

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: P233133

Luminaire Tested: **FCB-24-2-LD4-24-30-UNV-EDD1-WDP12**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P233133  
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-LD4-24-30-UNV-EDD1-WDP12  
Description: FAILSAFE 2X2 FCB LED TROFFER  
.125 POLYCARBONATE LENS  
Light Source: (84)3000K CCT, 80 CRI LEDs  
Ballast/Driver: ELECTRONIC DRIVER

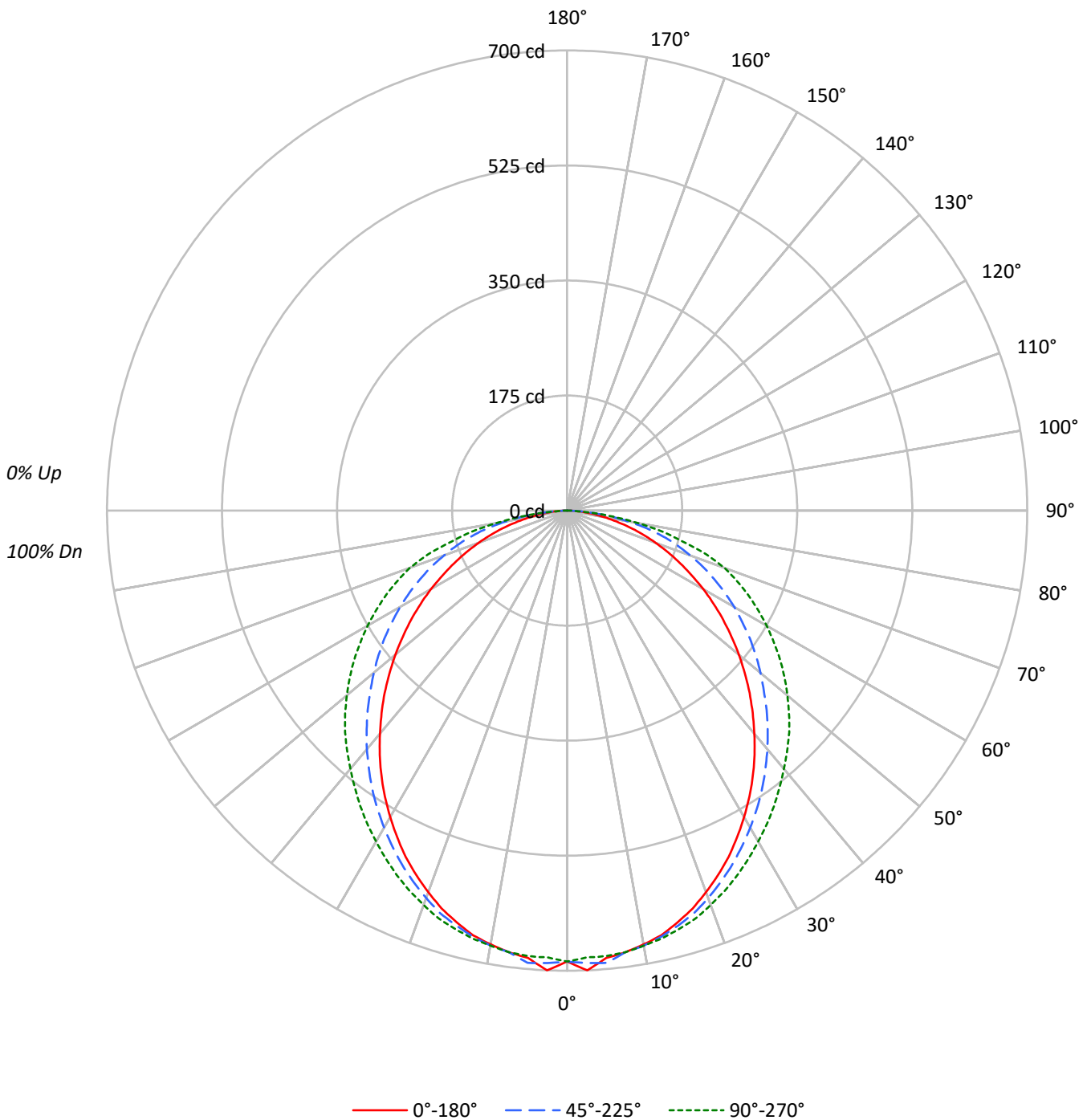
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1922.0 lumens  
Efficiency: N/A  
Efficacy: 98.1 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°	1846	1846	1846
5°	1845	1866	1838
10°	1831	1836	1836
15°	1807	1820	1836
20°	1769	1796	1828
25°	1726	1765	1818
30°	1673	1731	1806
35°	1618	1698	1802
40°	1556	1665	1802
45°	1494	1633	1818
50°	1428	1608	1831
55°	1359	1592	1855
60°	1288	1580	1886
65°	1208	1571	1934
70°	1125	1566	2000
75°	1020	1565	1895
80°	883	1449	1680
85°	750	1096	1068



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	65.1	3.4
10°-20°	184.3	9.6
20°-30°	274.2	14.3
30°-40°	324.3	16.9
40°-50°	333.3	17.3
50°-60°	304.6	15.8
60°-70°	243.6	12.7
70°-80°	152.9	8.0
80°-90°	39.8	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°	523.5	27.2
0°-40°	847.8	44.1
0°-60°	1485.7	77.3
0°-90°	1922.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1922.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	686	686	686	686	686	
5°	683	683	691	686	680	65
15°	649	650	653	657	659	183
25°	581	585	594	605	612	267
35°	493	499	517	536	549	308
45°	392	403	429	461	478	303
55°	290	304	339	377	395	259
65°	190	207	247	284	304	188
75°	98	117	150	173	182	104
85°	24	31	36	35	35	28
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	686.0	686.0	686.0	686.0	686.0
2.5°	700.0	697.2	688.8	683.2	680.4
5°	683.2	683.2	690.7	686.0	680.4
7.5°	677.6	677.6	677.6	691.6	677.6
10°	670.1	671.1	672.0	677.6	672.0
12.5°	661.7	661.7	663.6	665.5	666.4
15°	648.6	649.6	653.3	657.1	658.9
17.5°	634.6	637.4	642.1	646.8	650.5
20°	617.8	621.5	627.1	634.6	638.4
22.5°	600.0	603.8	611.3	619.7	626.2
25°	581.3	585.1	594.4	604.7	612.2
27.5°	559.9	564.5	575.7	589.8	597.2
30°	538.4	544.0	557.0	572.9	581.3
32.5°	515.9	522.5	537.4	555.2	565.5
35°	492.6	499.1	516.9	536.5	548.6
37.5°	468.3	475.7	495.4	517.8	530.9
40°	443.0	451.4	473.9	498.2	513.1
42.5°	417.8	427.1	451.4	480.4	495.4
45°	392.5	402.8	429.0	460.8	477.6
47.5°	366.4	378.5	405.6	441.2	458.0
50°	341.1	353.3	384.1	420.6	437.4
52.5°	315.0	329.0	361.7	399.1	416.8
55°	289.7	303.8	339.3	376.7	395.4
57.5°	264.5	278.5	315.9	354.2	372.9
60°	239.3	254.2	293.5	330.9	350.5
62.5°	214.0	229.9	270.1	308.4	327.1
65°	189.7	206.6	246.7	284.1	303.8
67.5°	166.4	184.1	223.4	259.8	279.5
70°	143.0	160.8	199.1	234.6	254.2
72.5°	120.6	138.3	175.7	207.5	222.4
75°	98.1	116.8	150.5	172.9	182.3
77.5°	76.6	95.3	124.3	139.3	149.5
80°	57.0	72.9	93.5	104.7	108.4
82.5°	39.3	52.3	65.4	68.2	70.1
85°	24.3	30.8	35.5	34.6	34.6
87.5°	11.2	12.2	10.3	7.5	4.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)