

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: P563200

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

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563200
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-81-84-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: 12190.0 lumens
Efficiency: N/A
Efficacy: 94.1 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

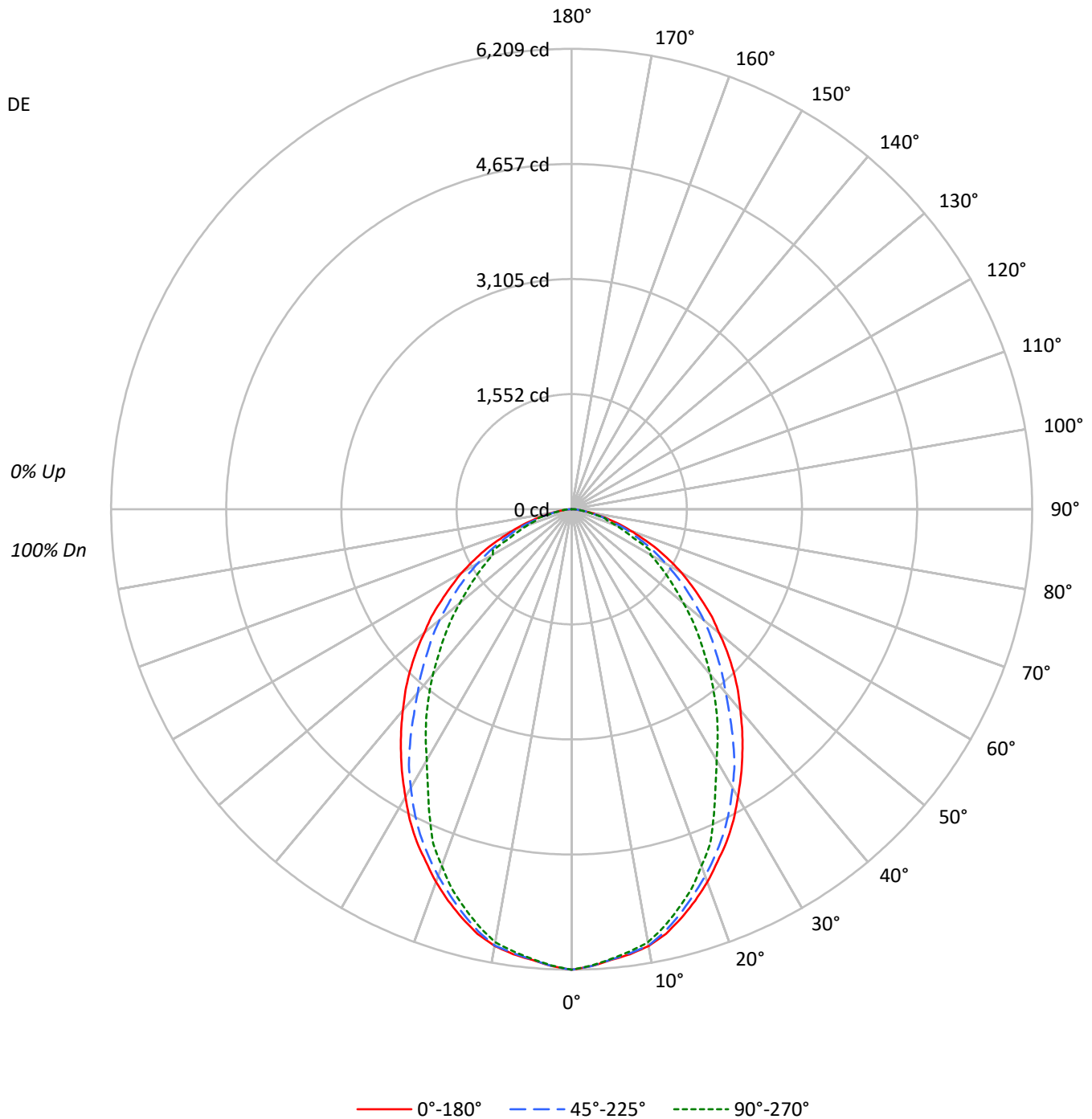
Input Watts (W): 129.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	8355	8355	8355
5°	8241	8232	8222
10°	8170	8160	8101
15°	7949	7869	7759
20°	7657	7534	7329
25°	7343	7183	6735
30°	6959	6736	6067
35°	6591	6226	5613
40°	6216	5674	5106
45°	5860	5245	4617
50°	5424	4868	4117
55°	5018	4412	3688
60°	4598	3941	3303
65°	4045	3451	2926
70°	3332	3022	2485
75°	2650	2314	2426
80°	1780	1669	1557
85°	1108	1329	1551

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5860 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	578.0	4.7
10°-20°	1586.3	13.0
20°-30°	2196.1	18.0
30°-40°	2341.7	19.2
40°-50°	2136.3	17.5
50°-60°	1673.6	13.7
60°-70°	1090.8	8.9
70°-80°	483.3	4.0
80°-90°	103.8	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°	4360.5	35.8
0°-40°	6702.2	55.0
0°-60°	10512.2	86.2
0°-90°	12190.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12190.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6209	6209	6209	6209	6209	
5°	6102	6095	6095	6087	6087	579
15°	5707	5707	5650	5592	5570	1604
25°	4946	4917	4838	4666	4537	2271
35°	4013	3984	3790	3503	3417	2509
45°	3080	3015	2757	2527	2426	2372
55°	2139	2075	1881	1658	1572	1919
65°	1271	1199	1084	1106	919	1252
75°	510	474	445	424	467	546
85°	72	79	86	93	100	100
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6209.4	6209.4	6209.4	6209.4	6209.4
2.5°	6166.4	6166.4	6166.4	6159.2	6159.2
5°	6101.7	6094.6	6094.6	6087.4	6087.4
7.5°	6051.5	6044.3	6037.1	6030.0	6015.6
10°	5979.7	5979.7	5972.5	5936.6	5929.5
12.5°	5864.9	5857.7	5829.0	5778.7	5764.4
15°	5706.9	5706.9	5649.5	5592.1	5570.5
17.5°	5534.6	5527.5	5455.7	5398.2	5369.5
20°	5348.0	5333.6	5261.9	5168.5	5118.3
22.5°	5139.8	5139.8	5053.7	4931.6	4881.4
25°	4946.0	4917.3	4838.3	4666.0	4536.8
27.5°	4723.5	4680.4	4594.3	4350.2	4199.4
30°	4479.4	4457.9	4335.8	4020.0	3905.1
32.5°	4249.7	4213.8	4084.6	3754.4	3661.0
35°	4012.8	3984.1	3790.3	3503.1	3417.0
37.5°	3775.9	3740.0	3495.9	3266.2	3158.6
40°	3539.0	3495.9	3230.3	3022.2	2907.3
42.5°	3316.5	3259.0	3000.6	2778.1	2648.9
45°	3079.6	3015.0	2756.6	2526.8	2426.3
47.5°	2842.7	2785.3	2548.4	2311.5	2196.6
50°	2591.4	2541.2	2325.8	2089.0	1966.9
52.5°	2383.3	2304.3	2096.1	1859.2	1758.7
55°	2139.2	2074.6	1880.8	1658.2	1572.1
57.5°	1916.7	1852.1	1672.6	1464.4	1392.6
60°	1708.5	1615.2	1464.4	1285.0	1227.5
62.5°	1478.8	1407.0	1277.8	1127.0	1198.8
65°	1270.6	1198.8	1084.0	1105.5	918.9
67.5°	1040.9	1005.0	904.5	804.0	775.3
70°	847.1	804.0	768.1	660.4	631.7
72.5°	674.8	631.7	581.5	524.0	502.5
75°	509.7	473.8	445.1	423.5	466.6
77.5°	351.7	337.4	315.9	294.3	287.1
80°	229.7	222.5	215.4	208.2	201.0
82.5°	136.4	136.4	136.4	136.4	136.4
85°	71.8	79.0	86.1	93.3	100.5
87.5°	43.1	43.1	50.2	57.4	64.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)