

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: P233172

Luminaire Tested: **FCB-24-4-LD4-40-50-UNV-EDD1-WDA6**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P233172  
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-LD4-40-50-UNV-EDD1-WDA6  
Description: FAILSAFE 2X4 FCB LED TROFFER  
.060 ACRYLIC LENS  
Light Source: (168)5000K CCT, 80 CRI LEDs  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

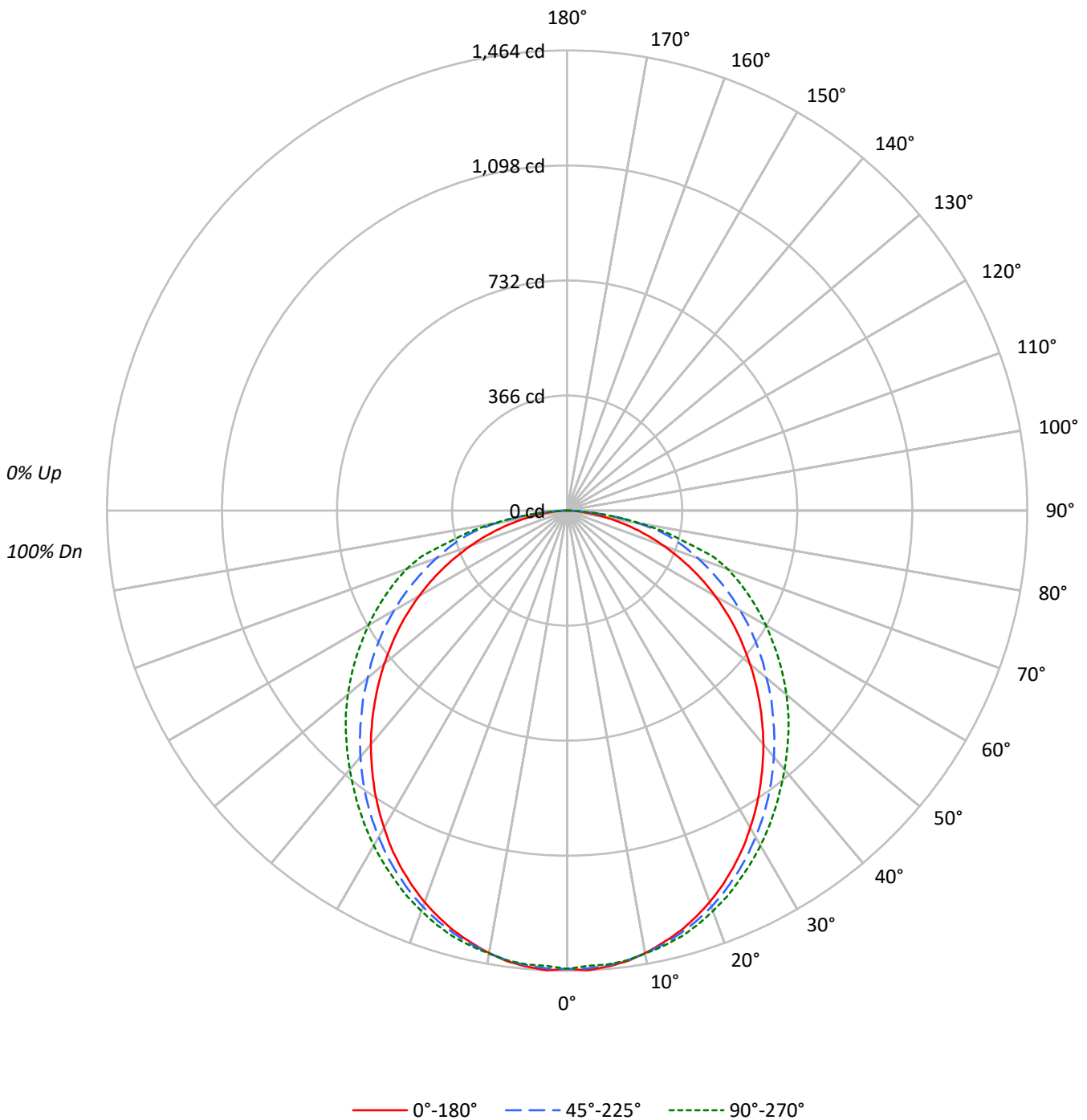
Lumens per Lamp: N/A  
Luminaire Lumens: 4155.0 lumens  
Efficiency: N/A  
Efficacy: 143.3 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.25 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 29  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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	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°	1962	1962	1962
5°	1968	1962	1958
10°	1953	1953	1955
15°	1930	1940	1954
20°	1898	1921	1941
25°	1859	1894	1926
30°	1810	1863	1912
35°	1759	1832	1897
40°	1707	1797	1889
45°	1649	1762	1895
50°	1590	1733	1906
55°	1532	1722	1926
60°	1462	1711	1964
65°	1386	1712	2029
70°	1282	1740	2138
75°	1146	1820	2034
80°	959	1742	1863
85°	724	1340	1274



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	137.8	3.3
10°-20°	392.2	9.4
20°-30°	586.3	14.1
30°-40°	695.5	16.7
40°-50°	715.9	17.2
50°-60°	656.7	15.8
60°-70°	531.0	12.8
70°-80°	344.6	8.3
80°-90°	95.0	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°	1116.3	26.9
0°-40°	1811.8	43.6
0°-60°	3184.4	76.6
0°-90°	4155.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4155.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1458	1458	1458	1458	1458	
5°	1457	1447	1452	1451	1450	138
15°	1386	1380	1393	1398	1403	390
25°	1252	1253	1276	1288	1297	576
35°	1071	1080	1115	1140	1155	670
45°	866	881	926	970	996	669
55°	653	673	734	794	821	583
65°	435	461	538	609	637	430
75°	220	262	350	391	391	234
85°	47	80	87	84	82	57
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1458.2	1458.2	1458.2	1458.2	1458.2
2.5°	1463.9	1452.5	1458.2	1456.8	1449.7
5°	1456.8	1446.8	1452.5	1451.1	1449.7
7.5°	1446.8	1436.8	1444.0	1442.5	1444.0
10°	1429.7	1421.2	1429.7	1431.2	1431.2
12.5°	1408.4	1401.3	1412.7	1415.5	1418.4
15°	1385.6	1379.9	1392.7	1398.4	1402.7
17.5°	1357.2	1352.9	1368.6	1375.7	1381.4
20°	1325.9	1324.5	1341.5	1348.6	1355.8
22.5°	1290.3	1290.3	1310.2	1318.8	1328.7
25°	1251.9	1253.3	1276.1	1287.5	1297.4
27.5°	1210.7	1212.1	1239.1	1253.3	1264.7
30°	1165.1	1170.8	1199.3	1217.8	1230.6
32.5°	1119.6	1126.7	1158.0	1179.4	1193.6
35°	1071.2	1079.8	1115.3	1139.5	1155.2
37.5°	1021.4	1031.4	1069.8	1096.8	1115.3
40°	971.7	983.0	1022.9	1054.2	1075.5
42.5°	919.0	931.8	975.9	1012.9	1035.7
45°	866.4	880.6	926.1	970.2	995.8
47.5°	813.7	830.8	879.2	927.6	954.6
50°	759.7	776.8	828.0	883.4	910.5
52.5°	705.6	725.5	782.4	839.3	866.4
55°	653.0	672.9	734.1	793.8	820.9
57.5°	598.9	618.8	685.7	748.3	775.3
60°	543.4	566.2	635.9	699.9	729.8
62.5°	489.4	513.6	587.5	655.8	684.3
65°	435.3	460.9	537.8	608.9	637.3
67.5°	379.8	409.7	489.4	561.9	591.8
70°	325.8	358.5	442.4	515.0	543.4
72.5°	273.1	308.7	395.5	469.5	486.5
75°	220.5	261.8	350.0	391.2	391.2
77.5°	170.7	216.2	298.8	314.4	322.9
80°	123.8	173.6	224.8	243.3	240.4
82.5°	82.5	132.3	160.8	160.8	156.5
85°	46.9	79.7	86.8	83.9	82.5
87.5°	19.9	29.9	27.0	21.3	18.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)