

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: P233219

Luminaire Tested: **FCB-24-4-LD4-60-40-UNV-EDD1-WDA12**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P233219
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-LD4-60-40-UNV-EDD1-WDA12
Description: FAILSAFE 2X4 FCB LED TROFFER
.125 ACRYLIC LENS
Light Source: (168)4000K CCT, 80 CRI LEDs
Ballast/Driver: ELECTRONIC DRIVER

Summary

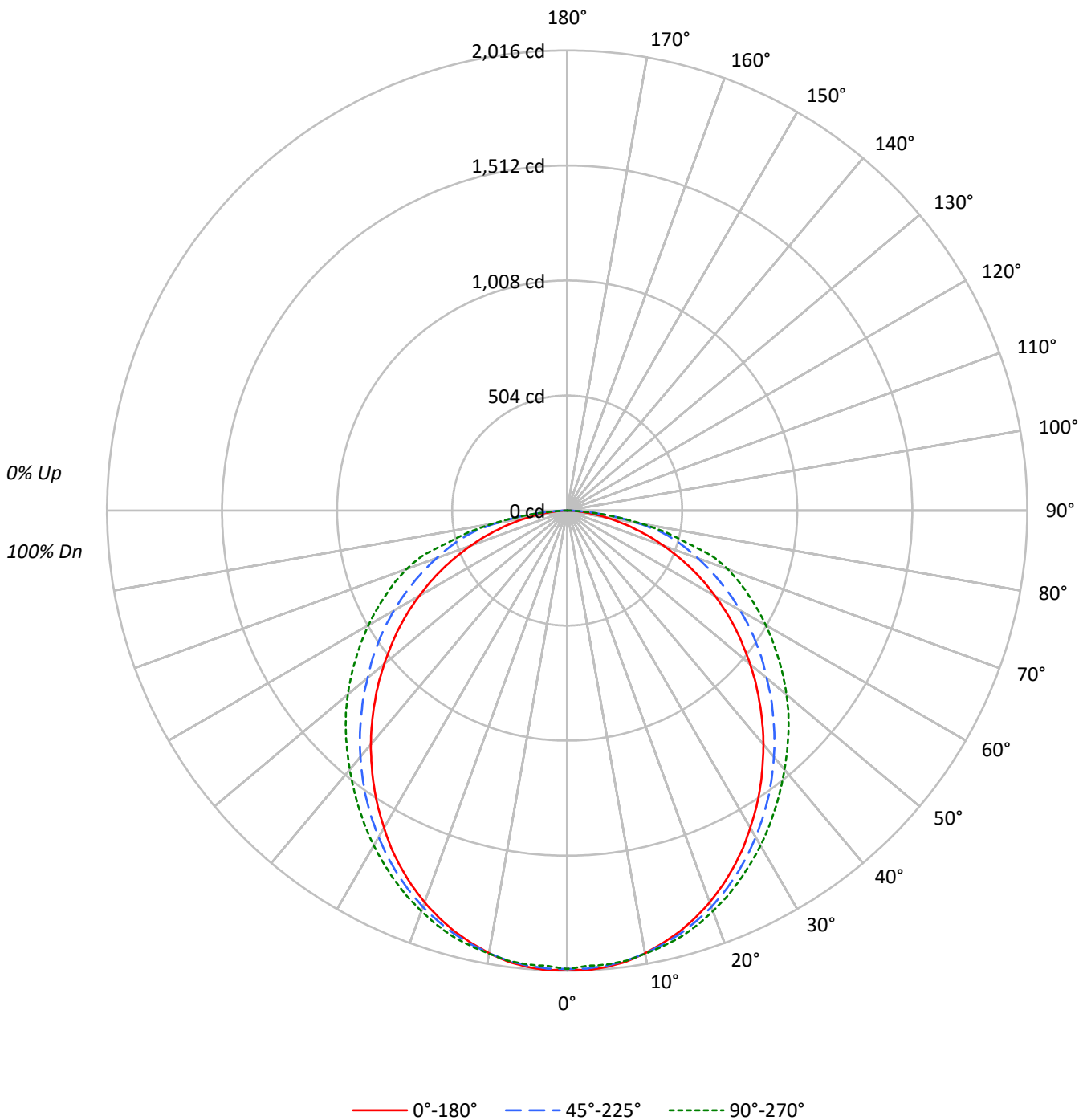
Lumens per Lamp: N/A
Luminaire Lumens: 5723.0 lumens
Efficiency: N/A
Efficacy: 109.6 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.25 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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	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°	2702	2702	2702
5°	2710	2702	2697
10°	2691	2691	2693
15°	2658	2672	2691
20°	2615	2646	2674
25°	2560	2609	2653
30°	2493	2566	2633
35°	2424	2523	2613
40°	2351	2475	2602
45°	2271	2427	2610
50°	2190	2387	2625
55°	2110	2372	2652
60°	2014	2357	2705
65°	1909	2358	2795
70°	1765	2397	2945
75°	1579	2506	2802
80°	1321	2399	2566
85°	999	1845	1755



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	189.8	3.3
10°-20°	540.2	9.4
20°-30°	807.5	14.1
30°-40°	958.0	16.7
40°-50°	986.0	17.2
50°-60°	904.5	15.8
60°-70°	731.4	12.8
70°-80°	474.6	8.3
80°-90°	130.9	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°	1537.5	26.9
0°-40°	2495.5	43.6
0°-60°	4386.1	76.6
0°-90°	5723.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5723.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2008	2008	2008	2008	2008	
5°	2006	1993	2001	1999	1997	190
15°	1908	1901	1918	1926	1932	538
25°	1724	1726	1758	1773	1787	794
35°	1476	1487	1536	1570	1591	923
45°	1193	1213	1276	1336	1372	921
55°	899	927	1011	1093	1131	803
65°	600	635	741	839	878	593
75°	304	360	482	539	539	323
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°	2008.5	2008.5	2008.5	2008.5	2008.5
2.5°	2016.3	2000.6	2008.5	2006.5	1996.7
5°	2006.5	1992.8	2000.6	1998.7	1996.7
7.5°	1992.8	1979.1	1988.9	1986.9	1988.9
10°	1969.3	1957.5	1969.3	1971.2	1971.2
12.5°	1939.9	1930.1	1945.8	1949.7	1953.6
15°	1908.5	1900.7	1918.3	1926.2	1932.1
17.5°	1869.4	1863.5	1885.0	1894.8	1902.7
20°	1826.2	1824.3	1847.8	1857.6	1867.4
22.5°	1777.3	1777.3	1804.7	1816.4	1830.2
25°	1724.3	1726.3	1757.7	1773.3	1787.1
27.5°	1667.5	1669.5	1706.7	1726.3	1742.0
30°	1604.8	1612.7	1651.8	1677.3	1695.0
32.5°	1542.1	1551.9	1595.0	1624.4	1644.0
35°	1475.5	1487.3	1536.2	1569.6	1591.1
37.5°	1406.9	1420.6	1473.5	1510.8	1536.2
40°	1338.3	1354.0	1408.9	1452.0	1481.4
42.5°	1265.8	1283.5	1344.2	1395.2	1426.5
45°	1193.3	1212.9	1275.6	1336.4	1371.6
47.5°	1120.8	1144.3	1211.0	1277.6	1314.8
50°	1046.4	1069.9	1140.4	1216.8	1254.1
52.5°	971.9	999.3	1077.7	1156.1	1193.3
55°	899.4	926.8	1011.1	1093.4	1130.6
57.5°	824.9	852.4	944.5	1030.7	1067.9
60°	748.5	779.9	875.9	964.1	1005.2
62.5°	674.1	707.4	809.3	903.3	942.5
65°	599.6	634.9	740.7	838.7	877.9
67.5°	523.2	564.3	674.1	774.0	815.1
70°	448.7	493.8	609.4	709.3	748.5
72.5°	376.2	425.2	544.7	646.6	670.1
75°	303.7	360.5	482.0	538.9	538.9
77.5°	235.1	297.8	411.5	433.0	444.8
80°	170.5	239.1	309.6	335.1	331.2
82.5°	113.7	182.2	221.4	221.4	215.5
85°	64.7	109.7	119.5	115.6	113.7
87.5°	27.4	41.1	37.2	29.4	25.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)