

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: P233031

Luminaire Tested: **FCB-12-4-LD4-35-40-UNV-EDD1**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P233031
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P35573)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FCB-12-4-LD4-35-40-UNV-EDD1
Description: FAILSAFE 1X4 FCB LED TROFFER
OPAL DIFFUSER, NO LENS
Light Source: (84)4000K CCT, 80 CRI LEDs
Ballast/Driver: ELECTRONIC DRIVER

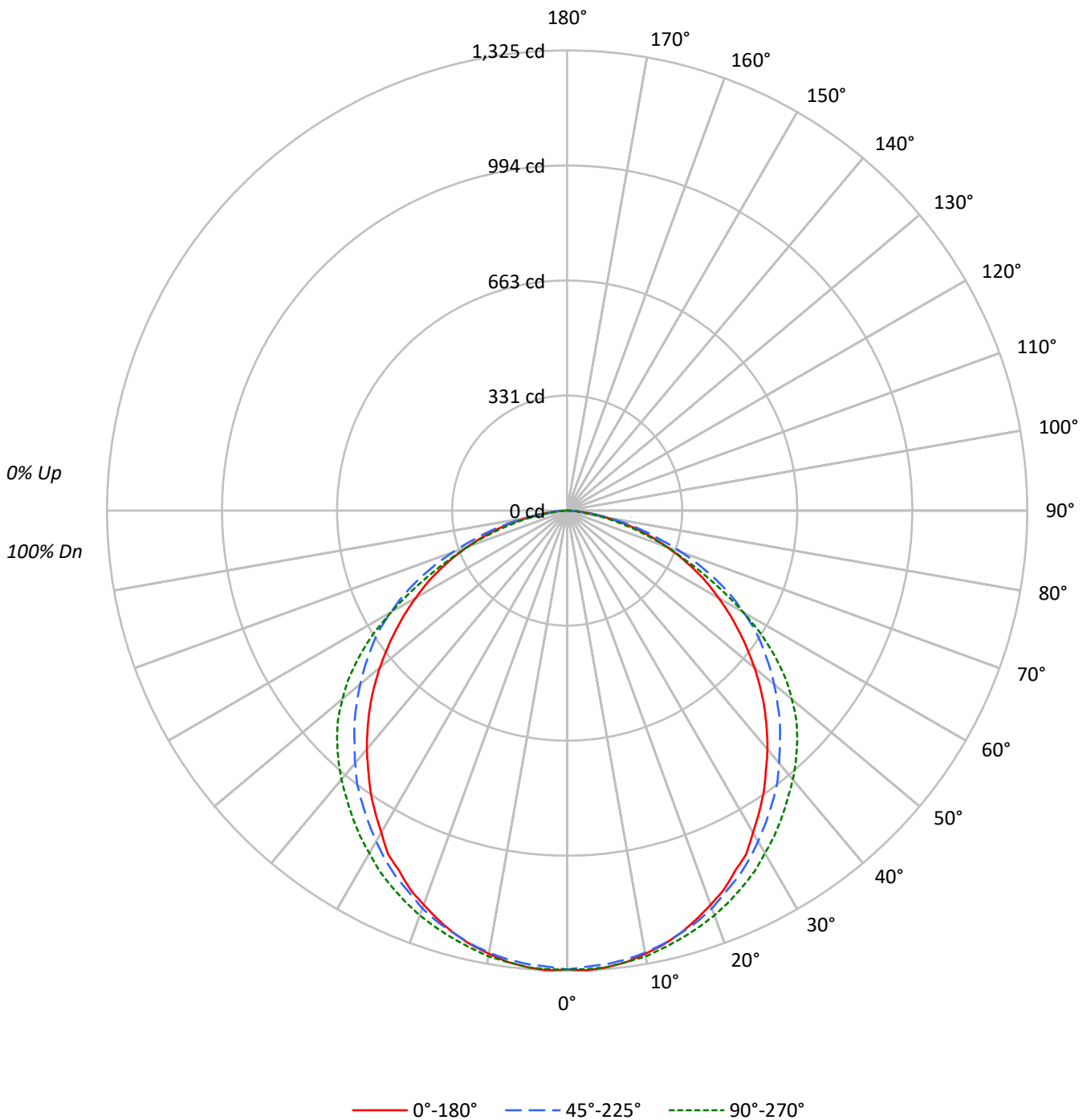
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3662.0 lumens
Efficiency: N/A
Efficacy: 116.3 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.28 / 1.37
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 31.5
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	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84					84			
2	99	91	84	79	97	89	83	78	86	80	76	82	78	74	79	76	73	70					70			
3	90	80	72	66	88	78	71	65	75	69	64	73	67	63	70	66	62	59					59			
4	83	71	62	56	81	70	61	55	67	60	54	65	59	54	63	57	53	51					51			
5	76	63	54	48	74	62	54	48	60	53	47	58	52	46	56	51	46	44					44			
6	70	57	48	42	68	56	48	42	54	47	41	53	46	41	51	45	40	38					38			
7	65	52	43	37	63	51	43	37	49	42	36	48	41	36	47	40	36	34					34			
8	61	47	39	33	59	46	38	33	45	38	33	44	37	32	43	37	32	30					30			
9	57	43	35	30	55	43	35	29	42	34	29	40	34	29	39	33	29	27					27			
10	53	40	32	27	52	39	32	27	38	31	27	37	31	26	37	31	26	25					25			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3556	3556	3556
5°	3565	3541	3565
10°	3542	3532	3562
15°	3511	3511	3551
20°	3459	3490	3552
25°	3399	3457	3548
30°	3327	3416	3540
35°	3244	3380	3541
40°	3152	3336	3551
45°	3057	3298	3566
50°	2948	3257	3537
55°	2829	3227	3422
60°	2711	3158	3148
65°	2586	3023	2759
70°	2400	2755	2386
75°	2177	2403	1971
80°	1734	1903	1455
85°	1226	1059	837



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	125.0	3.4
10°-20°	357.2	9.8
20°-30°	538.6	14.7
30°-40°	645.6	17.6
40°-50°	670.0	18.3
50°-60°	604.3	16.5
60°-70°	440.8	12.0
70°-80°	231.3	6.3
80°-90°	49.3	1.3
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°	1020.8	27.9
0°-40°	1666.4	45.5
0°-60°	2940.6	80.3
0°-90°	3662.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3662.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1322	1322	1322	1322	1322	
5°	1320	1316	1311	1320	1320	125
15°	1260	1260	1260	1275	1275	355
25°	1145	1150	1164	1190	1195	528
35°	988	998	1029	1067	1078	617
45°	803	820	867	919	937	619
55°	603	625	688	733	729	540
65°	406	430	475	457	433	402
75°	209	238	231	200	190	220
85°	40	49	34	29	27	51
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1321.5	1321.5	1321.5	1321.5	1321.5
2.5°	1325.1	1321.5	1314.3	1321.5	1321.5
5°	1319.7	1316.1	1310.7	1319.7	1319.7
7.5°	1310.7	1307.1	1303.5	1312.5	1310.7
10°	1296.2	1294.4	1292.6	1303.5	1303.5
12.5°	1280.0	1280.0	1278.2	1290.8	1289.0
15°	1260.1	1260.1	1260.1	1274.6	1274.6
17.5°	1234.9	1238.5	1242.1	1258.3	1258.3
20°	1207.8	1211.4	1218.6	1238.5	1240.3
22.5°	1180.7	1182.5	1189.7	1213.2	1218.6
25°	1144.6	1150.0	1164.4	1189.7	1195.1
27.5°	1115.7	1117.5	1133.8	1162.6	1169.9
30°	1070.6	1083.2	1099.5	1132.0	1139.2
32.5°	1029.0	1039.9	1065.2	1099.5	1110.3
35°	987.5	998.4	1029.0	1067.0	1077.8
37.5°	940.6	956.8	992.9	1030.9	1043.5
40°	897.3	911.7	949.6	996.6	1011.0
42.5°	850.3	864.8	906.3	958.6	974.9
45°	803.4	819.6	866.6	918.9	937.0
47.5°	754.6	772.7	821.4	879.2	895.5
50°	704.1	723.9	778.1	837.7	844.9
52.5°	653.5	675.2	733.0	785.3	792.5
55°	603.0	624.6	687.8	733.0	729.4
57.5°	554.2	577.7	642.7	666.2	662.6
60°	503.7	529.0	586.7	597.6	584.9
62.5°	456.8	480.2	534.4	525.4	509.1
65°	406.2	429.7	474.8	456.8	433.3
67.5°	355.7	384.5	413.4	382.7	364.7
70°	305.1	337.6	350.2	319.5	303.3
72.5°	256.4	290.7	287.0	256.4	245.5
75°	209.4	238.3	231.1	200.4	189.6
77.5°	158.9	191.4	175.1	149.8	140.8
80°	111.9	140.8	122.8	101.1	93.9
82.5°	74.0	93.9	75.8	59.6	54.2
85°	39.7	48.7	34.3	28.9	27.1
87.5°	16.2	14.4	12.6	12.6	10.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)