

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: P563783

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

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563783
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
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 17517.0 lumens
Efficiency: N/A
Efficacy: 101.4 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

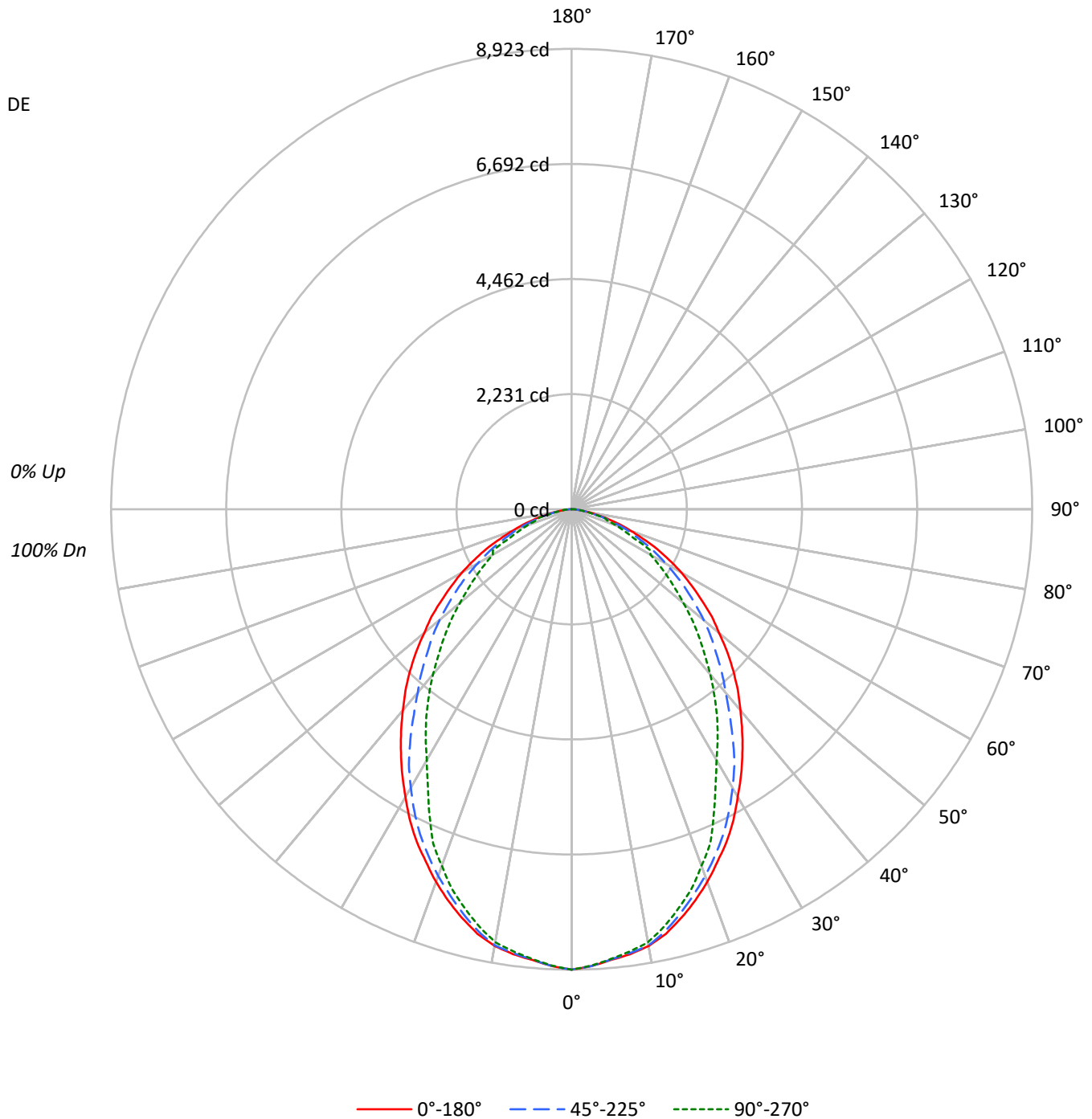
Input Watts (W): 172.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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				
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°	12006	12006	12006
5°	11843	11829	11815
10°	11740	11726	11641
15°	11423	11308	11150
20°	11004	10827	10531
25°	10552	10322	9679
30°	10001	9680	8718
35°	9472	8946	8065
40°	8932	8153	7338
45°	8421	7537	6634
50°	7795	6996	5916
55°	7211	6340	5299
60°	6607	5663	4747
65°	5813	4959	4204
70°	4788	4342	3571
75°	3807	3325	3486
80°	2558	2398	2238
85°	1593	1911	2229

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8421 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	830.6	4.7
10°-20°	2279.5	13.0
20°-30°	3155.8	18.0
30°-40°	3365.1	19.2
40°-50°	3069.9	17.5
50°-60°	2405.0	13.7
60°-70°	1567.5	8.9
70°-80°	694.5	4.0
80°-90°	149.1	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°	6266.0	35.8
0°-40°	9631.0	55.0
0°-60°	15106.0	86.2
0°-90°	17517.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	17517.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	8923	8923	8923	8923	8923	
5°	8768	8758	8758	8748	8748	832
15°	8201	8201	8118	8036	8005	2305
25°	7107	7066	6953	6705	6519	3263
35°	5766	5725	5447	5034	4910	3605
45°	4425	4332	3961	3631	3487	3409
55°	3074	2981	2703	2383	2259	2757
65°	1826	1723	1558	1589	1320	1799
75°	732	681	640	609	670	785
85°	103	114	124	134	144	143
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	8922.9	8922.9	8922.9	8922.9	8922.9
2.5°	8861.0	8861.0	8861.0	8850.7	8850.7
5°	8768.2	8757.9	8757.9	8747.6	8747.6
7.5°	8696.0	8685.7	8675.4	8665.0	8644.4
10°	8592.8	8592.8	8582.5	8530.9	8520.6
12.5°	8427.8	8417.5	8376.2	8304.0	8283.4
15°	8200.8	8200.8	8118.3	8035.8	8004.8
17.5°	7953.3	7943.0	7839.8	7757.3	7716.0
20°	7685.1	7664.4	7561.3	7427.2	7355.0
22.5°	7385.9	7385.9	7262.1	7086.8	7014.6
25°	7107.4	7066.1	6952.7	6705.1	6519.4
27.5°	6787.6	6725.7	6601.9	6251.2	6034.6
30°	6436.9	6405.9	6230.6	5776.7	5611.6
32.5°	6106.8	6055.2	5869.5	5395.0	5260.9
35°	5766.4	5725.1	5446.6	5034.0	4910.2
37.5°	5426.0	5374.4	5023.7	4693.6	4538.8
40°	5085.6	5023.7	4642.0	4342.8	4177.8
42.5°	4765.8	4683.2	4311.9	3992.1	3806.4
45°	4425.4	4332.5	3961.2	3631.1	3486.6
47.5°	4084.9	4002.4	3662.0	3321.6	3156.5
50°	3723.9	3651.7	3342.2	3001.8	2826.5
52.5°	3424.8	3311.3	3012.1	2671.7	2527.3
55°	3074.0	2981.2	2702.7	2382.9	2259.1
57.5°	2754.2	2661.4	2403.5	2104.4	2001.2
60°	2455.1	2321.0	2104.4	1846.5	1764.0
62.5°	2125.0	2021.8	1836.2	1619.5	1722.7
65°	1825.8	1722.7	1557.6	1588.6	1320.4
67.5°	1495.8	1444.2	1299.8	1155.3	1114.1
70°	1217.2	1155.3	1103.8	949.0	907.8
72.5°	969.7	907.8	835.6	753.0	722.1
75°	732.4	680.8	639.6	608.6	670.5
77.5°	505.5	484.8	453.9	422.9	412.6
80°	330.1	319.8	309.5	299.2	288.8
82.5°	196.0	196.0	196.0	196.0	196.0
85°	103.2	113.5	123.8	134.1	144.4
87.5°	61.9	61.9	72.2	82.5	92.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)