

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: P233110

Luminaire Tested: **FCB-24-2-LD4-24-35-UNV-EDD1-WDP6**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P233110  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P25706)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: FCB-24-2-LD4-24-35-UNV-EDD1-WDP6  
Description: FAILSAFE 2X2 FCB LED TROFFER  
.060 POLYCARBONATE LENS  
Light Source: (84)3500K CCT, 80 CRI LEDs  
Ballast/Driver: ELECTRONIC DRIVER

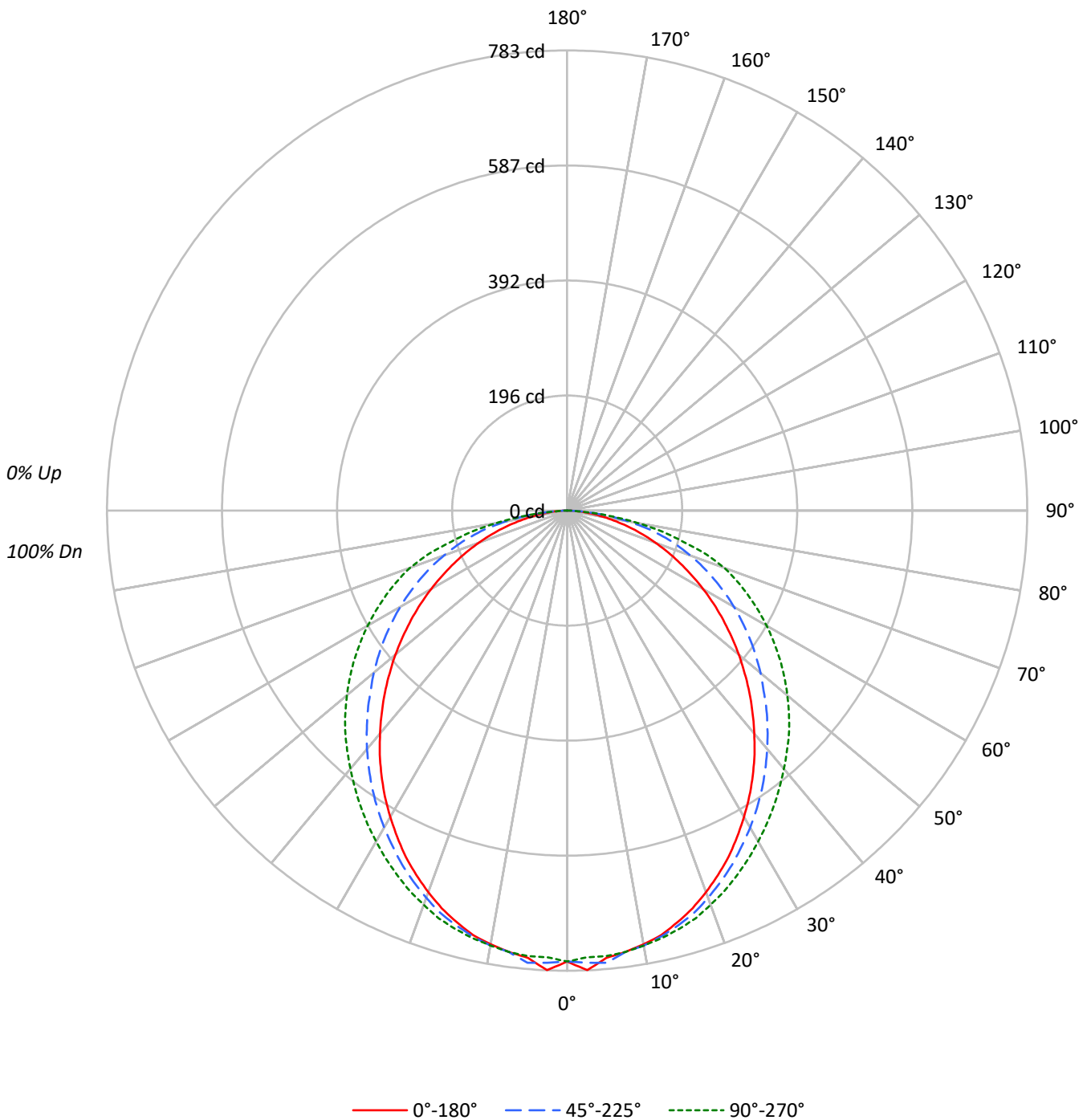
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2149.0 lumens  
Efficiency: N/A  
Efficacy: 109.6 lumens/watt  
Spacing Criteria (0/90/45): 1.17 / 1.26 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 19.6  
Input Voltage (V): 120  
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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	108	104	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69
3	90	79	70	64	87	77	69	63	74	68	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	64	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	43
6	70	56	47	41	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	48	41	35	47	40	35	46	40	35	33
8	60	46	38	32	58	46	38	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

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

	0°	45°	90°
0°	2064	2064	2064
5°	2063	2086	2055
10°	2047	2053	2053
15°	2020	2035	2052
20°	1978	2008	2044
25°	1930	1973	2032
30°	1870	1935	2020
35°	1809	1898	2015
40°	1740	1861	2015
45°	1670	1826	2032
50°	1597	1798	2048
55°	1520	1780	2074
60°	1440	1766	2109
65°	1351	1757	2162
70°	1258	1751	2236
75°	1141	1749	2119
80°	987	1619	1878
85°	840	1226	1195



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	72.8	3.4
10°-20°	206.1	9.6
20°-30°	306.6	14.3
30°-40°	362.6	16.9
40°-50°	372.6	17.3
50°-60°	340.5	15.8
60°-70°	272.4	12.7
70°-80°	170.9	8.0
80°-90°	44.5	2.1
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	585.4	27.2
0°-40°	947.9	44.1
0°-60°	1661.1	77.3
0°-90°	2149.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2149.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	767	767	767	767	767	
5°	764	764	772	767	761	73
15°	725	726	730	735	737	204
25°	650	654	665	676	684	299
35°	551	558	578	600	613	344
45°	439	450	480	515	534	338
55°	324	340	379	421	442	290
65°	212	231	276	318	340	211
75°	110	131	168	193	204	117
85°	27	34	40	39	39	31
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	767.1	767.1	767.1	767.1	767.1
2.5°	782.7	779.6	770.2	763.9	760.8
5°	763.9	763.9	772.3	767.1	760.8
7.5°	757.6	757.6	757.6	773.3	757.6
10°	749.3	750.3	751.4	757.6	751.4
12.5°	739.9	739.9	742.0	744.1	745.1
15°	725.2	726.3	730.5	734.7	736.7
17.5°	709.6	712.7	717.9	723.2	727.3
20°	690.8	694.9	701.2	709.6	713.8
22.5°	670.9	675.1	683.4	692.9	700.2
25°	650.0	654.2	664.6	676.1	684.5
27.5°	626.0	631.2	643.7	659.4	667.8
30°	601.9	608.2	622.8	640.6	650.0
32.5°	576.9	584.2	600.9	620.7	632.2
35°	550.7	558.0	577.9	599.8	613.4
37.5°	523.6	531.9	553.9	578.9	593.6
40°	495.3	504.7	529.8	557.0	573.7
42.5°	467.1	477.6	504.7	537.1	553.9
45°	438.9	450.4	479.7	515.2	534.0
47.5°	409.7	423.2	453.5	493.3	512.1
50°	381.4	395.0	429.5	470.3	489.1
52.5°	352.2	367.8	404.4	446.2	466.1
55°	324.0	339.6	379.3	421.1	442.0
57.5°	295.7	311.4	353.2	396.1	417.0
60°	267.5	284.2	328.1	369.9	391.9
62.5°	239.3	257.1	302.0	344.9	365.8
65°	212.1	231.0	275.9	317.7	339.6
67.5°	186.0	205.9	249.8	290.5	312.5
70°	159.9	179.7	222.6	262.3	284.2
72.5°	134.8	154.7	196.5	232.0	248.7
75°	109.7	130.6	168.2	193.3	203.8
77.5°	85.7	106.6	139.0	155.7	167.2
80°	63.7	81.5	104.5	117.0	121.2
82.5°	43.9	58.5	73.2	76.3	78.4
85°	27.2	34.5	39.7	38.7	38.7
87.5°	12.5	13.6	11.5	8.4	5.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)