

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: 8706.0

Luminaire Tested: **CFR 24 240BX 277 1K19 1/2 ELB**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: 8706.0
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: CFR 24 240BX 277 1K19 1/2 ELB
Description: FAIL-SAFE 2x2 RECESSED CLEANROOM LUMINAIRE
WHITE REFLECTOR w/.125 K19 ACRYLIC LENS
Light Source: 2/40W BIAX 3150 LUMENS
WATTS=65
F40TT/2G11/RS/35
Ballast/Driver: MAGNETEK #C240I120RH

Summary

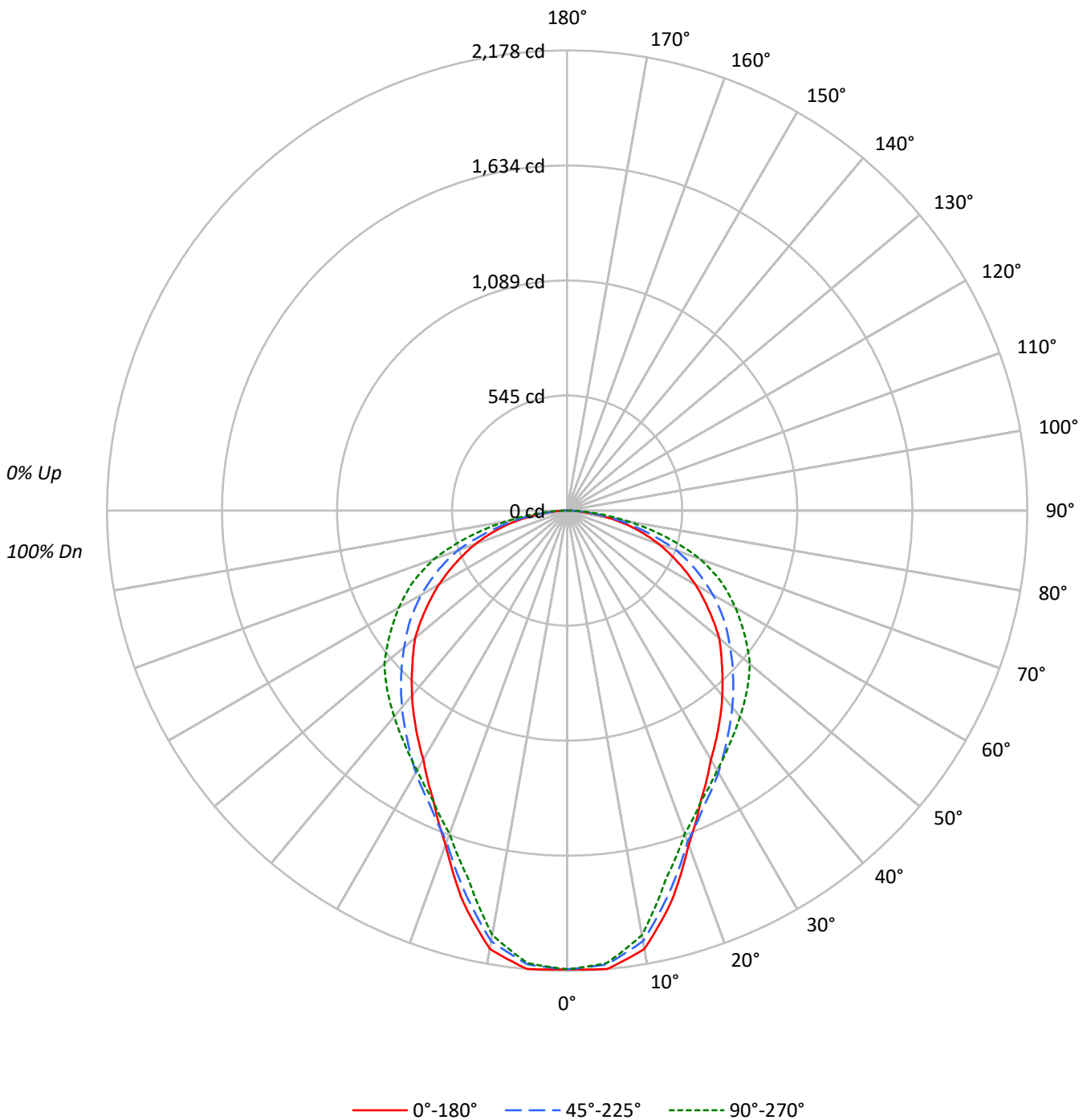
Lumens per Lamp: 3150 (2 lamps)
Luminaire Lumens: 5135.9 lumens
Efficiency: 81.5%
Efficacy: 79.0 lumens/watt
Spacing Criteria (0/90/45): 0.96 / 0.97 / 1.19
Luminous Opening: Rectangular (W 1.71' x L: 1.81' x H: 0')
CIE Type: Direct

Input Watts (W): 65
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	50	30	10	0	
RCR																						
0	97	97	97	97	95	95	95	95	91	91	91	87	87	87	83	83	83	83	83	83	82	
1	88	84	81	77	86	82	79	76	79	76	74	76	74	71	73	71	69	73	71	69	68	
2	80	73	68	63	78	72	66	62	69	64	60	66	62	59	64	61	58	64	61	58	56	
3	73	64	57	52	71	63	57	52	60	55	51	58	54	50	56	52	49	56	52	49	47	
4	67	57	50	44	65	56	49	44	54	48	43	52	47	42	50	46	42	50	46	42	40	
5	61	51	43	38	60	50	43	38	48	42	37	47	41	37	45	40	36	45	40	36	35	
6	57	46	38	33	55	45	38	33	44	37	33	42	37	32	41	36	32	41	36	32	30	
7	53	42	34	29	51	41	34	29	40	34	29	39	33	29	37	32	29	37	32	29	27	
8	49	38	31	26	48	37	31	26	36	30	26	35	30	26	34	29	26	34	29	26	24	
9	46	35	28	24	45	35	28	24	34	28	24	33	27	23	32	27	23	32	27	23	22	
10	43	32	26	22	42	32	26	22	31	25	21	30	25	21	30	25	21	30	25	21	20	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7546	7546	7546
5°	7600	7523	7502
10°	7437	7303	7201
15°	6881	6729	6496
20°	6222	6166	6022
25°	5768	5895	5788
30°	5463	5748	5700
35°	5304	5601	5703
40°	5182	5518	5776
45°	5093	5462	5919
50°	5078	5446	6105
55°	4957	5503	6212
60°	4873	5541	6396
65°	4754	5568	6646
70°	4675	5590	6809
75°	4526	5117	6514
80°	4044	4644	5845
85°	3191	3270	4467



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ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	203.1	4.0	3.2	0°	2171	2171	2171	2171	2171	
10°-20°	524.4	10.2	8.3	5°	2178	2162	2156	2158	2150	205
20°-30°	704.8	13.7	11.2	15°	1912	1912	1870	1836	1805	535
30°-40°	821.4	16.0	13.0	25°	1504	1518	1537	1526	1509	697
40°-50°	862.1	16.8	13.7	35°	1250	1281	1320	1341	1344	784
50°-60°	819.0	15.9	13.0	45°	1036	1055	1111	1171	1204	802
60°-70°	673.4	13.1	10.7	55°	818	832	908	1003	1025	733
70°-80°	415.2	8.1	6.6	65°	578	596	677	761	808	574
80°-90°	112.5	2.2	1.8	75°	337	335	381	449	485	353
90°-100°	0.0	0.0	0.0	85°	80	74	82	105	112	99
100°-110°	0.0	0.0	0.0	90°	0	0	0	0	0	
110°-120°	0.0	0.0	0.0							
120°-130°	0.0	0.0	0.0							
130°-140°	0.0	0.0	0.0							
140°-150°	0.0	0.0	0.0							
150°-160°	0.0	0.0	0.0							
160°-170°	0.0	0.0	0.0							
170°-180°	0.0	0.0	0.0							
0°-30°	1432.3	27.9	22.7							
0°-40°	2253.7	43.9	35.8							
0°-60°	3934.8	76.6	62.5							
0°-90°	5135.9	100.0	81.5							
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°	5135.9	100.0	81.5							



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2171	2171	2171	2171	2171
5°	2178	2162	2156	2158	2150
10°	2107	2090	2069	2050	2040
15°	1912	1912	1870	1836	1805
20°	1682	1678	1667	1631	1628
25°	1504	1518	1537	1526	1509
30°	1361	1394	1432	1433	1420
35°	1250	1281	1320	1341	1344
40°	1142	1170	1216	1250	1273
45°	1036	1055	1111	1171	1204
50°	939	948	1007	1097	1129
55°	818	832	908	1003	1025
60°	701	720	797	890	920
65°	578	596	677	761	808
70°	460	473	550	615	670
75°	337	335	381	449	485
80°	202	198	232	263	292
85°	80	74	82	105	112
90°	0	0	0	0	0

(END OF REPORT)