039.2	76.0	48.1	180°	0	0	0	0	0	0
0°-90°	5223.1	98.3	62.2							
90°-120°	92.2	1.7	1.1							
90°-150°	92.4	1.7	1.1							
90°-180°	92.0	1.7	1.1							
0°-180°	5315.5	100.0	63.3							



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1803	1803	1803	1803	1803
2.5°	1801	1800	1801	1801	1802
5°	1793	1793	1795	1798	1799
7.5°	1779	1780	1786	1791	1792
10°	1760	1764	1773	1778	1781
12.5°	1736	1743	1755	1763	1766
15°	1707	1717	1733	1746	1752
17.5°	1674	1686	1708	1731	1740
20°	1633	1648	1682	1717	1731
22.5°	1586	1605	1656	1704	1722
25°	1535	1558	1632	1688	1711
27.5°	1477	1508	1601	1668	1697
30°	1416	1457	1560	1643	1679
32.5°	1350	1404	1517	1614	1656
35°	1282	1345	1469	1579	1623
37.5°	1213	1280	1416	1535	1576
40°	1139	1209	1355	1479	1514
42.5°	1061	1132	1289	1412	1441
45°	978	1052	1222	1341	1366
47.5°	890	974	1154	1266	1294
50°	801	899	1080	1188	1223
52.5°	714	823	999	1107	1152
55°	633	740	913	1033	1090
57.5°	557	652	827	970	1044
60°	486	566	743	916	1000
62.5°	424	487	662	860	958
65°	365	417	590	804	909
67.5°	309	355	526	745	854
70°	259	299	471	684	787
72.5°	215	249	414	620	710
75°	175	205	353	549	629
77.5°	132	165	289	469	546
80°	90	132	230	387	461
82.5°	52	102	177	313	380
85°	22	75	135	250	312
87.5°	5	53	103	200	262
90°	1	36	78	157	214
92.5°	1	24	63	126	175
95°	1	14	53	100	141
97.5°	1	6	43	82	113
100°	1	2	33	66	89
102.5°	1	0	21	52	70
105°	1	0	11	38	54
107.5°	1	0	5	25	39
110°	1	1	1	15	25



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	2	1	1	7	13
115°	2	1	1	3	6
117.5°	2	2	2	1	2
120°	2	2	2	2	1
122.5°	0	0	0	0	0
125°	0	0	0	0	0
127.5°	0	0	0	0	0
130°	0	0	0	0	0
132.5°	0	0	0	0	0
135°	0	0	0	0	0
137.5°	0	0	0	0	0
140°	0	0	0	0	0
142.5°	0	0	0	0	0
145°	0	0	0	0	0
147.5°	0	0	0	0	0
150°	0	0	0	0	0
152.5°	0	0	0	0	0
155°	0	0	0	0	0
157.5°	0	0	0	0	0
160°	0	0	0	0	0
162.5°	0	0	0	0	0
165°	0	0	0	0	0
167.5°	0	0	0	0	0
170°	0	0	0	0	0
172.5°	0	0	0	0	0
175°	0	0	0	0	0
177.5°	0	0	0	0	0
180°	0	0	0	0	0

(END OF REPORT)