

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: P233157

Luminaire Tested: **FCB-24-4-LD4-60-30-UNV-EDD1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P233157
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-LD4-60-30-UNV-EDD1
Description: FAILSAFE 2X4 FCB LED TROFFER
OPAL DIFFUSER, NO LENS
Light Source: (168)3000K CCT, 80 CRI LEDs
Ballast/Driver: ELECTRONIC DRIVER

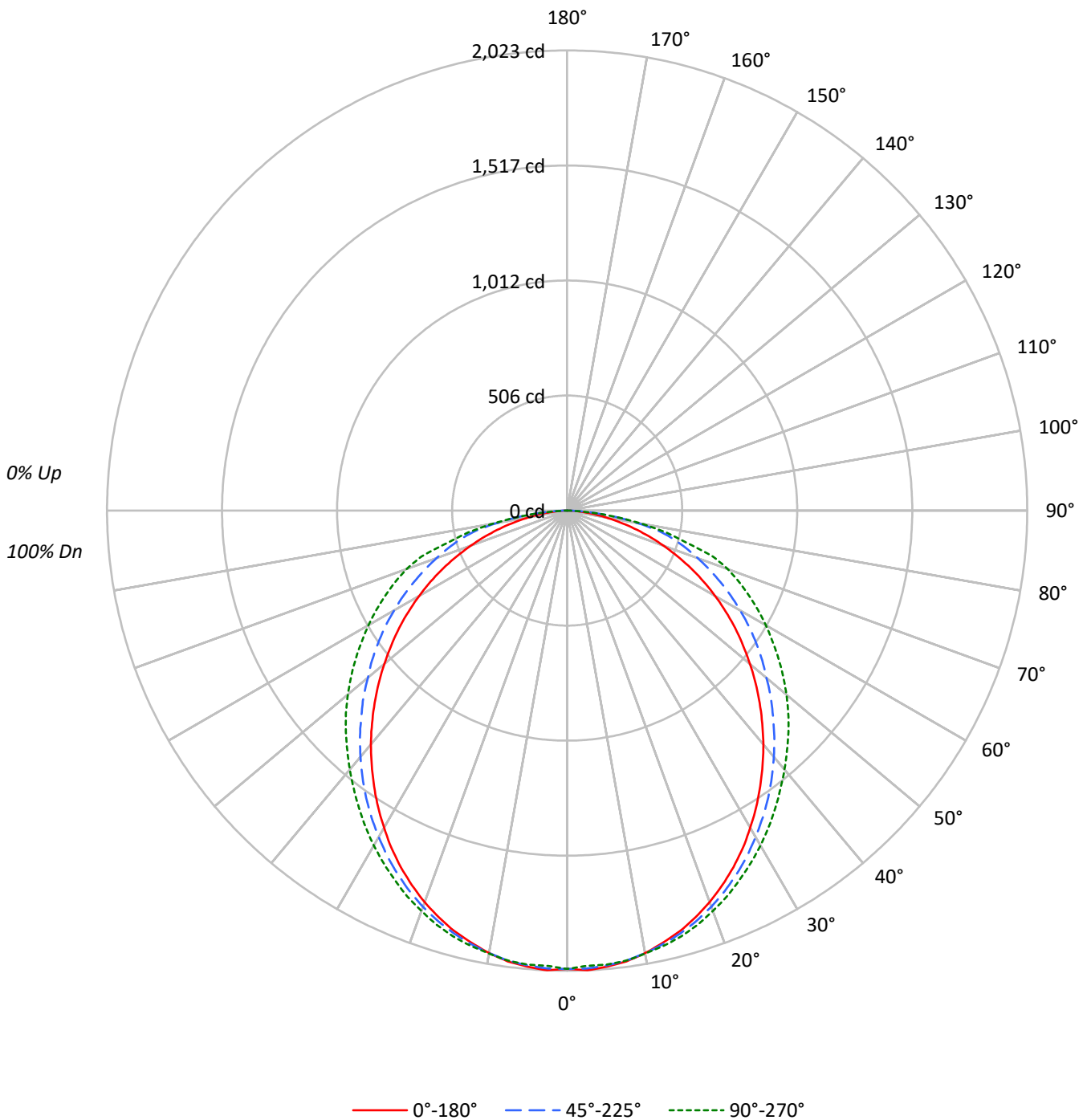
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5741.0 lumens
Efficiency: N/A
Efficacy: 110.0 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): 52.2
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°	2711	2711	2711
5°	2719	2711	2705
10°	2699	2699	2702
15°	2667	2681	2700
20°	2623	2654	2682
25°	2568	2618	2661
30°	2501	2574	2642
35°	2431	2531	2622
40°	2358	2482	2610
45°	2278	2435	2618
50°	2197	2395	2633
55°	2116	2379	2661
60°	2021	2364	2714
65°	1915	2365	2804
70°	1771	2405	2954
75°	1584	2514	2810
80°	1325	2407	2574
85°	1002	1851	1760



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	190.4	3.3
10°-20°	541.9	9.4
20°-30°	810.1	14.1
30°-40°	961.0	16.7
40°-50°	989.1	17.2
50°-60°	907.4	15.8
60°-70°	733.7	12.8
70°-80°	476.2	8.3
80°-90°	131.3	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°	1542.3	26.9
0°-40°	2503.4	43.6
0°-60°	4399.9	76.6
0°-90°	5741.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5741.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2015	2015	2015	2015	2015	
5°	2013	1999	2007	2005	2003	191
15°	1914	1907	1924	1932	1938	539
25°	1730	1732	1763	1779	1793	796
35°	1480	1492	1541	1574	1596	926
45°	1197	1217	1280	1341	1376	924
55°	902	930	1014	1097	1134	806
65°	602	637	743	841	881	594
75°	305	362	484	541	541	324
85°	65	110	120	116	114	79
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2014.8	2014.8	2014.8	2014.8	2014.8
2.5°	2022.7	2006.9	2014.8	2012.8	2003.0
5°	2012.8	1999.1	2006.9	2005.0	2003.0
7.5°	1999.1	1985.3	1995.1	1993.2	1995.1
10°	1975.5	1963.7	1975.5	1977.4	1977.4
12.5°	1946.0	1936.2	1951.9	1955.8	1959.8
15°	1914.5	1906.7	1924.4	1932.2	1938.1
17.5°	1875.2	1869.3	1891.0	1900.8	1908.6
20°	1832.0	1830.0	1853.6	1863.4	1873.3
22.5°	1782.8	1782.8	1810.4	1822.2	1835.9
25°	1729.8	1731.7	1763.2	1778.9	1792.7
27.5°	1672.8	1674.7	1712.1	1731.7	1747.5
30°	1609.9	1617.7	1657.0	1682.6	1700.3
32.5°	1547.0	1556.8	1600.0	1629.5	1649.2
35°	1480.1	1491.9	1541.1	1574.5	1596.1
37.5°	1411.3	1425.1	1478.2	1515.5	1541.1
40°	1342.5	1358.3	1413.3	1456.5	1486.0
42.5°	1269.8	1287.5	1348.4	1399.5	1431.0
45°	1197.1	1216.7	1279.6	1340.6	1376.0
47.5°	1124.4	1147.9	1214.8	1281.6	1319.0
50°	1049.7	1073.2	1144.0	1220.7	1258.0
52.5°	975.0	1002.5	1081.1	1159.7	1197.1
55°	902.2	929.8	1014.3	1096.8	1134.2
57.5°	827.5	855.1	947.4	1033.9	1071.3
60°	750.9	782.3	878.6	967.1	1008.4
62.5°	676.2	709.6	811.8	906.2	945.5
65°	601.5	636.9	743.0	841.3	880.6
67.5°	524.8	566.1	676.2	776.4	817.7
70°	450.1	495.3	611.3	711.6	750.9
72.5°	377.4	426.5	546.5	648.7	672.3
75°	304.7	361.7	483.6	540.6	540.6
77.5°	235.9	298.8	412.8	434.4	446.2
80°	171.0	239.8	310.6	336.1	332.2
82.5°	114.0	182.8	222.1	222.1	216.2
85°	64.9	110.1	119.9	116.0	114.0
87.5°	27.5	41.3	37.3	29.5	25.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)