

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: P563202

Luminaire Tested: FSR-24-4-LD4-3HI-50-UNV-81-85-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563202
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-81-85-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11948.0 lumens
Efficiency: N/A
Efficacy: 92.2 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

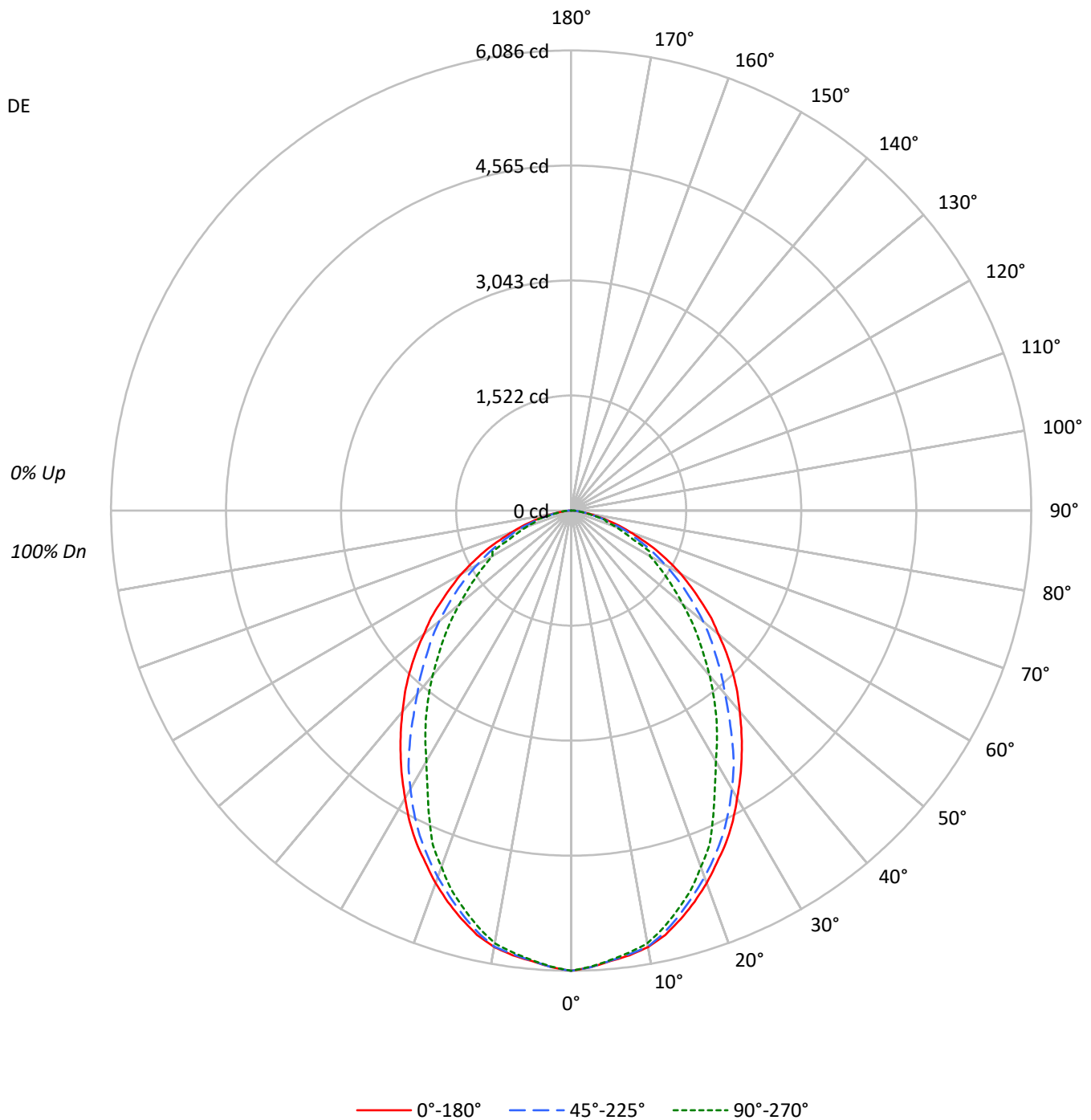
Input Watts (W): 129.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	8189	8189	8189
5°	8078	8068	8059
10°	8008	7998	7940
15°	7792	7713	7605
20°	7505	7385	7183
25°	7197	7040	6602
30°	6821	6603	5947
35°	6460	6102	5501
40°	6093	5561	5005
45°	5743	5141	4525
50°	5317	4772	4035
55°	4918	4324	3615
60°	4506	3862	3238
65°	3965	3382	2867
70°	3266	2962	2436
75°	2597	2268	2377
80°	1745	1636	1526
85°	1087	1303	1521

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5743 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	566.5	4.7
10°-20°	1554.8	13.0
20°-30°	2152.5	18.0
30°-40°	2295.2	19.2
40°-50°	2093.9	17.5
50°-60°	1640.4	13.7
60°-70°	1069.1	8.9
70°-80°	473.7	4.0
80°-90°	101.7	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°	4273.9	35.8
0°-40°	6569.1	55.0
0°-60°	10303.5	86.2
0°-90°	11948.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11948.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6086	6086	6086	6086	6086	
5°	5981	5974	5974	5966	5966	568
15°	5594	5594	5537	5481	5460	1573
25°	4848	4820	4742	4573	4447	2226
35°	3933	3905	3715	3434	3349	2459
45°	3018	2955	2702	2477	2378	2325
55°	2097	2033	1843	1625	1541	1881
65°	1245	1175	1062	1084	901	1227
75°	500	464	436	415	457	535
85°	70	77	84	92	98	98
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6086.2	6086.2	6086.2	6086.2	6086.2
2.5°	6043.9	6043.9	6043.9	6036.9	6036.9
5°	5980.6	5973.6	5973.6	5966.5	5966.5
7.5°	5931.4	5924.3	5917.3	5910.3	5896.2
10°	5861.0	5861.0	5854.0	5818.8	5811.7
12.5°	5748.4	5741.4	5713.2	5664.0	5649.9
15°	5593.6	5593.6	5537.3	5481.1	5459.9
17.5°	5424.8	5417.7	5347.4	5291.1	5262.9
20°	5241.8	5227.8	5157.4	5065.9	5016.7
22.5°	5037.8	5037.8	4953.4	4833.7	4784.5
25°	4847.8	4819.7	4742.3	4573.4	4446.8
27.5°	4629.7	4587.5	4503.0	4263.8	4116.1
30°	4390.5	4369.4	4249.8	3940.2	3827.6
32.5°	4165.3	4130.1	4003.5	3679.8	3588.4
35°	3933.1	3905.0	3715.0	3433.6	3349.1
37.5°	3700.9	3665.8	3426.5	3201.4	3095.8
40°	3468.8	3426.5	3166.2	2962.2	2849.6
42.5°	3250.6	3194.4	2941.1	2722.9	2596.3
45°	3018.4	2955.1	2701.8	2476.7	2378.2
47.5°	2786.3	2730.0	2497.8	2265.6	2153.0
50°	2540.0	2490.7	2279.7	2047.5	1927.9
52.5°	2336.0	2258.6	2054.5	1822.3	1723.8
55°	2096.7	2033.4	1843.4	1625.3	1540.9
57.5°	1878.6	1815.3	1639.4	1435.3	1365.0
60°	1674.6	1583.1	1435.3	1259.4	1203.2
62.5°	1449.4	1379.1	1252.4	1104.7	1175.0
65°	1245.4	1175.0	1062.4	1083.5	900.6
67.5°	1020.2	985.0	886.5	788.0	759.9
70°	830.2	788.0	752.9	647.3	619.2
72.5°	661.4	619.2	569.9	513.6	492.5
75°	499.6	464.4	436.2	415.1	457.3
77.5°	344.8	330.7	309.6	288.5	281.4
80°	225.2	218.1	211.1	204.0	197.0
82.5°	133.7	133.7	133.7	133.7	133.7
85°	70.4	77.4	84.4	91.5	98.5
87.5°	42.2	42.2	49.3	56.3	63.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)