

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: ITL49945

Luminaire Tested: **EFS-12-32CT-DT**

Issue Date: 3/3/2020



**Test Information**

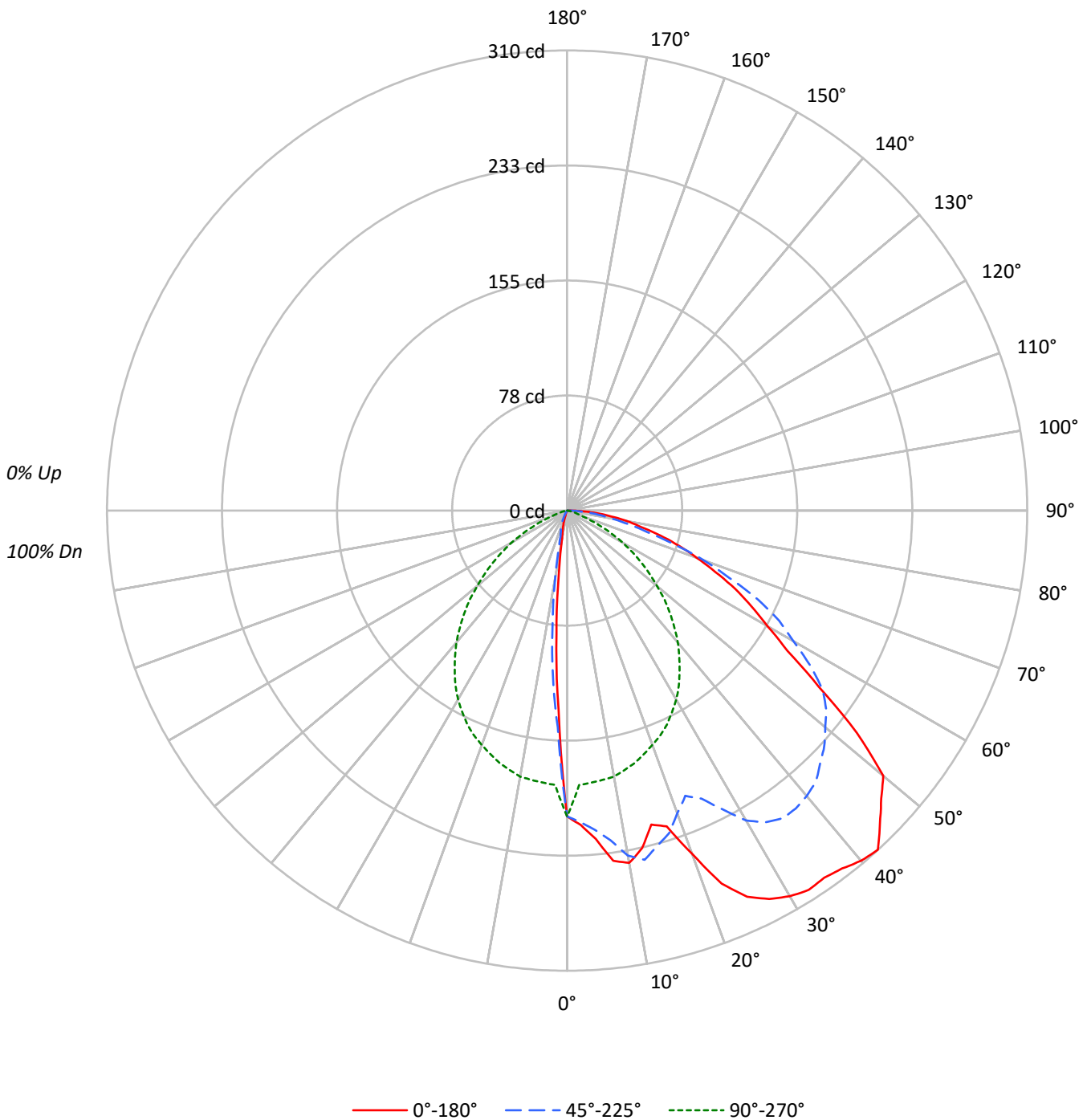
Test Method: LM-79-08  
Report Number: ITL49945  
Test Lab:  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: EFS-12-32CT-DT  
Description: CAST METAL HOUSING, FABRICATED WHITE PAINTED METAL REFLECTOR,  
CLEAR FLAT GLASS LINEAR PRISMATIC LENS IN CAST BLACK PAINTED  
METAL HOUSING COVER.  
Light Source: ONE 32-WATT TRIPLE 'U' TUBE COMPACT FLUORESCENT, PHILIPS  
PL-T 32W/35/4P, HORIZONTAL POSITION.  
NOTE: DATA AVERAGED ABOUT THE 0/180 DEGREE PLANE AT CLIENT'S  
REQUEST.  
Ballast/Driver: -

**Summary**

Lumens per Lamp: 2400 (1 lamp)  
Luminaire Lumens: 454.2 lumens  
Efficiency: 18.9%  
Efficacy: 12.4 lumens/watt  
Spacing Criteria (0/90/45): 1.04 / 1.08 / 1.27  
Luminous Opening: Rectangular w/ Sides (W: 0.92' x L: 0.23' x H: 0.03')  
CIE Type: Direct  
  
Input Watts (W): 36.6  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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									
RC	80									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	50	30	10	0													
RCR																																					
0	23	23	23	23	22	22	22	22	21	21	21	20	20	20	19	19	19	19	19	19	19	19	19	19													
1	21	20	19	18	20	19	19	18	18	18	17	18	17	17	17	17	16	16	16	16	16	16	16	16													
2	19	17	16	15	18	17	16	15	16	15	14	15	15	14	15	14	14	13	13	13	13	13	13	13													
3	17	15	13	12	17	15	13	12	14	13	12	14	13	12	13	12	11	11	11	11	11	11	11	11													
4	16	13	12	10	15	13	11	10	13	11	10	12	11	10	12	11	10	9	9	9	9	9	9	9													
5	14	12	10	9	14	12	10	9	11	10	9	11	10	9	10	9	8	8	8	8	8	8	8	8													
6	13	11	9	8	13	10	9	8	10	9	8	10	8	7	9	8	7	7	7	7	7	7	7	7													
7	12	10	8	7	12	9	8	7	9	8	7	9	8	7	9	7	7	6	6	6	6	6	6	6													
8	11	9	7	6	11	9	7	6	8	7	6	8	7	6	8	7	6	5	5	5	5	5	5	5													
9	11	8	6	5	10	8	6	5	8	6	5	7	6	5	7	6	5	4	4	4	4	4	4	4													
10	10	7	6	5	10	7	6	5	7	6	5	7	6	5	7	6	5	4	4	4	4	4	4	4													

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	10553	10553	10553
5°	11282	9434	4218
10°	12242	9411	1016
15°	11205	9250	512
20°	12776	9047	156
25°	15252	8847	0
30°	16450	8528	0
35°	17239	8063	0
40°	18480	7542	0
45°	18996	6866	0
50°	19055	6050	0
55°	15471	5195	0
60°	12926	4160	0
65°	11720	2824	0
70°	10130	1506	0
75°	8523	878	0
80°	6817	494	0
85°	4591	423	0



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**ZONAL LUMENS:**

**CANDELA DISTRIBUTION:**

Zone	Lumens	% Fixture	% Lamp		0°	45°	90°	135°	180°	Flux
0°-10°	15.3	3.4	0.6	0°	206	206	206	206	206	
10°-20°	37.9	8.3	1.6	5°	222	216	184	111	83	22
20°-30°	59.6	13.1	2.5	15°	219	234	176	17	10	65
30°-40°	79.9	17.6	3.3	25°	287	214	159	7	0	131
40°-50°	90.9	20.0	3.8	35°	302	253	132	1	0	191
50°-60°	81.8	18.0	3.4	45°	298	241	98	0	0	230
60°-70°	53.9	11.9	2.2	55°	207	210	61	0	0	189
70°-80°	27.0	6.0	1.1	65°	125	142	25	0	0	123
80°-90°	7.6	1.7	0.3	75°	65	56	5	0	0	69
90°-100°	0.3	0.1	0.0	85°	20	12	1	0	0	21
100°-110°	0.0	0.0	0.0	90°	4	2	0	0	0	3
110°-120°	0.0	0.0	0.0	95°	0	0	0	0	0	1
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°	112.8	24.8	4.7	165°	0	0	0	0	0	0
0°-40°	192.7	42.4	8.0	175°	0	0	0	0	0	0
0°-60°	365.4	80.4	15.2	180°	0	0	0	0	0	0
0°-90°	453.9	99.9	18.9							
90°-120°	0.3	0.1	0.0							
90°-150°	0.3	0.1	0.0							
90°-180°	0.0	0.0	0.0							
0°-180°	454.2	100.0	18.9							



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	206	206	206	206	206	206	206	206	206	206	206
2.5°	212	212	212	212	211	210	207	203	197	189	185
5°	222	221	221	220	218	216	214	213	205	193	184
7.5°	238	238	237	235	231	224	219	214	211	195	183
10°	241	242	242	243	240	236	227	217	211	197	182
12.5°	233	234	234	236	238	241	234	220	210	198	179
15°	219	221	223	227	231	234	237	226	210	198	176
17.5°	223	220	218	215	219	228	233	228	209	197	172
20°	246	243	237	224	213	217	225	229	209	196	168
22.5°	272	268	262	247	224	208	217	224	208	192	164
25°	287	285	281	267	244	214	206	217	208	189	159
27.5°	295	293	290	280	261	227	199	208	205	184	153
30°	300	300	296	286	270	241	201	200	200	178	147
32.5°	303	302	298	289	274	249	206	189	195	172	140
35°	302	301	298	291	276	253	214	180	188	165	132
37.5°	304	303	298	288	276	253	219	175	179	157	124
40°	308	306	299	287	272	251	220	173	168	148	116
42.5°	310	309	302	286	268	248	218	173	157	139	107
45°	298	298	297	287	264	241	213	171	146	130	98
47.5°	287	287	283	278	262	235	207	168	134	119	89
50°	278	278	273	264	254	227	198	163	123	109	79
52.5°	246	252	257	252	239	220	188	155	112	98	70
55°	207	210	220	235	224	210	177	145	101	87	61
57.5°	176	180	185	200	211	194	166	133	90	76	52
60°	156	158	157	168	186	176	154	120	79	63	43
62.5°	140	141	139	139	157	161	140	107	69	52	34
65°	125	125	124	119	129	142	124	93	59	41	25
67.5°	108	109	108	105	102	118	108	80	50	31	17
70°	93	94	93	89	84	98	93	68	40	22	11
72.5°	79	81	79	75	71	76	77	56	31	16	7
75°	65	66	65	62	58	56	61	45	24	10	5
77.5°	51	53	52	49	46	42	47	34	17	6	3
80°	41	42	40	38	34	30	34	24	11	4	2
82.5°	30	31	31	28	25	21	23	16	7	2	1
85°	20	21	21	19	16	12	14	9	3	1	1
87.5°	11	12	12	11	9	6	6	4	1	1	1
90°	4	5	4	4	4	2	1	0	0	0	0
95°	0	0	0	0	0	0	0	0	0	0	0
105°	0	0	0	0	0	0	0	0	0	0	0
115°	0	0	0	0	0	0	0	0	0	0	0
125°	0	0	0	0	0	0	0	0	0	0	0
135°	0	0	0	0	0	0	0	0	0	0	0
145°	0	0	0	0	0	0	0	0	0	0	0
155°	0	0	0	0	0	0	0	0	0	0	0
165°	0	0	0	0	0	0	0	0	0	0	0



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
175°	0	0	0	0	0	0	0	0	0	0	0
180°	0	0	0	0	0	0	0	0	0	0	0



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**CANDELA DISTRIBUTION (continued):**

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	206	206	206	206	206	206	206	206	206	206
2.5°	181	173	164	156	146	140	133	130	126	134
5°	176	158	139	123	111	99	91	84	80	83
7.5°	171	141	118	95	75	60	48	42	39	43
10°	165	128	96	67	46	32	23	21	19	20
12.5°	159	114	76	44	25	19	16	14	14	14
15°	151	101	56	28	17	14	12	11	10	10
17.5°	143	86	40	19	14	11	9	6	5	6
20°	135	75	29	15	12	8	5	4	3	3
22.5°	128	62	21	13	9	5	3	2	1	2
25°	120	50	17	12	7	3	1	0	0	0
27.5°	112	41	15	10	4	2	0	0	0	0
30°	103	34	14	8	3	1	0	0	0	0
32.5°	95	28	13	6	2	0	0	0	0	0
35°	86	23	12	5	1	0	0	0	0	0
37.5°	78	20	11	4	1	0	0	0	0	0
40°	70	18	9	3	0	0	0	0	0	0
42.5°	63	17	8	2	0	0	0	0	0	0
45°	56	16	7	2	0	0	0	0	0	0
47.5°	50	15	7	1	0	0	0	0	0	0
50°	44	14	6	1	0	0	0	0	0	0
52.5°	39	13	5	1	0	0	0	0	0	0
55°	33	11	4	1	0	0	0	0	0	0
57.5°	27	10	4	1	0	0	0	0	0	0
60°	21	8	3	0	0	0	0	0	0	0
62.5°	16	7	3	0	0	0	0	0	0	0
65°	12	6	2	0	0	0	0	0	0	0
67.5°	9	5	2	0	0	0	0	0	0	0
70°	7	4	2	0	0	0	0	0	0	0
72.5°	5	3	1	0	0	0	0	0	0	0
75°	3	2	1	0	0	0	0	0	0	0
77.5°	2	1	1	0	0	0	0	0	0	0
80°	2	1	1	0	0	0	0	0	0	0
82.5°	1	0	0	0	0	0	0	0	0	0
85°	1	0	0	0	0	0	0	0	0	0
87.5°	1	0	0	0	0	0	0	0	0	0
90°	0	0	0	0	0	0	0	0	0	0
95°	0	0	0	0	0	0	0	0	0	0
105°	0	0	0	0	0	0	0	0	0	0
115°	0	0	0	0	0	0	0	0	0	0
125°	0	0	0	0	0	0	0	0	0	0
135°	0	0	0	0	0	0	0	0	0	0
145°	0	0	0	0	0	0	0	0	0	0
155°	0	0	0	0	0	0	0	0	0	0
165°	0	0	0	0	0	0	0	0	0	0





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**CANDELA DISTRIBUTION (continued):**

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
175°	0	0	0	0	0	0	0	0	0	0
180°	0	0	0	0	0	0	0	0	0	0

(END OF REPORT)