

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: P233153

Luminaire Tested: **FCB-24-4-LD4-50-30-UNV-EDD1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P233153
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-LD4-50-30-UNV-EDD1
Description: FAILSAFE 2X4 FCB LED TROFFER
OPAL DIFFUSER, NO LENS
Light Source: (168)3000K CCT, 80 CRI LEDs
Ballast/Driver: ELECTRONIC DRIVER

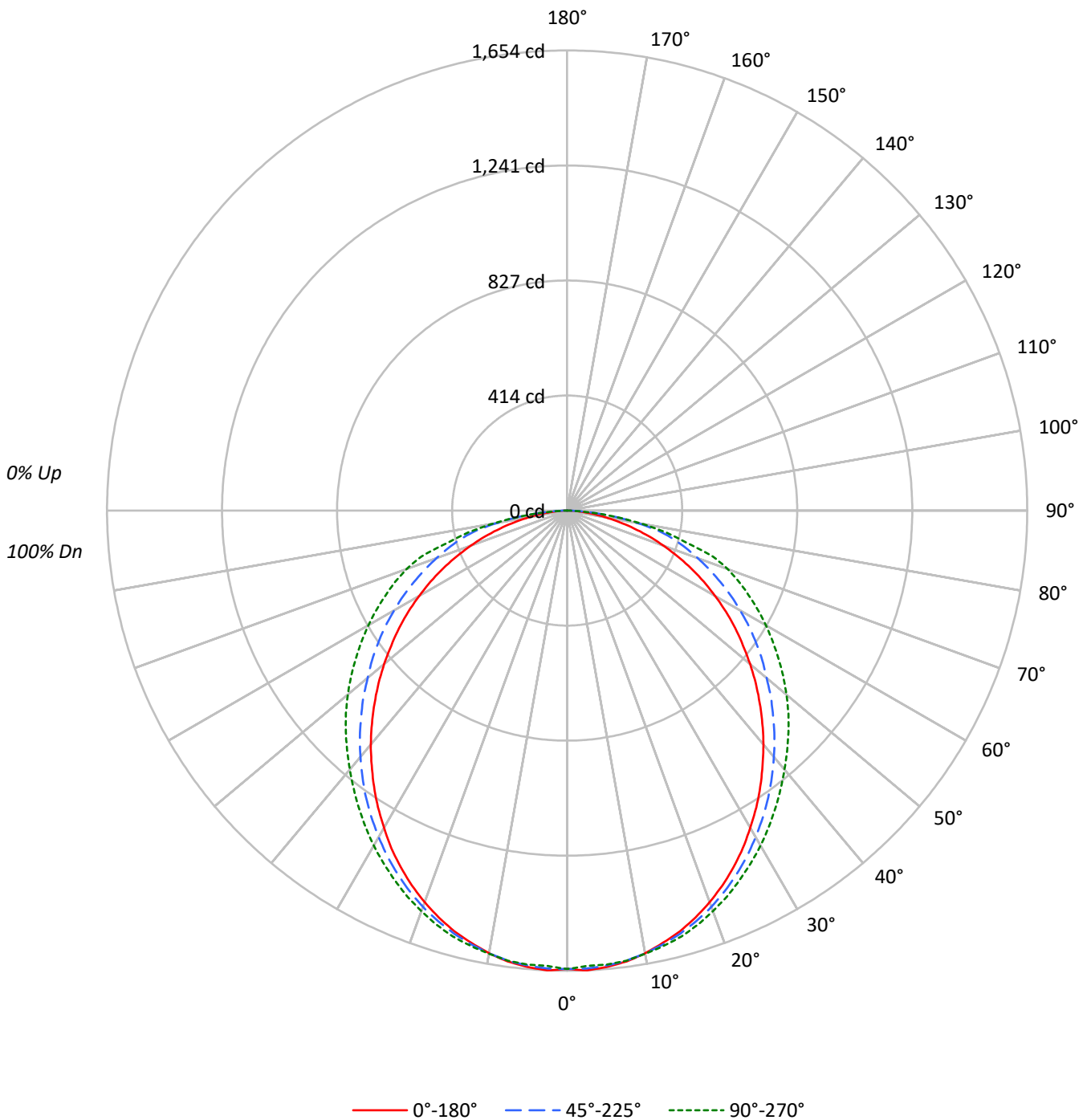
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4695.0 lumens
Efficiency: N/A
Efficacy: 115.4 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): 40.7
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°	2217	2217	2217
5°	2223	2217	2212
10°	2207	2207	2209
15°	2181	2192	2208
20°	2145	2171	2194
25°	2100	2141	2177
30°	2046	2105	2160
35°	1988	2070	2144
40°	1928	2030	2135
45°	1863	1991	2141
50°	1797	1958	2153
55°	1731	1946	2176
60°	1653	1934	2219
65°	1566	1934	2293
70°	1448	1967	2416
75°	1295	2056	2298
80°	1084	1968	2105
85°	818	1514	1439



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	155.7	3.3
10°-20°	443.2	9.4
20°-30°	662.5	14.1
30°-40°	785.9	16.7
40°-50°	808.9	17.2
50°-60°	742.1	15.8
60°-70°	600.0	12.8
70°-80°	389.4	8.3
80°-90°	107.4	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°	1261.3	26.9
0°-40°	2047.2	43.6
0°-60°	3598.2	76.6
0°-90°	4695.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4695.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1648	1648	1648	1648	1648	
5°	1646	1635	1641	1640	1638	156
15°	1566	1559	1574	1580	1585	441
25°	1415	1416	1442	1455	1466	651
35°	1210	1220	1260	1288	1305	757
45°	979	995	1046	1096	1125	755
55°	738	760	830	897	928	659
65°	492	521	608	688	720	486
75°	249	296	395	442	442	265
85°	53	90	98	95	93	65
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1647.7	1647.7	1647.7	1647.7	1647.7
2.5°	1654.1	1641.3	1647.7	1646.1	1638.1
5°	1646.1	1634.8	1641.3	1639.7	1638.1
7.5°	1634.8	1623.6	1631.6	1630.0	1631.6
10°	1615.6	1605.9	1615.6	1617.2	1617.2
12.5°	1591.4	1583.4	1596.3	1599.5	1602.7
15°	1565.7	1559.3	1573.8	1580.2	1585.0
17.5°	1533.6	1528.7	1546.4	1554.5	1560.9
20°	1498.2	1496.6	1515.9	1523.9	1532.0
22.5°	1458.0	1458.0	1480.5	1490.2	1501.4
25°	1414.6	1416.2	1441.9	1454.8	1466.1
27.5°	1368.0	1369.6	1400.1	1416.2	1429.1
30°	1316.6	1323.0	1355.1	1376.0	1390.5
32.5°	1265.1	1273.2	1308.5	1332.6	1348.7
35°	1210.5	1220.1	1260.3	1287.6	1305.3
37.5°	1154.2	1165.4	1208.8	1239.4	1260.3
40°	1097.9	1110.8	1155.8	1191.2	1215.3
42.5°	1038.5	1052.9	1102.8	1144.5	1170.3
45°	979.0	995.1	1046.5	1096.3	1125.3
47.5°	919.5	938.8	993.4	1048.1	1078.6
50°	858.4	877.7	935.6	998.3	1028.8
52.5°	797.3	819.8	884.1	948.4	979.0
55°	737.8	760.4	829.5	897.0	927.5
57.5°	676.8	699.3	774.8	845.6	876.1
60°	614.1	639.8	718.6	790.9	824.7
62.5°	553.0	580.3	663.9	741.1	773.2
65°	491.9	520.8	607.6	688.0	720.2
67.5°	429.2	463.0	553.0	635.0	668.7
70°	368.1	405.1	499.9	581.9	614.1
72.5°	308.6	348.8	446.9	530.5	549.8
75°	249.2	295.8	395.4	442.1	442.1
77.5°	192.9	244.3	337.6	355.3	364.9
80°	139.9	196.1	254.0	274.9	271.7
82.5°	93.2	149.5	181.6	181.6	176.8
85°	53.0	90.0	98.1	94.8	93.2
87.5°	22.5	33.8	30.5	24.1	20.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)