

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: P559108

Luminaire Tested: FSR-12-1-LD4-2HI-40-UNV-81-86-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559108
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-12-1-LD4-2HI-40-UNV-81-86-EDD-90
Description: 1X1 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

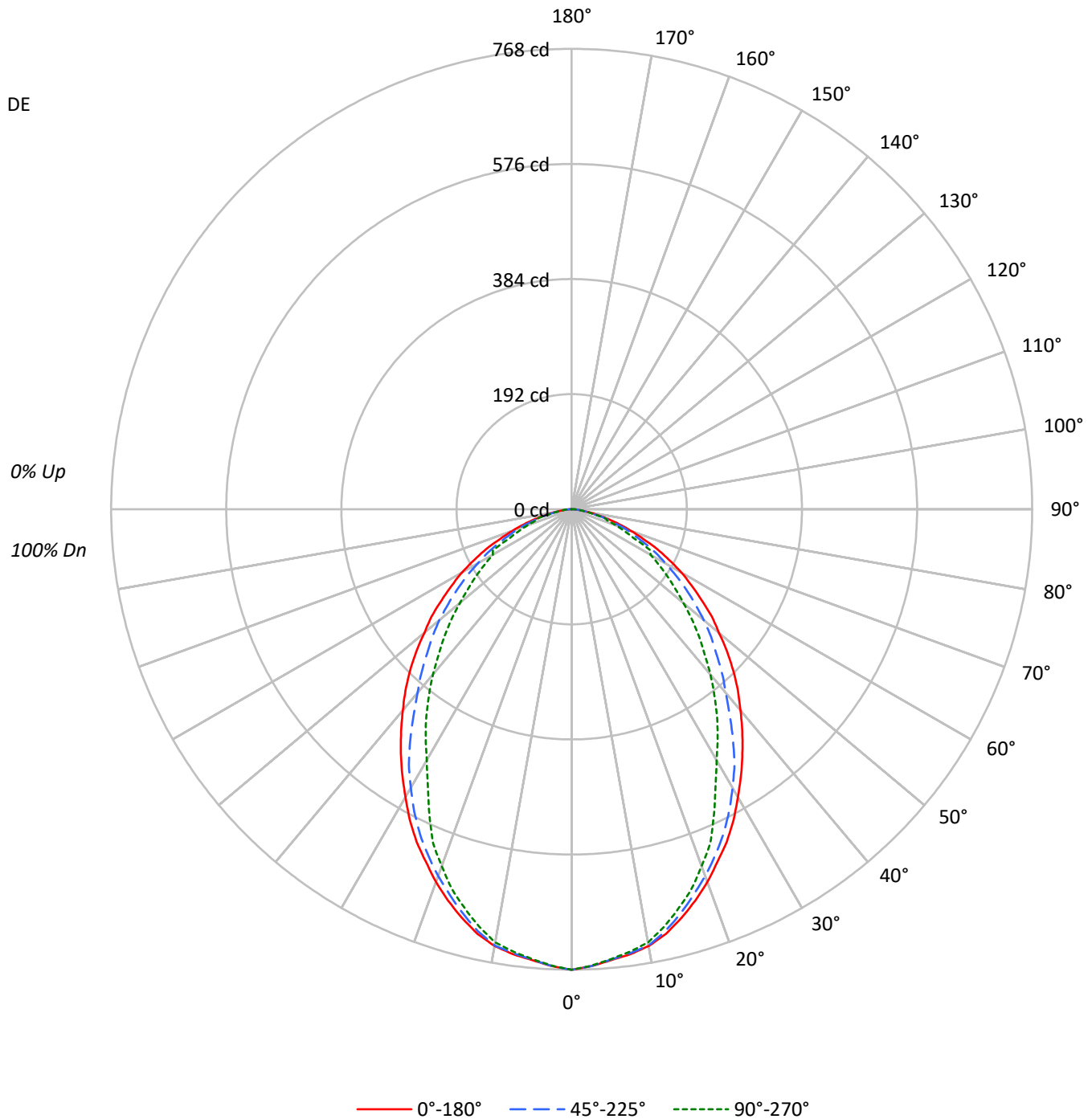
Lumens per Lamp: N/A
Luminaire Lumens: 1508.0 lumens
Efficiency: N/A
Efficacy: 69.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 21.6
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°	8269	8269	8269
5°	8156	8146	8137
10°	8085	8075	8017
15°	7867	7788	7679
20°	7578	7456	7253
25°	7267	7108	6665
30°	6887	6667	6004
35°	6523	6161	5554
40°	6152	5615	5054
45°	5800	5191	4570
50°	5369	4818	4074
55°	4966	4367	3650
60°	4551	3901	3270
65°	4004	3415	2896
70°	3298	2990	2458
75°	2624	2292	2400
80°	1760	1649	1543
85°	1099	1321	1531

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5800 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	71.5	4.7
10°-20°	196.2	13.0
20°-30°	271.7	18.0
30°-40°	289.7	19.2
40°-50°	264.3	17.5
50°-60°	207.0	13.7
60°-70°	135.0	8.9
70°-80°	59.8	4.0
80°-90°	12.8	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°	539.4	35.8
0°-40°	829.1	55.0
0°-60°	1300.5	86.2
0°-90°	1508.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1508.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	768	768	768	768	768	
5°	755	754	754	753	753	72
15°	706	706	699	692	689	198
25°	612	608	598	577	561	281
35°	496	493	469	433	423	310
45°	381	373	341	313	300	293
55°	265	257	233	205	194	237
65°	157	148	134	137	114	155
75°	63	59	55	52	58	68
85°	9	10	11	12	12	12
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	768.2	768.2	768.2	768.2	768.2
2.5°	762.8	762.8	762.8	761.9	761.9
5°	754.8	753.9	753.9	753.1	753.1
7.5°	748.6	747.7	746.8	746.0	744.2
10°	739.7	739.7	738.8	734.4	733.5
12.5°	725.5	724.6	721.1	714.9	713.1
15°	706.0	706.0	698.9	691.8	689.1
17.5°	684.7	683.8	674.9	667.8	664.3
20°	661.6	659.8	650.9	639.4	633.2
22.5°	635.8	635.8	625.2	610.1	603.9
25°	611.9	608.3	598.5	577.2	561.2
27.5°	584.3	579.0	568.3	538.2	519.5
30°	554.1	551.5	536.4	497.3	483.1
32.5°	525.7	521.3	505.3	464.4	452.9
35°	496.4	492.9	468.9	433.4	422.7
37.5°	467.1	462.7	432.5	404.1	390.7
40°	437.8	432.5	399.6	373.9	359.7
42.5°	410.3	403.2	371.2	343.7	327.7
45°	381.0	373.0	341.0	312.6	300.2
47.5°	351.7	344.6	315.3	285.9	271.7
50°	320.6	314.4	287.7	258.4	243.3
52.5°	294.8	285.1	259.3	230.0	217.6
55°	264.6	256.6	232.7	205.1	194.5
57.5°	237.1	229.1	206.9	181.2	172.3
60°	211.4	199.8	181.2	159.0	151.9
62.5°	182.9	174.1	158.1	139.4	148.3
65°	157.2	148.3	134.1	136.8	113.7
67.5°	128.8	124.3	111.9	99.5	95.9
70°	104.8	99.5	95.0	81.7	78.1
72.5°	83.5	78.1	71.9	64.8	62.2
75°	63.1	58.6	55.1	52.4	57.7
77.5°	43.5	41.7	39.1	36.4	35.5
80°	28.4	27.5	26.6	25.8	24.9
82.5°	16.9	16.9	16.9	16.9	16.9
85°	8.9	9.8	10.7	11.5	12.4
87.5°	5.3	5.3	6.2	7.1	8.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)