

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: P563630

Luminaire Tested: FSR-24-4-LD4-3STD-50-UNV-93-97-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563630
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-93-97-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10018.0 lumens
Efficiency: N/A
Efficacy: 100.3 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

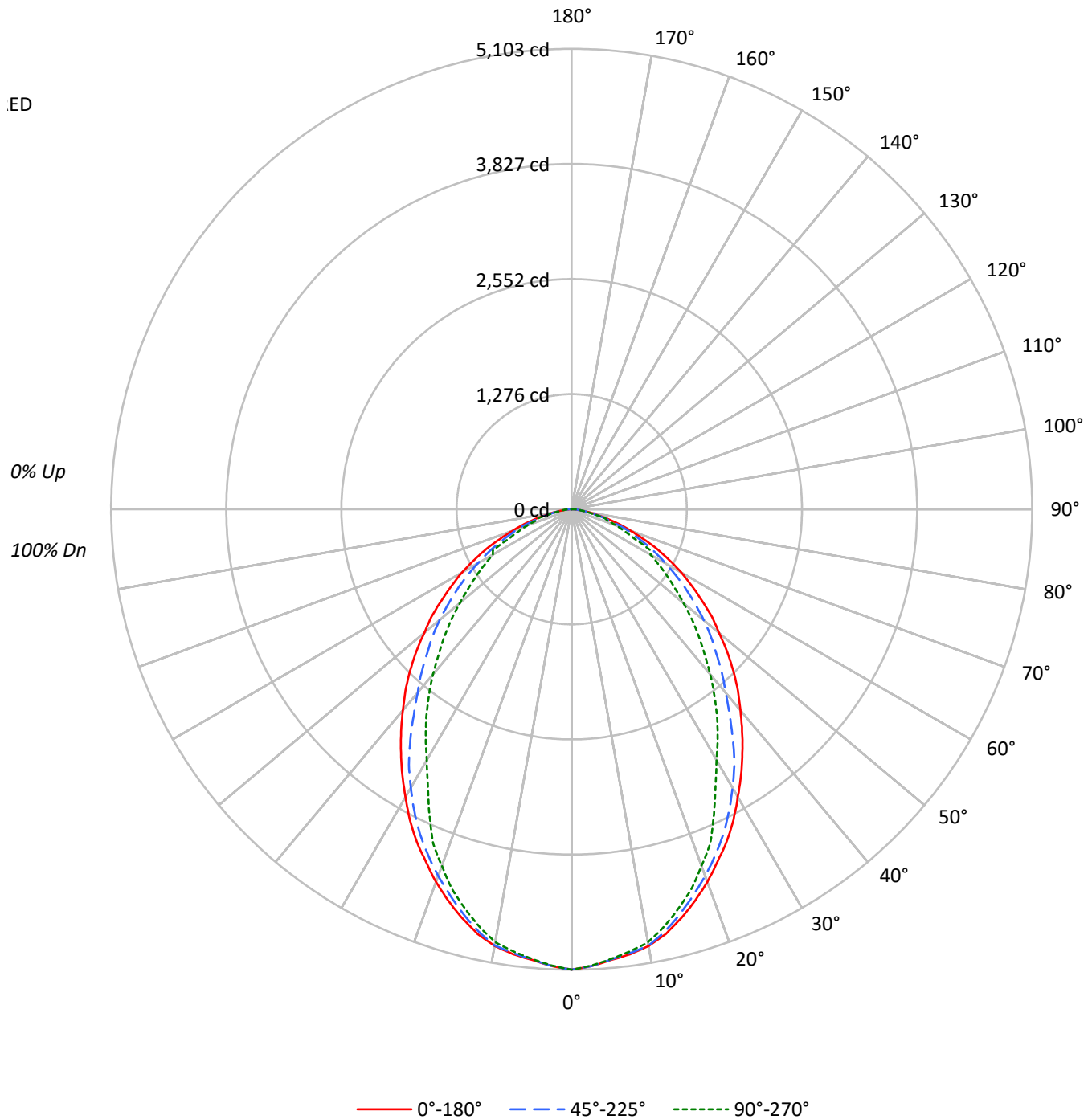
Input Watts (W): 99.9
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	6866	6866	6866
5°	6773	6765	6757
10°	6714	6706	6658
15°	6533	6467	6377
20°	6293	6192	6023
25°	6034	5903	5535
30°	5719	5536	4986
35°	5417	5116	4612
40°	5108	4663	4197
45°	4816	4311	3794
50°	4458	4001	3384
55°	4124	3626	3031
60°	3778	3239	2715
65°	3324	2836	2404
70°	2738	2483	2043
75°	2178	1902	1994
80°	1463	1371	1280
85°	911	1093	1275

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4816 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	475.0	4.7
10°-20°	1303.7	13.0
20°-30°	1804.8	18.0
30°-40°	1924.5	19.2
40°-50°	1755.7	17.5
50°-60°	1375.4	13.7
60°-70°	896.4	8.9
70°-80°	397.2	4.0
80°-90°	85.3	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°	3583.5	35.8
0°-40°	5508.0	55.0
0°-60°	8639.1	86.2
0°-90°	10018.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10018.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5103	5103	5103	5103	5103	
5°	5014	5009	5009	5003	5003	476
15°	4690	4690	4643	4596	4578	1319
25°	4065	4041	3976	3835	3728	1866
35°	3298	3274	3115	2879	2808	2062
45°	2531	2478	2265	2077	1994	1950
55°	1758	1705	1546	1363	1292	1577
65°	1044	985	891	908	755	1029
75°	419	389	366	348	384	449
85°	59	65	71	77	83	82
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5103.0	5103.0	5103.0	5103.0	5103.0
2.5°	5067.6	5067.6	5067.6	5061.7	5061.7
5°	5014.5	5008.6	5008.6	5002.7	5002.7
7.5°	4973.2	4967.3	4961.4	4955.5	4943.7
10°	4914.3	4914.3	4908.4	4878.9	4873.0
12.5°	4819.9	4814.0	4790.4	4749.1	4737.3
15°	4690.1	4690.1	4642.9	4595.7	4578.0
17.5°	4548.5	4542.6	4483.6	4436.4	4412.8
20°	4395.1	4383.3	4324.3	4247.6	4206.3
22.5°	4224.0	4224.0	4153.2	4052.9	4011.6
25°	4064.7	4041.1	3976.2	3834.7	3728.5
27.5°	3881.8	3846.4	3775.7	3575.1	3451.2
30°	3681.3	3663.6	3563.3	3303.7	3209.3
32.5°	3492.5	3463.0	3356.8	3085.4	3008.7
35°	3297.8	3274.2	3114.9	2878.9	2808.1
37.5°	3103.1	3073.6	2873.0	2684.3	2595.8
40°	2908.4	2873.0	2654.8	2483.7	2389.3
42.5°	2725.6	2678.4	2466.0	2283.1	2176.9
45°	2530.9	2477.8	2265.4	2076.6	1994.0
47.5°	2336.2	2289.0	2094.3	1899.6	1805.2
50°	2129.7	2088.4	1911.4	1716.7	1616.5
52.5°	1958.6	1893.7	1722.6	1528.0	1445.4
55°	1758.0	1704.9	1545.7	1362.8	1292.0
57.5°	1575.2	1522.1	1374.6	1203.5	1144.5
60°	1404.1	1327.4	1203.5	1056.0	1008.8
62.5°	1215.3	1156.3	1050.1	926.2	985.2
65°	1044.2	985.2	890.8	908.5	755.1
67.5°	855.4	825.9	743.3	660.7	637.1
70°	696.1	660.7	631.2	542.8	519.2
72.5°	554.5	519.2	477.9	430.7	413.0
75°	418.9	389.4	365.8	348.1	383.5
77.5°	289.1	277.3	259.6	241.9	236.0
80°	188.8	182.9	177.0	171.1	165.2
82.5°	112.1	112.1	112.1	112.1	112.1
85°	59.0	64.9	70.8	76.7	82.6
87.5°	35.4	35.4	41.3	47.2	53.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)