

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: P233152

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

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P233152
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
Description: FAILSAFE 2X4 FCB LED TROFFER
OPAL DIFFUSER, NO LENS
Light Source: (168)5000K CCT, 80 CRI LEDs
Ballast/Driver: ELECTRONIC DRIVER

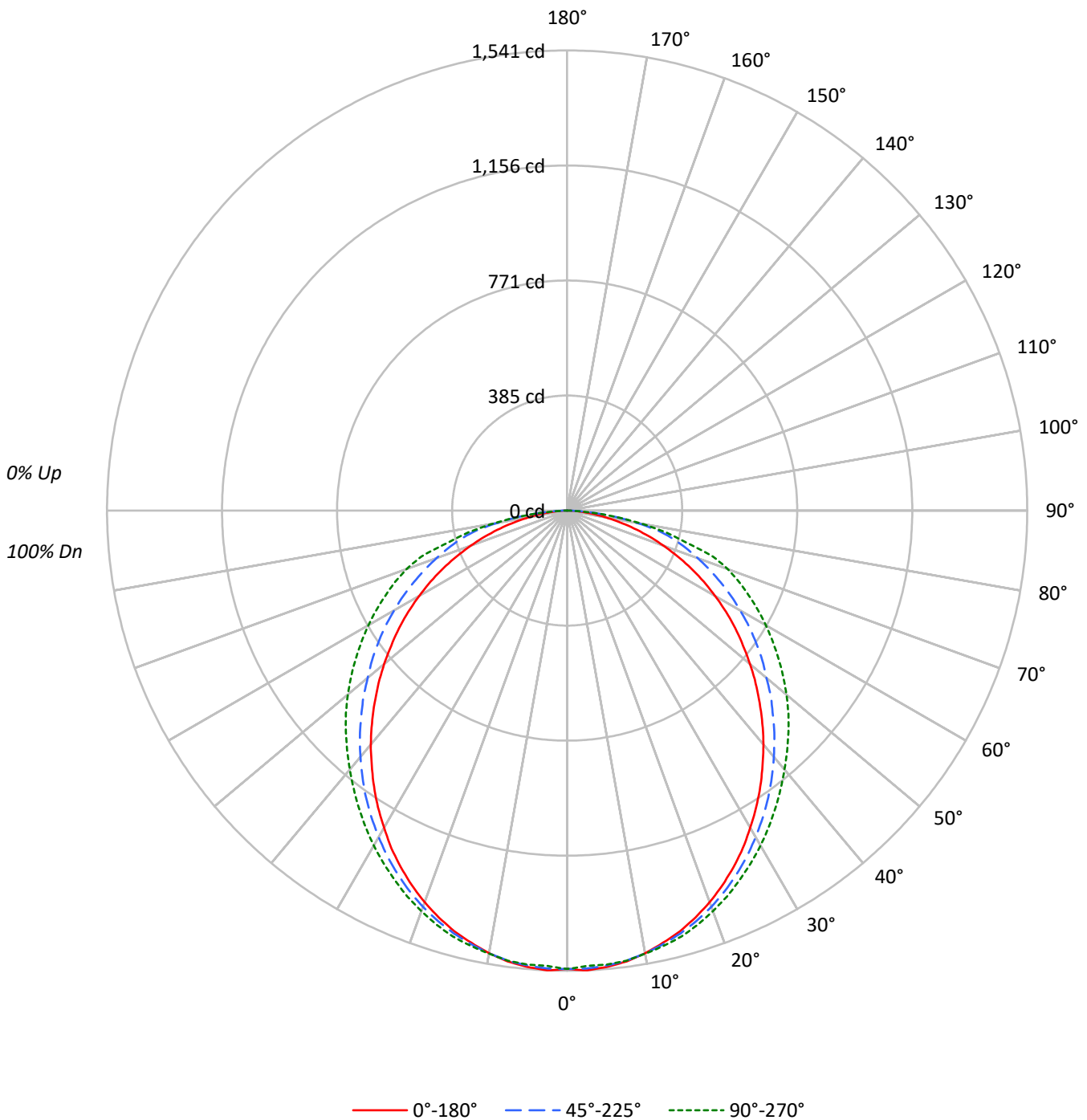
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4374.0 lumens
Efficiency: N/A
Efficacy: 150.8 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	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°	2065	2065	2065
5°	2071	2065	2061
10°	2056	2056	2058
15°	2032	2042	2057
20°	1999	2022	2044
25°	1957	1994	2028
30°	1906	1961	2013
35°	1852	1929	1997
40°	1797	1891	1989
45°	1735	1855	1995
50°	1674	1824	2006
55°	1612	1813	2027
60°	1540	1801	2067
65°	1459	1802	2136
70°	1349	1832	2251
75°	1207	1915	2141
80°	1010	1833	1961
85°	763	1411	1342



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	145.1	3.3
10°-20°	412.8	9.4
20°-30°	617.2	14.1
30°-40°	732.2	16.7
40°-50°	753.6	17.2
50°-60°	691.3	15.8
60°-70°	559.0	12.8
70°-80°	362.8	8.3
80°-90°	100.0	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°	1175.1	26.9
0°-40°	1907.3	43.6
0°-60°	3352.2	76.6
0°-90°	4374.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4374.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1535	1535	1535	1535	1535	
5°	1534	1523	1529	1528	1526	146
15°	1459	1453	1466	1472	1477	411
25°	1318	1319	1343	1355	1366	607
35°	1128	1137	1174	1200	1216	705
45°	912	927	975	1021	1048	704
55°	687	708	773	836	864	614
65°	458	485	566	641	671	453
75°	232	276	368	412	412	247
85°	49	84	91	88	87	61
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1535.0	1535.0	1535.0	1535.0	1535.0
2.5°	1541.0	1529.1	1535.0	1533.5	1526.1
5°	1533.5	1523.1	1529.1	1527.6	1526.1
7.5°	1523.1	1512.6	1520.1	1518.6	1520.1
10°	1505.1	1496.1	1505.1	1506.6	1506.6
12.5°	1482.6	1475.1	1487.1	1490.1	1493.1
15°	1458.7	1452.7	1466.2	1472.1	1476.6
17.5°	1428.7	1424.2	1440.7	1448.2	1454.2
20°	1395.8	1394.3	1412.2	1419.7	1427.2
22.5°	1358.3	1358.3	1379.3	1388.3	1398.8
25°	1317.9	1319.4	1343.4	1355.3	1365.8
27.5°	1274.5	1276.0	1304.4	1319.4	1331.4
30°	1226.5	1232.5	1262.5	1282.0	1295.4
32.5°	1178.6	1186.1	1219.1	1241.5	1256.5
35°	1127.7	1136.7	1174.1	1199.6	1216.1
37.5°	1075.3	1085.8	1126.2	1154.7	1174.1
40°	1022.9	1034.8	1076.8	1109.7	1132.2
42.5°	967.5	980.9	1027.4	1066.3	1090.3
45°	912.0	927.0	974.9	1021.4	1048.3
47.5°	856.6	874.6	925.5	976.4	1004.9
50°	799.7	817.7	871.6	930.0	958.5
52.5°	742.8	763.8	823.7	883.6	912.0
55°	687.4	708.4	772.8	835.7	864.1
57.5°	630.5	651.5	721.8	787.7	816.2
60°	572.1	596.0	669.4	736.8	768.3
62.5°	515.2	540.6	618.5	690.4	720.3
65°	458.3	485.2	566.1	641.0	670.9
67.5°	399.9	431.3	515.2	591.6	623.0
70°	343.0	377.4	465.8	542.1	572.1
72.5°	287.5	325.0	416.3	494.2	512.2
75°	232.1	275.6	368.4	411.8	411.8
77.5°	179.7	227.6	314.5	331.0	340.0
80°	130.3	182.7	236.6	256.1	253.1
82.5°	86.9	139.3	169.2	169.2	164.7
85°	49.4	83.9	91.4	88.4	86.9
87.5°	21.0	31.4	28.5	22.5	19.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)