

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: P233191

Luminaire Tested: **FCB-24-4-LD4-40-40-UNV-EDD1-WDP6**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P233191
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-LD4-40-40-UNV-EDD1-WDP6
Description: FAILSAFE 2X4 FCB LED TROFFER
.060 POLYCARBONATE LENS
Light Source: (168)4000K CCT, 80 CRI LEDs
Ballast/Driver: ELECTRONIC DRIVER

Summary

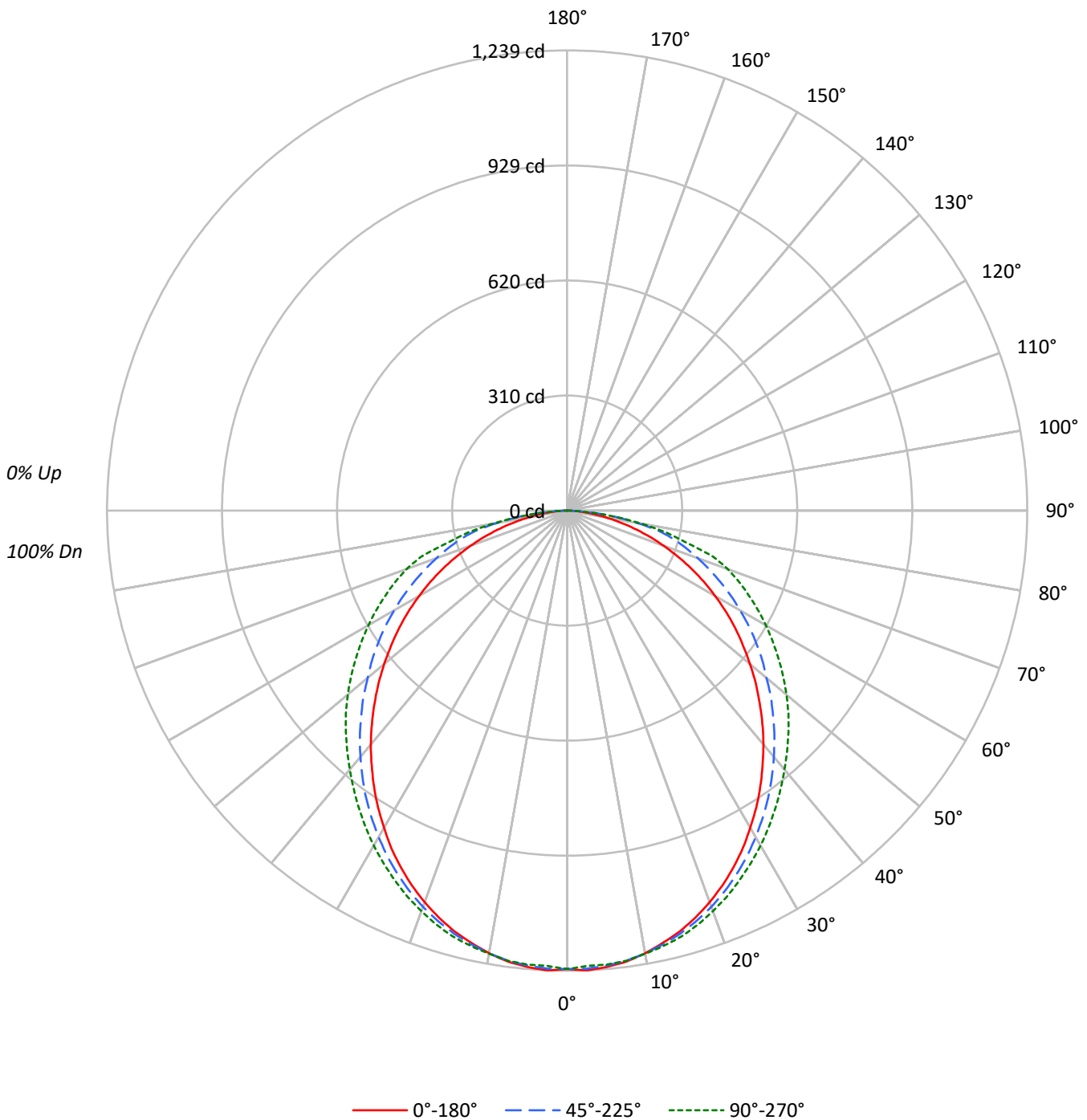
Lumens per Lamp: N/A
Luminaire Lumens: 3517.0 lumens
Efficiency: N/A
Efficacy: 121.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.25 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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	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°	1661	1661	1661
5°	1665	1661	1657
10°	1653	1653	1655
15°	1634	1642	1654
20°	1607	1626	1643
25°	1573	1603	1630
30°	1532	1577	1618
35°	1489	1551	1606
40°	1445	1521	1599
45°	1395	1492	1604
50°	1346	1467	1613
55°	1297	1458	1630
60°	1238	1449	1662
65°	1173	1449	1718
70°	1085	1473	1810
75°	970	1540	1721
80°	812	1475	1577
85°	613	1135	1078



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	116.6	3.3
10°-20°	332.0	9.4
20°-30°	496.3	14.1
30°-40°	588.7	16.7
40°-50°	605.9	17.2
50°-60°	555.9	15.8
60°-70°	449.5	12.8
70°-80°	291.7	8.3
80°-90°	80.4	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°	944.9	26.9
0°-40°	1533.6	43.6
0°-60°	2695.4	76.6
0°-90°	3517.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3517.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1234	1234	1234	1234	1234	
5°	1233	1225	1230	1228	1227	117
15°	1173	1168	1179	1184	1187	330
25°	1060	1061	1080	1090	1098	488
35°	907	914	944	964	978	567
45°	733	745	784	821	843	566
55°	553	570	621	672	695	494
65°	368	390	455	515	540	364
75°	187	222	296	331	331	198
85°	40	67	74	71	70	49
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1234.3	1234.3	1234.3	1234.3	1234.3
2.5°	1239.1	1229.5	1234.3	1233.1	1227.1
5°	1233.1	1224.7	1229.5	1228.3	1227.1
7.5°	1224.7	1216.2	1222.2	1221.0	1222.2
10°	1210.2	1203.0	1210.2	1211.4	1211.4
12.5°	1192.1	1186.1	1195.8	1198.2	1200.6
15°	1172.9	1168.1	1178.9	1183.7	1187.3
17.5°	1148.8	1145.2	1158.4	1164.4	1169.3
20°	1122.3	1121.1	1135.5	1141.6	1147.6
22.5°	1092.2	1092.2	1109.0	1116.3	1124.7
25°	1059.7	1060.9	1080.1	1089.8	1098.2
27.5°	1024.8	1026.0	1048.8	1060.9	1070.5
30°	986.2	991.0	1015.1	1030.8	1041.6
32.5°	947.7	953.7	980.2	998.3	1010.3
35°	906.7	914.0	944.1	964.5	977.8
37.5°	864.6	873.0	905.5	928.4	944.1
40°	822.5	832.1	865.8	892.3	910.4
42.5°	777.9	788.7	826.1	857.4	876.6
45°	733.3	745.4	783.9	821.3	842.9
47.5°	688.8	703.2	744.2	785.1	808.0
50°	643.0	657.5	700.8	747.8	770.7
52.5°	597.3	614.1	662.3	710.5	733.3
55°	552.7	569.6	621.4	671.9	694.8
57.5°	507.0	523.8	580.4	633.4	656.3
60°	460.0	479.3	538.3	592.5	617.7
62.5°	414.2	434.7	497.3	555.1	579.2
65°	368.5	390.2	455.2	515.4	539.5
67.5°	321.5	346.8	414.2	475.7	500.9
70°	275.8	303.5	374.5	435.9	460.0
72.5°	231.2	261.3	334.8	397.4	411.8
75°	186.6	221.6	296.2	331.1	331.1
77.5°	144.5	183.0	252.9	266.1	273.3
80°	104.8	146.9	190.3	205.9	203.5
82.5°	69.8	112.0	136.1	136.1	132.5
85°	39.7	67.4	73.5	71.0	69.8
87.5°	16.9	25.3	22.9	18.1	15.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)