

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: P233193

Luminaire Tested: **FCB-24-4-LD4-50-30-UNV-EDD1-WDP6**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P233193  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P25697)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: FCB-24-4-LD4-50-30-UNV-EDD1-WDP6  
Description: FAILSAFE 2X4 FCB LED TROFFER  
.060 POLYCARBONATE LENS  
Light Source: (168)3000K CCT, 80 CRI LEDs  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

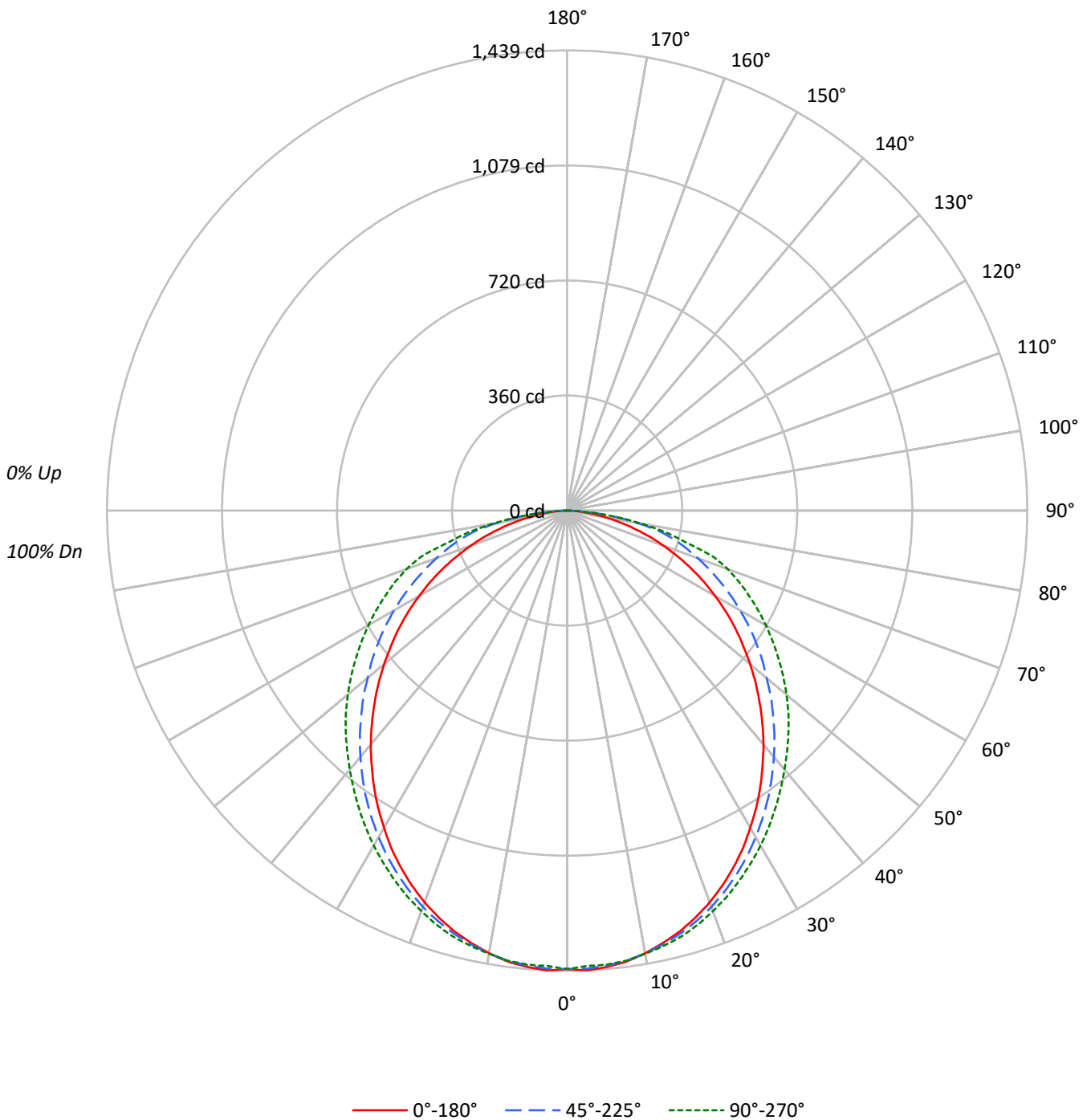
Lumens per Lamp: N/A  
Luminaire Lumens: 4085.0 lumens  
Efficiency: N/A  
Efficacy: 100.4 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.25 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 40.7  
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

TEST NUMBER: P233193

CATALOG NUMBER: FCB-24-4-LD4-50-30-UNV-EDD1-WDP6

### Luminous Intensity Polar Plot





TEST NUMBER: P233193

CATALOG NUMBER: FCB-24-4-LD4-50-30-UNV-EDD1-WDP6

**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	103	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	95	88	81	76	84	79	74	81	76	72	78	74	71	68
3	89	78	70	63	87	77	69	63	74	67	62	71	65	61	68	64	60	57
4	82	69	60	54	79	68	60	53	66	58	52	63	57	52	61	56	51	49
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42
6	69	56	47	40	67	55	46	40	53	45	40	51	44	39	50	44	39	37
7	64	51	42	35	63	50	41	35	48	41	35	47	40	35	45	39	35	32
8	60	46	38	32	58	45	37	32	44	37	31	43	36	31	42	36	31	29
9	56	42	34	28	54	42	34	28	41	33	28	40	33	28	38	32	28	26
10	52	39	31	26	51	39	31	26	38	31	26	37	30	25	36	30	25	24

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

	0°	45°	90°
0°	1929	1929	1929
5°	1934	1929	1925
10°	1920	1920	1922
15°	1898	1907	1921
20°	1866	1888	1908
25°	1827	1863	1894
30°	1780	1832	1880
35°	1730	1801	1865
40°	1678	1766	1857
45°	1621	1733	1863
50°	1563	1704	1874
55°	1506	1693	1893
60°	1438	1682	1931
65°	1363	1683	1995
70°	1260	1711	2102
75°	1127	1789	1999
80°	943	1712	1832
85°	713	1317	1252



TEST NUMBER: P233193

CATALOG NUMBER: FCB-24-4-LD4-50-30-UNV-EDD1-WDP6

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	135.5	3.3
10°-20°	385.6	9.4
20°-30°	576.4	14.1
30°-40°	683.8	16.7
40°-50°	703.8	17.2
50°-60°	645.7	15.8
60°-70°	522.0	12.8
70°-80°	338.8	8.3
80°-90°	93.4	2.3
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°	1097.5	26.9
0°-40°	1781.3	43.6
0°-60°	3130.7	76.6
0°-90°	4085.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4085.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1434	1434	1434	1434	1434	
5°	1432	1422	1428	1427	1425	136
15°	1362	1357	1369	1375	1379	384
25°	1231	1232	1255	1266	1276	567
35°	1053	1062	1096	1120	1136	659
45°	852	866	910	954	979	657
55°	642	662	722	780	807	574
65°	428	453	529	599	627	423
75°	217	257	344	385	385	230
85°	46	78	85	82	81	57
90°	0	0	0	0	0	



TEST NUMBER: P233193

CATALOG NUMBER: FCB-24-4-LD4-50-30-UNV-EDD1-WDP6

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1433.6	1433.6	1433.6	1433.6	1433.6
2.5°	1439.2	1428.0	1433.6	1432.2	1425.2
5°	1432.2	1422.4	1428.0	1426.6	1425.2
7.5°	1422.4	1412.6	1419.6	1418.2	1419.6
10°	1405.6	1397.3	1405.6	1407.0	1407.0
12.5°	1384.7	1377.7	1388.9	1391.7	1394.5
15°	1362.3	1356.7	1369.3	1374.9	1379.1
17.5°	1334.3	1330.1	1345.5	1352.5	1358.1
20°	1303.5	1302.1	1318.9	1325.9	1332.9
22.5°	1268.6	1268.6	1288.2	1296.6	1306.3
25°	1230.8	1232.2	1254.6	1265.8	1275.6
27.5°	1190.3	1191.7	1218.2	1232.2	1243.4
30°	1145.5	1151.1	1179.1	1197.2	1209.8
32.5°	1100.7	1107.7	1138.5	1159.5	1173.5
35°	1053.2	1061.6	1096.5	1120.3	1135.7
37.5°	1004.2	1014.0	1051.8	1078.4	1096.5
40°	955.3	966.5	1005.6	1036.4	1057.4
42.5°	903.5	916.1	959.5	995.8	1018.2
45°	851.8	865.8	910.5	953.9	979.1
47.5°	800.0	816.8	864.4	911.9	938.5
50°	746.9	763.7	814.0	868.6	895.1
52.5°	693.7	713.3	769.3	825.2	851.8
55°	642.0	661.6	721.7	780.5	807.0
57.5°	588.8	608.4	674.2	735.7	762.3
60°	534.3	556.7	625.2	688.1	717.5
62.5°	481.1	504.9	577.6	644.8	672.8
65°	428.0	453.2	528.7	598.6	626.6
67.5°	373.4	402.8	481.1	552.5	581.8
70°	320.3	352.5	435.0	506.3	534.3
72.5°	268.5	303.5	388.8	461.6	478.3
75°	216.8	257.4	344.1	384.6	384.6
77.5°	167.8	212.6	293.7	309.1	317.5
80°	121.7	170.6	221.0	239.2	236.4
82.5°	81.1	130.1	158.0	158.0	153.9
85°	46.2	78.3	85.3	82.5	81.1
87.5°	19.6	29.4	26.6	21.0	18.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)