

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: 168P129

Luminaire Tested: **CFLT5-12-228-120-1K12**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: 168P129
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: CFLT5-12-228-120-1K12
Description: FAIL-SAFE 1 X 4 Fail-Safe CFL Series with a Prismatic Acrylic Lens
Light Source: Two - F28T5/835 - 2900 Lumens ea. - 28 Watts ea.
Ballast/Driver: Energy Savings ES-2-T5-28-120-F - L.O.B.F. = 92.6

Summary

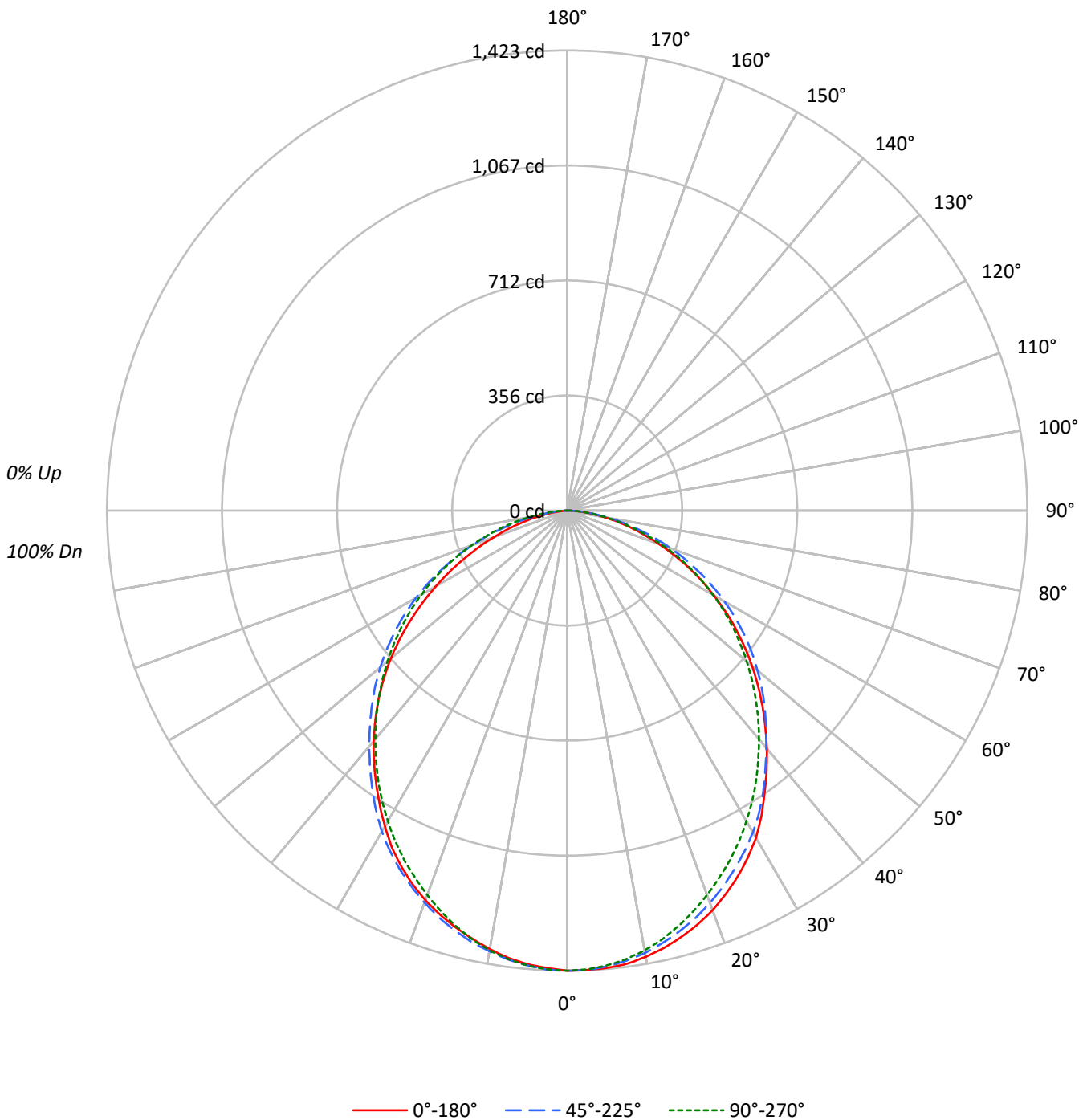
Lumens per Lamp: 2900 (2 lamps)
Luminaire Lumens: 3630.4 lumens
Efficiency: 62.6%
Efficacy: 60.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.31
Luminous Opening: Rectangular (W 3.71' x L: 0.71' x H: 0')
CIE Type: Direct

Input Watts (W): 60
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	67	67	67	64	64	64	63
1	68	65	63	61	67	64	62	60	61	59	58	59	57	56	57	55	54	53
2	62	57	53	50	61	56	52	49	54	51	48	52	49	47	50	48	46	45
3	57	51	46	42	55	50	45	41	48	44	40	46	43	40	44	42	39	38
4	52	45	40	35	51	44	39	35	43	38	35	41	37	34	40	36	34	32
5	48	40	35	31	47	40	34	30	38	34	30	37	33	30	36	32	29	28
6	44	36	31	27	43	36	30	27	35	30	26	34	29	26	33	29	26	25
7	41	33	28	24	40	32	27	24	31	27	24	31	26	23	30	26	23	22
8	38	30	25	21	38	30	25	21	29	24	21	28	24	21	27	24	21	20
9	36	28	23	19	35	27	22	19	27	22	19	26	22	19	25	22	19	18
10	34	26	21	17	33	25	21	17	25	20	17	24	20	17	24	20	17	16

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	5815	5815	5815
5°	5825	5792	5776
10°	5813	5730	5714
15°	5775	5627	5644
20°	5718	5501	5575
25°	5627	5375	5474
30°	5511	5233	5318
35°	5313	5083	5138
40°	5126	4924	4966
45°	4935	4768	4768
50°	4743	4609	4526
55°	4531	4446	4211
60°	4274	4258	3833
65°	3984	4042	3384
70°	3608	3764	2903
75°	3221	3379	2321
80°	2730	2847	1647
85°	2157	2157	891



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ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	45°	90°	135°	180°	Flux
0°-10°	134.1	3.7	2.3	0°	1423	1423	1423	1423	1423	
10°-20°	378.5	10.4	6.5	5°	1420	1415	1412	1412	1408	135
20°-30°	560.8	15.4	9.7	15°	1365	1346	1330	1344	1334	385
30°-40°	652.2	18.0	11.2	25°	1248	1224	1192	1224	1214	575
40°-50°	651.9	18.0	11.2	35°	1065	1058	1019	1051	1030	667
50°-60°	569.4	15.7	9.8	45°	854	864	825	854	825	659
60°-70°	414.3	11.4	7.1	55°	636	669	624	649	591	568
70°-80°	218.7	6.0	3.8	65°	412	451	418	425	350	408
80°-90°	50.4	1.4	0.9	75°	204	232	214	200	147	217
90°-100°	0.0	0.0	0.0	85°	46	51	46	33	19	52
100°-110°	0.0	0.0	0.0	90°	0	0	0	0	0	3
110°-120°	0.0	0.0	0.0	95°	0	0	0	0	0	0
120°-130°	0.0	0.0	0.0	105°	0	0	0	0	0	0
130°-140°	0.0	0.0	0.0	115°	0	0	0	0	0	0
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°	1073.4	29.6	18.5	165°	0	0	0	0	0	0
0°-40°	1725.6	47.5	29.8	175°	0	0	0	0	0	0
0°-60°	2947.0	81.2	50.8	180°	0	0	0	0	0	0
0°-90°	3630.4	100.0	62.6							
90°-120°	0.0	0.0	0.0							
90°-150°	0.0	0.0	0.0							
90°-180°	0.0	0.0	0.0							
0°-180°	3630.4	100.0	62.6							



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	1423	1423	1423	1423	1423	1423	1423	1423	1423
2.5°	1422	1425	1422	1419	1420	1418	1421	1423	1416
5°	1420	1420	1415	1411	1412	1410	1412	1416	1408
7.5°	1414	1411	1404	1399	1399	1398	1400	1403	1395
10°	1401	1396	1389	1381	1381	1381	1384	1388	1377
12.5°	1385	1378	1369	1359	1358	1360	1366	1369	1356
15°	1365	1358	1346	1333	1330	1336	1344	1347	1334
17.5°	1342	1334	1321	1302	1299	1308	1319	1322	1310
20°	1315	1307	1291	1270	1265	1277	1290	1294	1282
22.5°	1283	1275	1259	1235	1229	1244	1258	1263	1250
25°	1248	1238	1224	1200	1192	1208	1224	1228	1214
27.5°	1210	1200	1188	1161	1152	1171	1187	1188	1174
30°	1168	1156	1149	1120	1109	1130	1146	1144	1127
32.5°	1118	1107	1106	1076	1065	1084	1100	1095	1079
35°	1065	1055	1058	1030	1019	1036	1051	1044	1030
37.5°	1013	1004	1007	982	971	988	1001	995	981
40°	961	953	958	934	923	942	952	945	931
42.5°	907	903	911	886	875	894	903	895	878
45°	854	853	864	838	825	845	854	844	825
47.5°	800	801	817	788	775	794	805	791	769
50°	746	750	768	738	725	742	754	737	712
52.5°	691	697	720	688	674	690	702	681	652
55°	636	644	669	638	624	638	649	624	591
57.5°	580	589	615	588	573	586	595	565	530
60°	523	536	562	536	521	533	540	506	469
62.5°	468	481	507	486	470	479	483	447	410
65°	412	425	451	434	418	426	425	388	350
67.5°	356	370	396	382	366	372	368	329	295
70°	302	316	340	329	315	318	311	274	243
72.5°	251	262	286	277	263	265	255	221	194
75°	204	212	232	225	214	212	200	171	147
77.5°	159	164	180	175	166	163	150	126	106
80°	116	120	132	128	121	117	104	86	70
82.5°	79	81	88	86	81	76	64	52	42
85°	46	45	51	50	46	42	33	25	19
87.5°	20	17	20	21	18	16	10	7	3
90°	0	0	0	0	0	0	0	0	0
92.5°	0	0	0	0	0	0	0	0	0
95°	0	0	0	0	0	0	0	0	0
97.5°	0	0	0	0	0	0	0	0	0
100°	0	0	0	0	0	0	0	0	0
102.5°	0	0	0	0	0	0	0	0	0
105°	0	0	0	0	0	0	0	0	0
107.5°	0	0	0	0	0	0	0	0	0
110°	0	0	0	0	0	0	0	0	0



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CANDELA DISTRIBUTION (continued):

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

(END OF REPORT)