

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: P563782

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

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563782
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-LD4-4HI-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: 15240.0 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

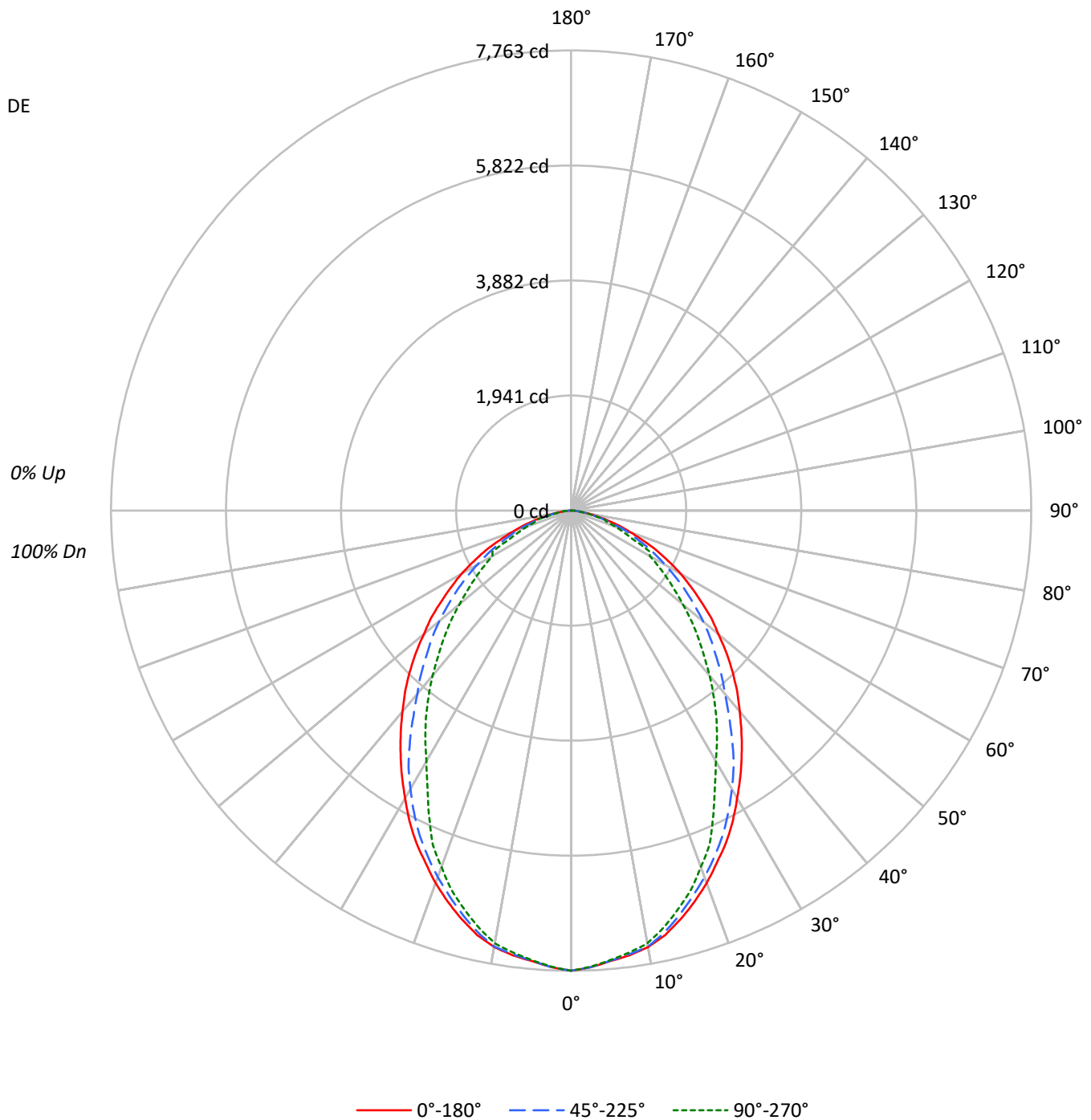
Input Watts (W): 172.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87					87			
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75					75			
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65					65			
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56					56			
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50					50			
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44					44			
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40					40			
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36					36			
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33					33			
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30					30			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10445	10445	10445
5°	10303	10291	10279
10°	10214	10202	10128
15°	9938	9838	9701
20°	9573	9419	9162
25°	9180	8980	8421
30°	8701	8422	7585
35°	8240	7783	7017
40°	7771	7093	6384
45°	7326	6558	5772
50°	6782	6087	5147
55°	6274	5516	4610
60°	5748	4927	4130
65°	5057	4315	3657
70°	4166	3778	3107
75°	3313	2892	3033
80°	2225	2086	1947
85°	1385	1663	1939

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7326 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	722.6	4.7
10°-20°	1983.2	13.0
20°-30°	2745.6	18.0
30°-40°	2927.6	19.2
40°-50°	2670.9	17.5
50°-60°	2092.4	13.7
60°-70°	1363.7	8.9
70°-80°	604.2	4.0
80°-90°	129.7	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°	5451.5	35.8
0°-40°	8379.1	55.0
0°-60°	13142.4	86.2
0°-90°	15240.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	15240.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7763	7763	7763	7763	7763	
5°	7628	7620	7620	7610	7610	724
15°	7135	7135	7063	6991	6964	2006
25°	6184	6148	6049	5834	5672	2839
35°	5017	4981	4739	4380	4272	3136
45°	3850	3769	3446	3159	3033	2966
55°	2674	2594	2351	2073	1965	2399
65°	1588	1499	1355	1382	1149	1565
75°	637	592	556	530	583	683
85°	90	99	108	117	126	124
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7763.1	7763.1	7763.1	7763.1	7763.1
2.5°	7709.2	7709.2	7709.2	7700.2	7700.2
5°	7628.4	7619.5	7619.5	7610.5	7610.5
7.5°	7565.6	7556.6	7547.7	7538.7	7520.7
10°	7475.9	7475.9	7466.9	7422.0	7413.0
12.5°	7332.3	7323.3	7287.4	7224.6	7206.6
15°	7134.8	7134.8	7063.0	6991.2	6964.3
17.5°	6919.4	6910.5	6820.7	6748.9	6713.0
20°	6686.1	6668.1	6578.4	6461.7	6398.9
22.5°	6425.8	6425.8	6318.1	6165.6	6102.7
25°	6183.5	6147.6	6048.9	5833.5	5672.0
27.5°	5905.3	5851.5	5743.8	5438.6	5250.2
30°	5600.2	5573.2	5420.7	5025.8	4882.2
32.5°	5313.0	5268.1	5106.6	4693.7	4577.1
35°	5016.8	4980.9	4738.6	4379.6	4271.9
37.5°	4720.7	4675.8	4370.6	4083.5	3948.8
40°	4424.5	4370.6	4038.6	3778.3	3634.7
42.5°	4146.3	4074.5	3751.4	3473.2	3311.6
45°	3850.1	3769.3	3446.3	3159.1	3033.4
47.5°	3554.0	3482.2	3186.0	2889.8	2746.2
50°	3239.8	3177.0	2907.8	2611.6	2459.0
52.5°	2979.6	2880.9	2620.6	2324.4	2198.8
55°	2674.4	2593.7	2351.4	2073.1	1965.4
57.5°	2396.2	2315.5	2091.1	1830.8	1741.1
60°	2136.0	2019.3	1830.8	1606.5	1534.7
62.5°	1848.8	1759.0	1597.5	1409.0	1498.8
65°	1588.5	1498.8	1355.2	1382.1	1148.8
67.5°	1301.3	1256.4	1130.8	1005.2	969.3
70°	1059.0	1005.2	960.3	825.7	789.8
72.5°	843.6	789.8	726.9	655.1	628.2
75°	637.2	592.3	556.4	529.5	583.4
77.5°	439.8	421.8	394.9	368.0	359.0
80°	287.2	278.2	269.2	260.3	251.3
82.5°	170.5	170.5	170.5	170.5	170.5
85°	89.7	98.7	107.7	116.7	125.6
87.5°	53.8	53.8	62.8	71.8	80.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)