

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: ITL50381

Luminaire Tested: **FCCT5-228-120-80/86-EB1-FNL**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: ITL50381
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FCCT5-228-120-80/86-EB1-FNL
Description: FABRICATED METAL HOUSING WITH WHITE PAINTED GENERAL INTERIOR FINISH, FORMED WHITE PAINTED METAL REFLECTOR, 1/4" CLEAR FLAT POLYCARBONATE LENS WITH 1/8" CLEAR ACRYLIC PRISMATIC OVERLAY IN FABRICATED WHITE PAINTED METAL DOOR FRAME.
Light Source: TWO 28-WATT T-5 SYLVANIA FP28/835 LINEAR FLUORESCENTS.
Ballast/Driver: ENERGY SAVINGS ES-2-T5-28-120-F, L.O.B.F. = 92.6% **

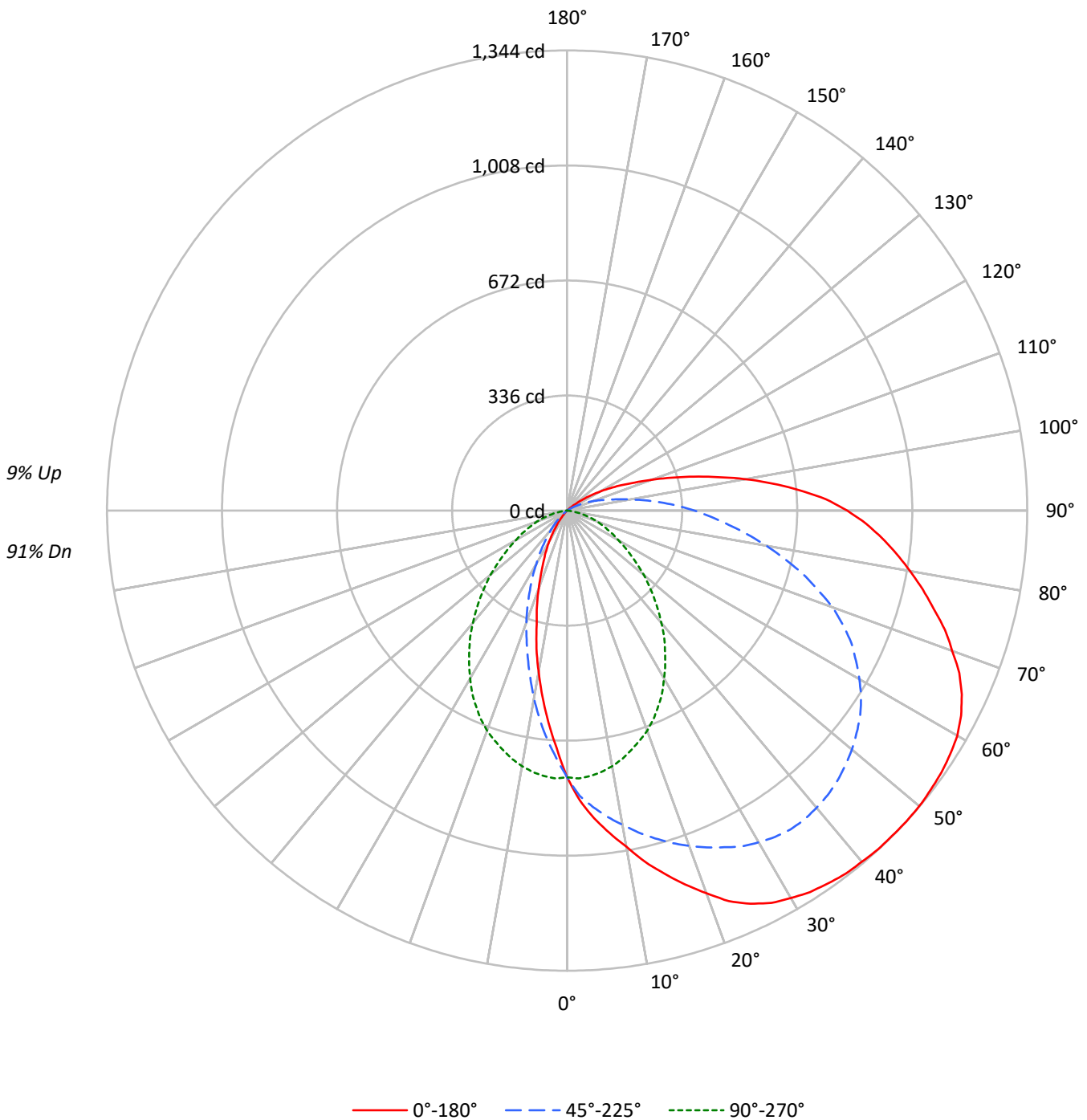
Summary

Lumens per Lamp: 2900 (2 lamps)
Luminaire Lumens: 3147.5 lumens
Efficiency: 54.3%
Efficacy: 52.7 lumens/watt
Spacing Criteria (0/90/45): 1.37 / 1.11 / 1.46
Luminous Opening: Rectangular w/ Sides (W: 3.91' x L: 0.37' x H: 0.37')
CIE Type: Direct

Input Watts (W): 59.7
Input Voltage (V): NR
Input Current (A_{in}): 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	63	63	63	63	61	61	61	61	57	57	57	54	54	54	51	51	51	49
1	56	52	49	47	54	51	48	45	47	45	43	44	43	41	42	40	39	37
2	50	45	40	36	48	43	39	36	40	37	34	38	35	32	35	33	31	29
3	45	39	34	30	43	37	33	29	35	31	28	33	29	27	31	28	25	24
4	41	34	29	25	39	33	28	24	31	26	23	29	25	22	27	24	21	20
5	38	30	25	21	36	29	24	20	27	23	20	26	22	19	24	21	18	17
6	35	27	22	18	33	26	21	18	25	20	17	23	19	16	22	19	16	15
7	32	24	19	16	31	24	19	15	22	18	15	21	17	14	20	17	14	13
8	30	22	17	14	29	21	17	14	20	16	13	19	16	13	18	15	12	11
9	28	20	16	12	27	20	15	12	19	15	12	18	14	12	17	14	11	10
10	26	19	14	11	25	18	14	11	17	13	11	16	13	10	16	12	10	9

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	5797	5797	5797
5°	6196	5764	4272
10°	6404	5634	3077
15°	6671	5440	2090
20°	6903	5236	1411
25°	7095	4954	907
30°	7120	4612	572
35°	7101	4243	299
40°	7073	3852	100
45°	7067	3442	0
50°	7094	3038	0
55°	7128	2595	0
60°	7169	2212	0
65°	7123	1889	0
70°	6950	1606	0
75°	6732	1211	0
80°	6533	697	0
85°	6340	205	0



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ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	45°	90°	135°	180°	Flux
0°-10°	72.7	2.3	1.3	0°	779	779	779	779	779	
10°-20°	203.7	6.5	3.5	5°	902	869	778	670	622	89
20°-30°	310.2	9.9	5.3	15°	1098	991	724	444	344	314
30°-40°	383.4	12.2	6.6	25°	1267	1085	630	257	162	585
40°-50°	422.6	13.4	7.3	35°	1329	1137	498	119	56	834
50°-60°	435.2	13.8	7.5	45°	1343	1116	358	38	0	1040
60°-70°	413.8	13.1	7.1	55°	1334	1045	227	0	0	1195
70°-80°	349.6	11.1	6.0	65°	1272	916	129	0	0	1256
80°-90°	261.7	8.3	4.5	75°	1108	712	57	0	0	1173
90°-100°	168.6	5.4	2.9	85°	923	473	5	0	0	773
100°-110°	84.1	2.7	1.5	90°	818	372	0	0	0	448
110°-120°	33.1	1.1	0.6	95°	681	274	0	0	0	525
120°-130°	8.2	0.3	0.1	105°	383	121	0	0	0	411
130°-140°	0.4	0.0	0.0	115°	175	42	0	0	0	179
140°-150°	0.0	0.0	0.0	125°	57	0	0	0	0	55
150°-160°	0.0	0.0	0.0	135°	0	0	0	0	0	4
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°	586.6	18.6	10.1	165°	0	0	0	0	0	0
0°-40°	970.0	30.8	16.7	175°	0	0	0	0	0	0
0°-60°	1827.8	58.1	31.5	180°	0	0	0	0	0	0
0°-90°	2852.9	90.6	49.2							
90°-120°	285.9	9.1	4.9							
90°-150°	294.5	9.4	5.1							
90°-180°	295.0	9.4	5.1							
0°-180°	3147.5	100.0	54.3							



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	779	779	779	779	779	779	779	779	779
2.5°	847	837	834	810	783	755	723	708	695
5°	902	884	869	828	778	724	670	636	622
7.5°	950	932	902	844	770	691	615	571	550
10°	997	973	932	856	758	653	557	503	479
12.5°	1051	1020	963	866	743	613	499	439	413
15°	1098	1063	991	872	724	570	444	374	344
17.5°	1145	1103	1018	878	704	528	394	323	293
20°	1189	1146	1042	881	684	485	348	274	243
22.5°	1235	1184	1065	882	659	445	302	229	199
25°	1267	1216	1085	879	630	406	257	183	162
27.5°	1292	1245	1106	877	601	367	219	151	133
30°	1307	1261	1119	869	566	326	180	121	105
32.5°	1321	1273	1130	858	533	288	148	93	79
35°	1329	1282	1137	847	498	249	119	70	56
37.5°	1337	1288	1138	831	465	212	95	51	39
40°	1339	1288	1133	810	428	179	73	35	19
42.5°	1343	1288	1127	790	393	151	54	18	8
45°	1343	1286	1116	766	358	125	38	8	0
47.5°	1344	1283	1102	736	324	104	26	0	0
50°	1343	1278	1086	703	292	85	13	0	0
52.5°	1339	1270	1066	670	259	70	6	0	0
55°	1334	1261	1045	634	227	55	0	0	0
57.5°	1326	1250	1018	591	200	40	0	0	0
60°	1316	1236	986	552	173	26	0	0	0
62.5°	1297	1215	951	512	152	14	0	0	0
65°	1272	1189	916	471	129	8	0	0	0
67.5°	1240	1156	872	429	111	3	0	0	0
70°	1197	1116	825	385	93	0	0	0	0
72.5°	1157	1071	767	345	75	0	0	0	0
75°	1108	1024	712	302	57	0	0	0	0
77.5°	1064	971	650	262	40	0	0	0	0
80°	1017	922	590	228	25	0	0	0	0
82.5°	971	865	530	195	14	0	0	0	0
85°	923	810	473	164	5	0	0	0	0
87.5°	874	751	420	137	0	0	0	0	0
90°	818	692	372	116	0	0	0	0	0
92.5°	757	614	322	90	0	0	0	0	0
95°	681	546	274	72	0	0	0	0	0
97.5°	605	476	229	53	0	0	0	0	0
100°	528	415	186	36	0	0	0	0	0
102.5°	452	352	152	23	0	0	0	0	0
105°	383	293	121	12	0	0	0	0	0
107.5°	319	245	100	6	0	0	0	0	0
110°	263	201	81	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°	214	157	62	0	0	0	0	0	0
115°	175	126	42	0	0	0	0	0	0
117.5°	142	100	29	0	0	0	0	0	0
120°	111	76	16	0	0	0	0	0	0
122.5°	84	54	9	0	0	0	0	0	0
125°	57	34	0	0	0	0	0	0	0
127.5°	35	19	0	0	0	0	0	0	0
130°	20	10	0	0	0	0	0	0	0
132.5°	10	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)