

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: FAIL-SAFE

Report Number: P563206

Luminaire Tested: FSR-24-4-LD4-3HI-50-UNV-81-87-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563206
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)
Test Lab: INNOVATION CENTER
Issue Date: 7/20/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-4-LD4-3HI-50-UNV-81-87-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

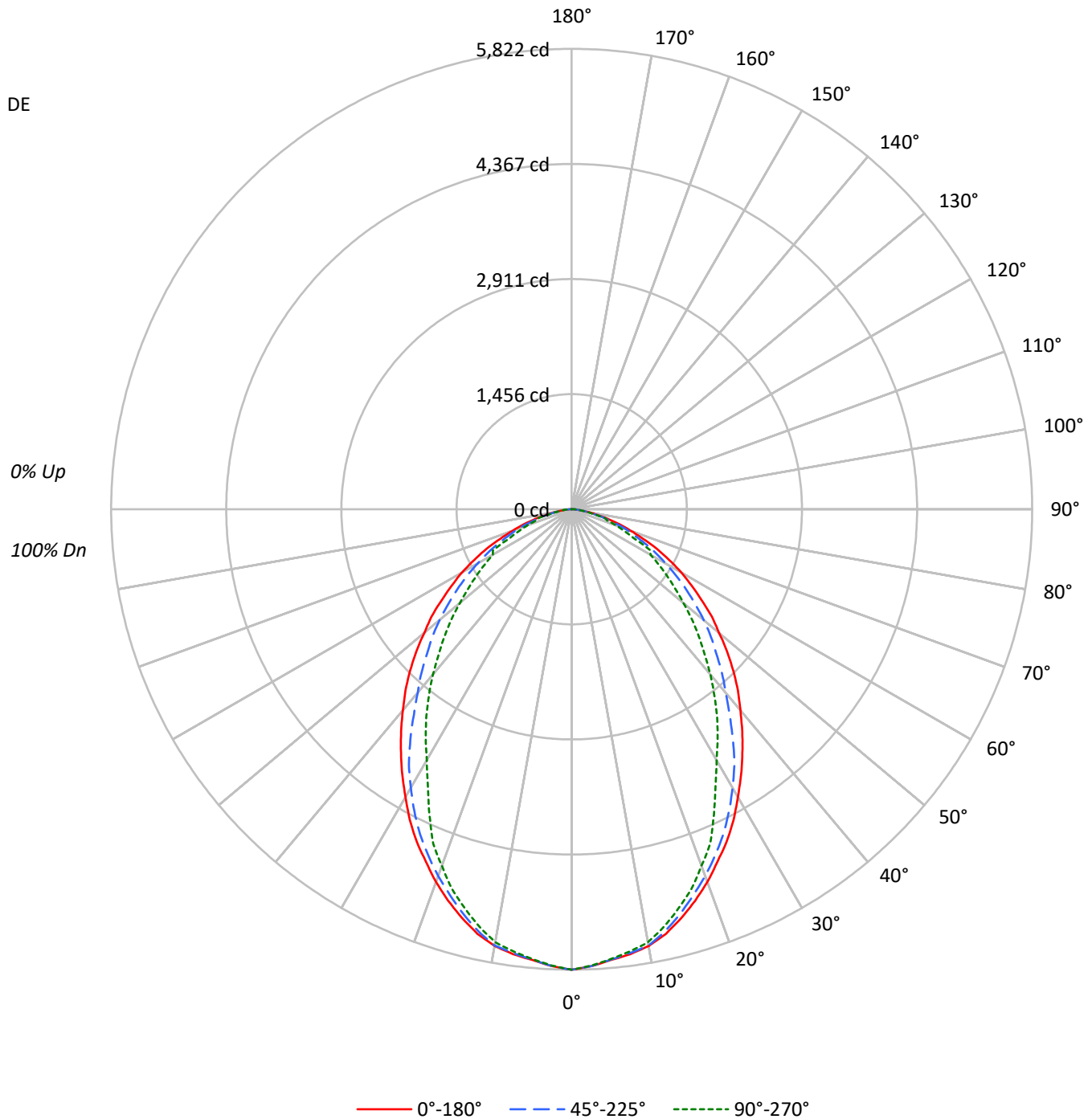
Lumens per Lamp: N/A
Luminaire Lumens: 11430.0 lumens
Efficiency: N/A
Efficacy: 88.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 129.6
Input Voltage (V):
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: 24 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	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	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87																												
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75																												
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65																												
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56																												
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50																												
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44																												
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40																												
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36																												
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33																												
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7834	7834	7834
5°	7727	7718	7709
10°	7660	7651	7596
15°	7454	7379	7276
20°	7180	7064	6872
25°	6885	6735	6315
30°	6525	6316	5689
35°	6180	5838	5263
40°	5828	5320	4788
45°	5495	4918	4329
50°	5086	4565	3861
55°	4705	4137	3458
60°	4311	3695	3097
65°	3793	3236	2743
70°	3125	2833	2330
75°	2484	2169	2274
80°	1669	1564	1461
85°	1039	1247	1454

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5495 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	542.0	4.7
10°-20°	1487.4	13.0
20°-30°	2059.2	18.0
30°-40°	2195.7	19.2
40°-50°	2003.1	17.5
50°-60°	1569.3	13.7
60°-70°	1022.8	8.9
70°-80°	453.1	4.0
80°-90°	97.3	0.9
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°	4088.6	35.8
0°-40°	6284.3	55.0
0°-60°	9856.8	86.2
0°-90°	11430.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11430.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5822	5822	5822	5822	5822	
5°	5721	5715	5715	5708	5708	543
15°	5351	5351	5297	5243	5223	1504
25°	4638	4611	4537	4375	4254	2129
35°	3763	3736	3554	3285	3204	2352
45°	2888	2827	2585	2369	2275	2224
55°	2006	1945	1764	1555	1474	1799
65°	1191	1124	1016	1037	862	1174
75°	478	444	417	397	438	512
85°	67	74	81	88	94	93
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5822.3	5822.3	5822.3	5822.3	5822.3
2.5°	5781.9	5781.9	5781.9	5775.2	5775.2
5°	5721.3	5714.6	5714.6	5707.9	5707.9
7.5°	5674.2	5667.5	5660.7	5654.0	5640.6
10°	5606.9	5606.9	5600.2	5566.5	5559.8
12.5°	5499.2	5492.5	5465.5	5418.4	5405.0
15°	5351.1	5351.1	5297.3	5243.4	5223.2
17.5°	5189.6	5182.8	5115.5	5061.7	5034.8
20°	5014.6	5001.1	4933.8	4846.3	4799.2
22.5°	4819.4	4819.4	4738.6	4624.2	4577.1
25°	4637.6	4610.7	4536.7	4375.1	4254.0
27.5°	4429.0	4388.6	4307.8	4079.0	3937.6
30°	4200.1	4179.9	4065.5	3769.3	3661.6
32.5°	3984.7	3951.1	3829.9	3520.3	3432.8
35°	3762.6	3735.7	3554.0	3284.7	3203.9
37.5°	3540.5	3506.8	3278.0	3062.6	2961.6
40°	3318.4	3278.0	3028.9	2833.7	2726.0
42.5°	3109.7	3055.9	2813.5	2604.9	2483.7
45°	2887.6	2827.0	2584.7	2369.3	2275.1
47.5°	2665.5	2611.6	2389.5	2167.4	2059.7
50°	2429.9	2382.8	2180.8	1958.7	1844.3
52.5°	2234.7	2160.6	1965.4	1743.3	1649.1
55°	2005.8	1945.3	1763.5	1554.9	1474.1
57.5°	1797.2	1736.6	1568.3	1373.1	1305.8
60°	1602.0	1514.5	1373.1	1204.8	1151.0
62.5°	1386.6	1319.3	1198.1	1056.8	1124.1
65°	1191.4	1124.1	1016.4	1036.6	861.6
67.5°	976.0	942.3	848.1	753.9	726.9
70°	794.3	753.9	720.2	619.2	592.3
72.5°	632.7	592.3	545.2	491.4	471.2
75°	477.9	444.2	417.3	397.1	437.5
77.5°	329.8	316.4	296.2	276.0	269.2
80°	215.4	208.7	201.9	195.2	188.5
82.5°	127.9	127.9	127.9	127.9	127.9
85°	67.3	74.0	80.8	87.5	94.2
87.5°	40.4	40.4	47.1	53.8	60.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)