

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: P562635

Luminaire Tested: FSR-24-4-LD4-2HI-50-UNV-81-94-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562635
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-LD4-2HI-50-UNV-81-94-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9363.0 lumens
Efficiency: N/A
Efficacy: 108.4 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

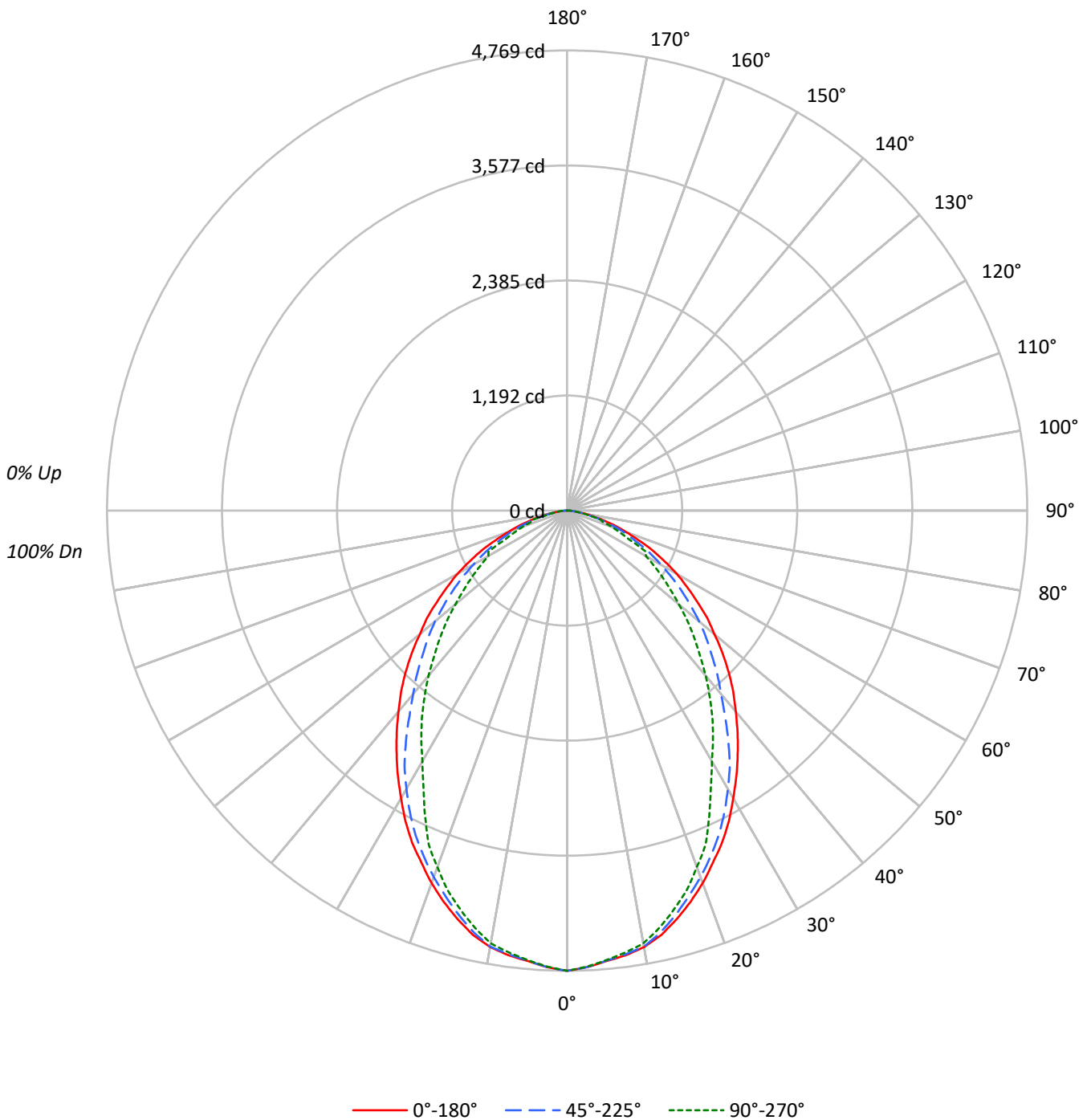
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	6417	6417	6417
5°	6330	6323	6315
10°	6275	6268	6222
15°	6106	6044	5960
20°	5882	5787	5629
25°	5640	5517	5173
30°	5345	5174	4660
35°	5063	4782	4311
40°	4774	4358	3922
45°	4501	4029	3546
50°	4167	3740	3162
55°	3854	3389	2833
60°	3531	3027	2537
65°	3107	2651	2247
70°	2559	2321	1909
75°	2035	1777	1863
80°	1367	1282	1196
85°	851	1022	1192

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4501 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	444.0	4.7
10°-20°	1218.4	13.0
20°-30°	1686.8	18.0
30°-40°	1798.7	19.2
40°-50°	1640.9	17.5
50°-60°	1285.5	13.7
60°-70°	837.8	8.9
70°-80°	371.2	4.0
80°-90°	79.7	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°	3349.2	35.8
0°-40°	5147.9	55.0
0°-60°	8074.3	86.2
0°-90°	9363.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9363.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4769	4769	4769	4769	4769	
5°	4687	4681	4681	4676	4676	445
15°	4383	4383	4339	4295	4279	1232
25°	3799	3777	3716	3584	3485	1744
35°	3082	3060	2911	2691	2624	1927
45°	2365	2316	2117	1941	1864	1822
55°	1643	1594	1445	1274	1208	1474
65°	976	921	833	849	706	962
75°	392	364	342	325	358	420
85°	55	61	66	72	77	76
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4769.4	4769.4	4769.4	4769.4	4769.4
2.5°	4736.3	4736.3	4736.3	4730.8	4730.8
5°	4686.7	4681.2	4681.2	4675.7	4675.7
7.5°	4648.1	4642.6	4637.1	4631.5	4620.5
10°	4592.9	4592.9	4587.4	4559.9	4554.4
12.5°	4504.7	4499.2	4477.2	4438.6	4427.5
15°	4383.4	4383.4	4339.3	4295.2	4278.7
17.5°	4251.1	4245.6	4190.4	4146.3	4124.3
20°	4107.7	4096.7	4041.6	3969.9	3931.3
22.5°	3947.8	3947.8	3881.7	3787.9	3749.3
25°	3799.0	3776.9	3716.3	3583.9	3484.7
27.5°	3628.0	3595.0	3528.8	3341.3	3225.5
30°	3440.6	3424.0	3330.3	3087.7	2999.5
32.5°	3264.1	3236.6	3137.3	2883.7	2812.0
35°	3082.2	3060.1	2911.3	2690.7	2624.5
37.5°	2900.2	2872.7	2685.2	2508.8	2426.0
40°	2718.3	2685.2	2481.2	2321.3	2233.1
42.5°	2547.3	2503.2	2304.7	2133.8	2034.6
45°	2365.4	2315.8	2117.3	1940.8	1863.6
47.5°	2183.4	2139.3	1957.4	1775.4	1687.2
50°	1990.5	1951.9	1786.5	1604.5	1510.8
52.5°	1830.6	1769.9	1610.0	1428.1	1350.9
55°	1643.1	1593.5	1444.6	1273.7	1207.5
57.5°	1472.2	1422.5	1284.7	1124.8	1069.7
60°	1312.3	1240.6	1124.8	987.0	942.8
62.5°	1135.8	1080.7	981.4	865.7	920.8
65°	975.9	920.8	832.6	849.1	705.8
67.5°	799.5	771.9	694.7	617.5	595.5
70°	650.6	617.5	590.0	507.3	485.2
72.5°	518.3	485.2	446.6	402.5	386.0
75°	391.5	363.9	341.9	325.3	358.4
77.5°	270.2	259.1	242.6	226.1	220.5
80°	176.4	170.9	165.4	159.9	154.4
82.5°	104.8	104.8	104.8	104.8	104.8
85°	55.1	60.7	66.2	71.7	77.2
87.5°	33.1	33.1	38.6	44.1	49.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)