

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: 180P104

Luminaire Tested: **CFDSF-332A-120-EB81 INVERTED LENS**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: 180P104
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: CFDSF-332A-120-EB81 INVERTED LENS
Description: 2 X 4 Recessed Air Supply Luminaire with an inverted .095 pattern 12 acrylic lens
Light Source: Three - F032T8/35K - 2800 Lumens ea. - 32 Watts ea.
Ballast/Driver: Magnetek B332I120RH Electronic - L.O.B.F. = 88.9

Summary

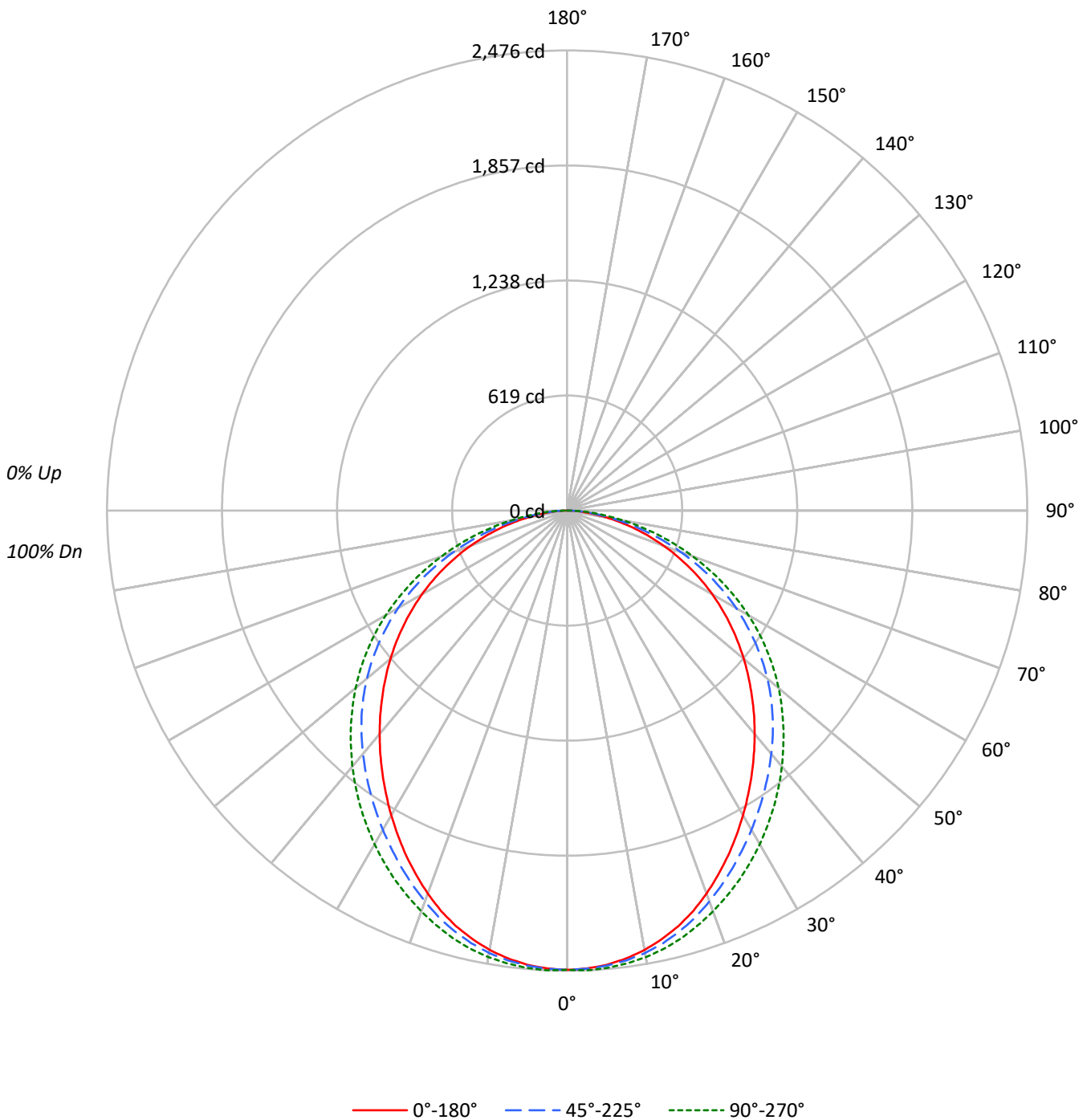
Lumens per Lamp: 2800 (3 lamps)
Luminaire Lumens: 6733.0 lumens
Efficiency: 80.2%
Efficacy: 78.9 lumens/watt
Spacing Criteria (0/90/45): 1.15 / 1.25 / 1.34
Luminous Opening: Rectangular (W 1.69' x L: 3.7' x H: 0')
CIE Type: Direct

Input Watts (W): 85.3
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	50	30	10	0	
RCR																						
0	95	95	95	95	93	93	93	93	89	89	89	85	85	85	82	82	82	80				80
1	87	83	80	77	85	81	78	75	78	75	73	75	73	71	72	70	69	67				67
2	79	73	67	62	77	71	66	62	68	64	60	66	62	59	63	60	58	56				56
3	72	64	57	52	70	62	56	51	60	55	50	58	53	50	56	52	49	47				47
4	66	56	49	44	64	55	49	44	53	48	43	51	46	42	50	45	42	40				40
5	61	50	43	38	59	49	43	38	48	42	37	46	41	37	45	40	36	35				35
6	56	45	38	33	55	45	38	33	43	37	33	42	36	32	41	36	32	30				30
7	52	41	34	29	51	41	34	29	39	33	29	38	33	29	37	32	28	27				27
8	48	38	31	26	47	37	30	26	36	30	26	35	30	26	34	29	25	24				24
9	45	35	28	23	44	34	28	23	33	27	23	32	27	23	31	27	23	22				22
10	42	32	26	21	41	31	25	21	31	25	21	30	25	21	29	24	21	20				20

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4256	4256	4256
5°	4241	4250	4271
10°	4198	4228	4268
15°	4126	4178	4246
20°	4020	4102	4207
25°	3894	4020	4166
30°	3765	3944	4123
35°	3642	3886	4082
40°	3530	3843	4043
45°	3423	3810	4010
50°	3326	3768	3982
55°	3222	3706	3943
60°	3107	3621	3883
65°	2967	3485	3778
70°	2780	3274	3616
75°	2516	2962	3388
80°	2153	2539	3055
85°	1680	2055	2629



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ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	233.4	3.5	2.8	0°	2471	2471	2471	2471	2471	
10°-20°	660.3	9.8	7.9	5°	2453	2451	2458	2464	2470	232
20°-30°	975.4	14.5	11.6	15°	2314	2319	2343	2368	2381	651
30°-40°	1153.2	17.1	13.7	25°	2049	2065	2115	2167	2192	943
40°-50°	1191.6	17.7	14.2	35°	1732	1768	1848	1917	1941	1084
50°-60°	1084.7	16.1	12.9	45°	1405	1456	1564	1632	1646	1085
60°-70°	833.1	12.4	9.9	55°	1073	1127	1234	1303	1313	959
70°-80°	474.0	7.0	5.6	65°	728	772	855	919	927	720
80°-90°	127.4	1.9	1.5	75°	378	403	445	497	509	401
90°-100°	0.0	0.0	0.0	85°	85	93	104	126	133	97
100°-110°	0.0	0.0	0.0	90°	0	0	0	0	0	5
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°	1869.1	27.8	22.3	165°	0	0	0	0	0	0
0°-40°	3022.4	44.9	36.0	175°	0	0	0	0	0	0
0°-60°	5298.6	78.7	63.1	180°	0	0	0	0	0	0
0°-90°	6733.0	100.0	80.2							
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°	6733.0	100.0	80.2							



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2471	2471	2471	2471	2471
2.5°	2466	2464	2467	2471	2476
5°	2453	2451	2458	2464	2470
7.5°	2431	2431	2441	2452	2458
10°	2400	2402	2417	2432	2440
12.5°	2361	2365	2384	2404	2414
15°	2314	2319	2343	2368	2381
17.5°	2258	2265	2294	2325	2340
20°	2193	2203	2238	2276	2295
22.5°	2122	2136	2178	2223	2245
25°	2049	2065	2115	2167	2192
27.5°	1971	1993	2049	2108	2134
30°	1893	1919	1983	2047	2073
32.5°	1812	1844	1916	1983	2008
35°	1732	1768	1848	1917	1941
37.5°	1651	1692	1779	1849	1870
40°	1570	1614	1709	1779	1798
42.5°	1488	1536	1638	1706	1722
45°	1405	1456	1564	1632	1646
47.5°	1323	1376	1487	1554	1566
50°	1241	1295	1406	1473	1486
52.5°	1157	1211	1322	1390	1401
55°	1073	1127	1234	1303	1313
57.5°	988	1041	1144	1212	1222
60°	902	952	1051	1118	1127
62.5°	816	863	954	1020	1028
65°	728	772	855	919	927
67.5°	640	680	752	814	823
70°	552	586	650	709	718
72.5°	464	494	547	602	613
75°	378	403	445	497	509
77.5°	295	315	347	394	407
80°	217	233	256	296	308
82.5°	146	157	174	206	216
85°	85	93	104	126	133
87.5°	36	42	47	60	64
90°	0	0	0	0	0
92.5°	0	0	0	0	0
95°	0	0	0	0	0
97.5°	0	0	0	0	0
100°	0	0	0	0	0
102.5°	0	0	0	0	0
105°	0	0	0	0	0
107.5°	0	0	0	0	0
110°	0	0	0	0	0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0	0	0	0	0
115°	0	0	0	0	0
117.5°	0	0	0	0	0
120°	0	0	0	0	0
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)