

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: P563584

Luminaire Tested: FSR-24-4-LD4-3STD-50-UNV-81-84-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563584
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-LD4-3STD-50-UNV-81-84-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9938.0 lumens
Efficiency: N/A
Efficacy: 99.5 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

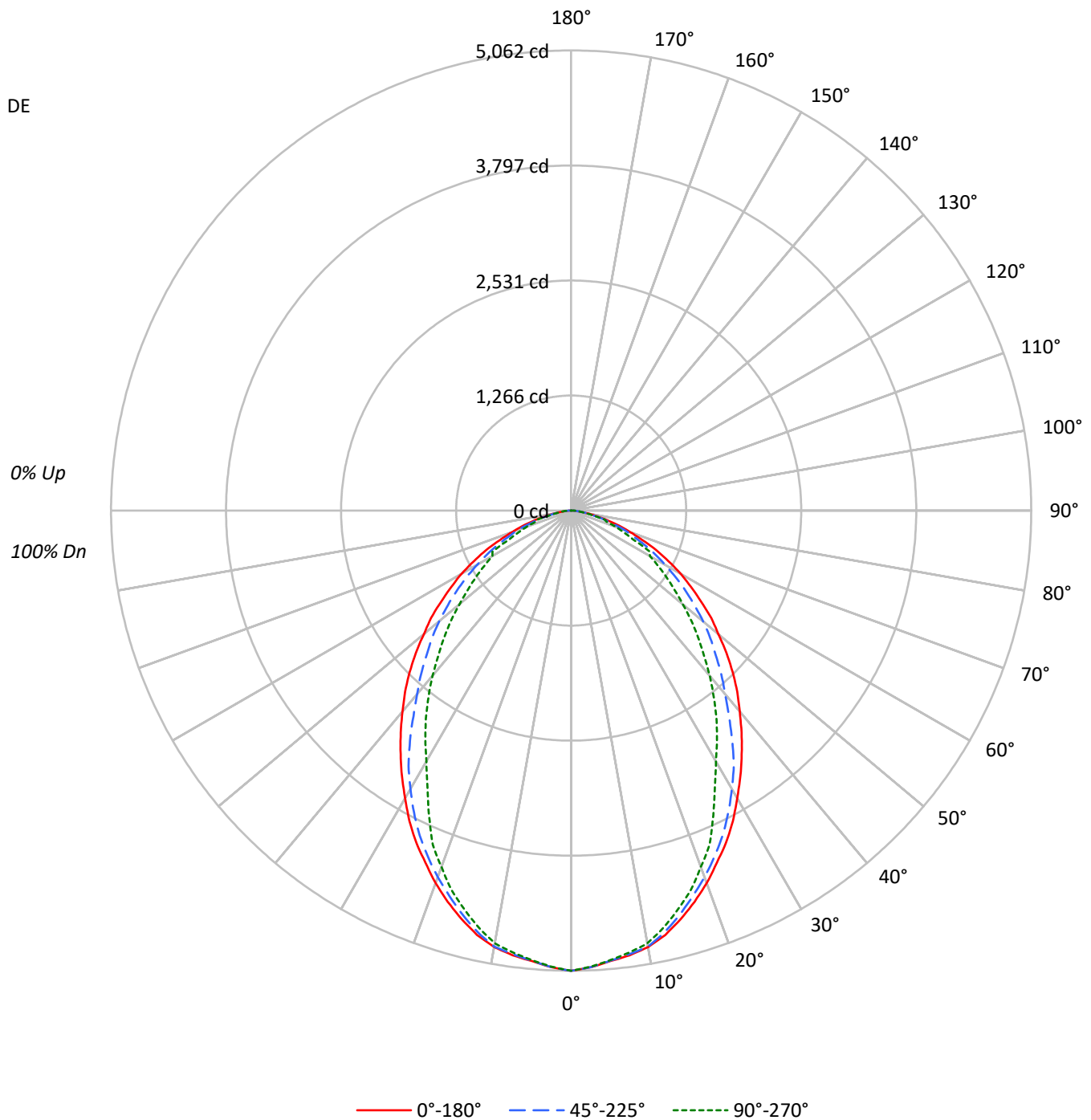
Input Watts (W): 99.9
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	6811	6811	6811
5°	6719	6711	6703
10°	6660	6653	6604
15°	6481	6416	6326
20°	6243	6142	5975
25°	5986	5856	5491
30°	5674	5492	4946
35°	5374	5075	4576
40°	5068	4626	4163
45°	4777	4276	3764
50°	4422	3969	3356
55°	4091	3597	3007
60°	3748	3213	2693
65°	3298	2813	2385
70°	2717	2463	2026
75°	2160	1886	1978
80°	1451	1361	1270
85°	903	1084	1264

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4777 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	471.2	4.7
10°-20°	1293.3	13.0
20°-30°	1790.4	18.0
30°-40°	1909.1	19.2
40°-50°	1741.7	17.5
50°-60°	1364.5	13.7
60°-70°	889.3	8.9
70°-80°	394.0	4.0
80°-90°	84.6	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°	3554.9	35.8
0°-40°	5464.0	55.0
0°-60°	8570.1	86.2
0°-90°	9938.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9938.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5062	5062	5062	5062	5062	
5°	4974	4969	4969	4963	4963	472
15°	4653	4653	4606	4559	4541	1308
25°	4032	4009	3944	3804	3699	1851
35°	3272	3248	3090	2856	2786	2045
45°	2511	2458	2247	2060	1978	1934
55°	1744	1691	1533	1352	1282	1564
65°	1036	977	884	901	749	1021
75°	416	386	363	345	380	445
85°	58	64	70	76	82	81
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5062.3	5062.3	5062.3	5062.3	5062.3
2.5°	5027.2	5027.2	5027.2	5021.3	5021.3
5°	4974.5	4968.6	4968.6	4962.8	4962.8
7.5°	4933.5	4927.7	4921.8	4916.0	4904.3
10°	4875.0	4875.0	4869.2	4839.9	4834.0
12.5°	4781.4	4775.5	4752.1	4711.1	4699.4
15°	4652.6	4652.6	4605.8	4559.0	4541.4
17.5°	4512.2	4506.3	4447.8	4401.0	4377.6
20°	4360.0	4348.3	4289.8	4213.7	4172.7
22.5°	4190.3	4190.3	4120.1	4020.6	3979.6
25°	4032.3	4008.9	3944.5	3804.0	3698.7
27.5°	3850.8	3815.7	3745.5	3546.5	3423.6
30°	3651.9	3634.3	3534.8	3277.3	3183.7
32.5°	3464.6	3435.3	3330.0	3060.8	2984.7
35°	3271.5	3248.1	3090.0	2855.9	2785.7
37.5°	3078.3	3049.1	2850.1	2662.8	2575.0
40°	2885.2	2850.1	2633.6	2463.8	2370.2
42.5°	2703.8	2657.0	2446.3	2264.9	2159.5
45°	2510.7	2458.0	2247.3	2060.0	1978.1
47.5°	2317.5	2270.7	2077.6	1884.5	1790.8
50°	2112.7	2071.7	1896.2	1703.0	1603.5
52.5°	1943.0	1878.6	1708.9	1515.8	1433.8
55°	1744.0	1691.3	1533.3	1351.9	1281.7
57.5°	1562.6	1509.9	1363.6	1193.9	1135.4
60°	1392.9	1316.8	1193.9	1047.6	1000.8
62.5°	1205.6	1147.1	1041.7	918.8	977.3
65°	1035.9	977.3	883.7	901.3	749.1
67.5°	848.6	819.3	737.4	655.5	632.1
70°	690.6	655.5	626.2	538.4	515.0
72.5°	550.1	515.0	474.0	427.2	409.7
75°	415.5	386.3	362.8	345.3	380.4
77.5°	286.8	275.1	257.5	239.9	234.1
80°	187.3	181.4	175.6	169.7	163.9
82.5°	111.2	111.2	111.2	111.2	111.2
85°	58.5	64.4	70.2	76.1	81.9
87.5°	35.1	35.1	41.0	46.8	52.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)