

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: P233169

Luminaire Tested: **FCB-24-4-LD4-40-30-UNV-EDD1-WDA6**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P233169  
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-LD4-40-30-UNV-EDD1-WDA6  
Description: FAILSAFE 2X4 FCB LED TROFFER  
.060 ACRYLIC LENS  
Light Source: (168)3000K CCT, 80 CRI LEDs  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

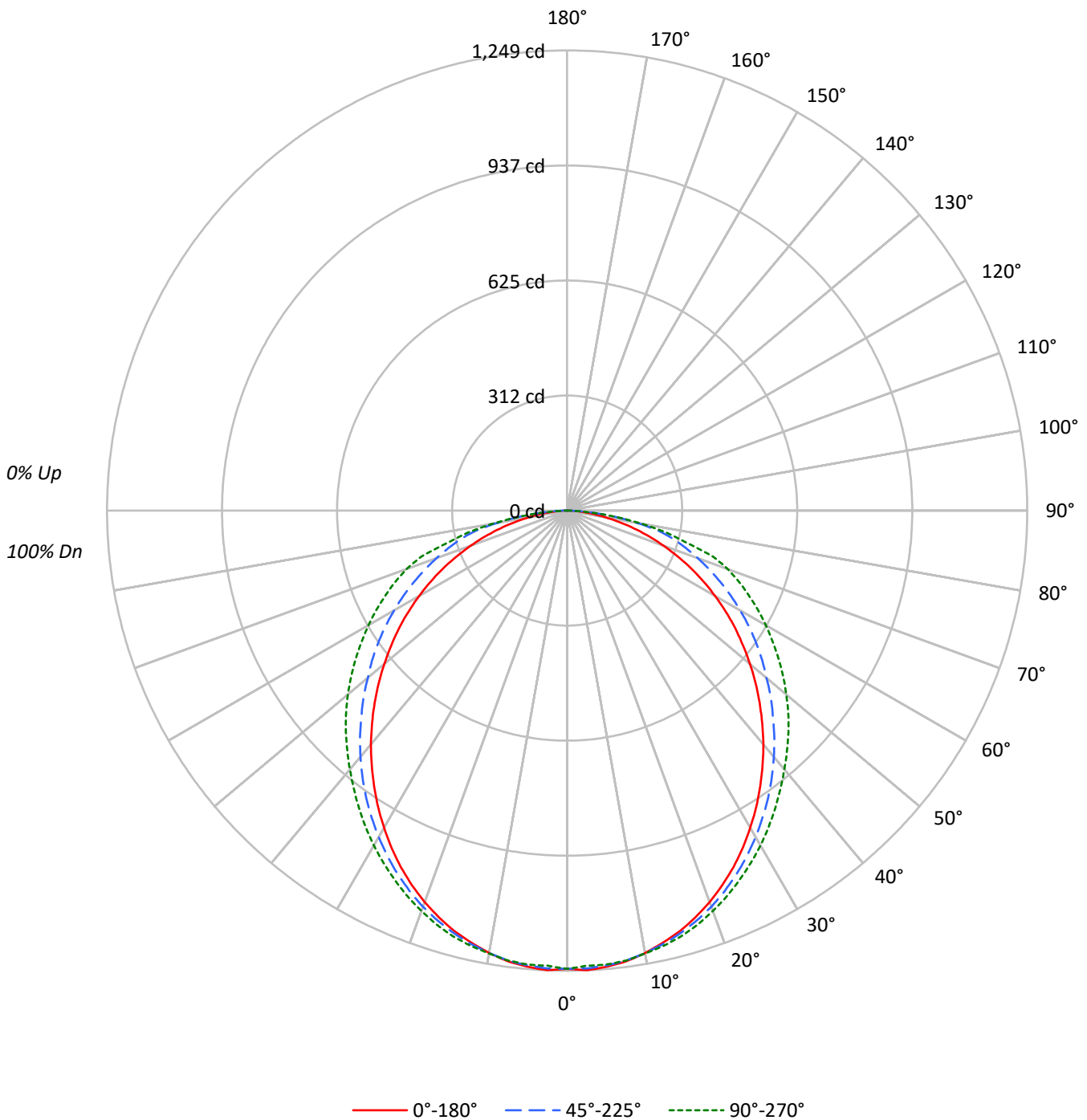
Lumens per Lamp: N/A  
Luminaire Lumens: 3544.0 lumens  
Efficiency: N/A  
Efficacy: 122.2 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.25 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 29  
Input Voltage (V): 120  
Input Current (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	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					100			
1	108	103	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83					83			
2	98	90	83	77	95	88	81	76	84	79	74	81	76	72	78	74	71	68					68			
3	89	78	70	63	87	77	69	63	74	67	62	71	65	61	68	64	60	57					57			
4	82	69	60	54	79	68	60	53	66	58	52	63	57	52	61	56	51	49					49			
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42					42			
6	69	56	47	40	67	55	46	40	53	45	40	51	44	39	50	44	39	37					37			
7	64	51	42	35	63	50	41	35	48	41	35	47	40	35	45	39	35	32					32			
8	60	46	38	32	58	45	37	32	44	37	31	43	36	31	42	36	31	29					29			
9	56	42	34	28	54	42	34	28	41	33	28	40	33	28	38	32	28	26					26			
10	52	39	31	26	51	39	31	26	38	31	26	37	30	25	36	30	25	24					24			

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

	0°	45°	90°
0°	1674	1674	1674
5°	1678	1673	1670
10°	1666	1666	1668
15°	1646	1655	1667
20°	1619	1638	1656
25°	1585	1616	1643
30°	1544	1589	1631
35°	1501	1563	1618
40°	1456	1532	1611
45°	1406	1503	1616
50°	1356	1478	1626
55°	1307	1469	1642
60°	1247	1460	1675
65°	1182	1460	1731
70°	1093	1485	1823
75°	978	1552	1735
80°	818	1485	1589
85°	618	1142	1087



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	117.5	3.3
10°-20°	334.5	9.4
20°-30°	500.1	14.1
30°-40°	593.2	16.7
40°-50°	610.6	17.2
50°-60°	560.1	15.8
60°-70°	452.9	12.8
70°-80°	293.9	8.3
80°-90°	81.1	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°	952.1	26.9
0°-40°	1545.3	43.6
0°-60°	2716.1	76.6
0°-90°	3544.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3544.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1244	1244	1244	1244	1244	
5°	1242	1234	1239	1238	1236	118
15°	1182	1177	1188	1193	1196	333
25°	1068	1069	1088	1098	1107	491
35°	914	921	951	972	985	571
45°	739	751	790	828	849	570
55°	557	574	626	677	700	498
65°	371	393	459	519	544	367
75°	188	223	298	334	334	200
85°	40	68	74	72	70	49
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1243.8	1243.8	1243.8	1243.8	1243.8
2.5°	1248.6	1238.9	1243.8	1242.5	1236.5
5°	1242.5	1234.1	1238.9	1237.7	1236.5
7.5°	1234.1	1225.6	1231.6	1230.4	1231.6
10°	1219.5	1212.2	1219.5	1220.7	1220.7
12.5°	1201.3	1195.2	1204.9	1207.4	1209.8
15°	1181.9	1177.0	1187.9	1192.8	1196.4
17.5°	1157.6	1154.0	1167.3	1173.4	1178.2
20°	1130.9	1129.7	1144.3	1150.3	1156.4
22.5°	1100.6	1100.6	1117.6	1124.8	1133.3
25°	1067.8	1069.0	1088.4	1098.1	1106.6
27.5°	1032.6	1033.8	1056.9	1069.0	1078.7
30°	993.8	998.6	1022.9	1038.7	1049.6
32.5°	955.0	961.0	987.7	1005.9	1018.1
35°	913.7	921.0	951.3	972.0	985.3
37.5°	871.2	879.7	912.5	935.6	951.3
40°	828.8	838.5	872.5	899.1	917.3
42.5°	783.9	794.8	832.4	864.0	883.4
45°	739.0	751.1	789.9	827.6	849.4
47.5°	694.1	708.6	749.9	791.2	814.2
50°	648.0	662.5	706.2	753.5	776.6
52.5°	601.9	618.8	667.4	715.9	739.0
55°	557.0	573.9	626.1	677.1	700.1
57.5°	510.9	527.8	584.9	638.3	661.3
60°	463.5	482.9	542.4	597.0	622.5
62.5°	417.4	438.0	501.1	559.4	583.7
65°	371.3	393.1	458.7	519.3	543.6
67.5°	324.0	349.5	417.4	479.3	504.8
70°	277.9	305.8	377.4	439.3	463.5
72.5°	233.0	263.3	337.3	400.4	415.0
75°	188.1	223.3	298.5	333.7	333.7
77.5°	145.6	184.4	254.8	268.2	275.4
80°	105.6	148.0	191.7	207.5	205.1
82.5°	70.4	112.8	137.1	137.1	133.5
85°	40.0	68.0	74.0	71.6	70.4
87.5°	17.0	25.5	23.1	18.2	15.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)