

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: P590017

Luminaire Tested: FSR-24-2-LD4-1LO-50-UNV-81-88-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590017
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-1)
Test Lab: INNOVATION CENTER
Issue Date: 12/8/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-2-LD4-1LO-50-UNV-81-88-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

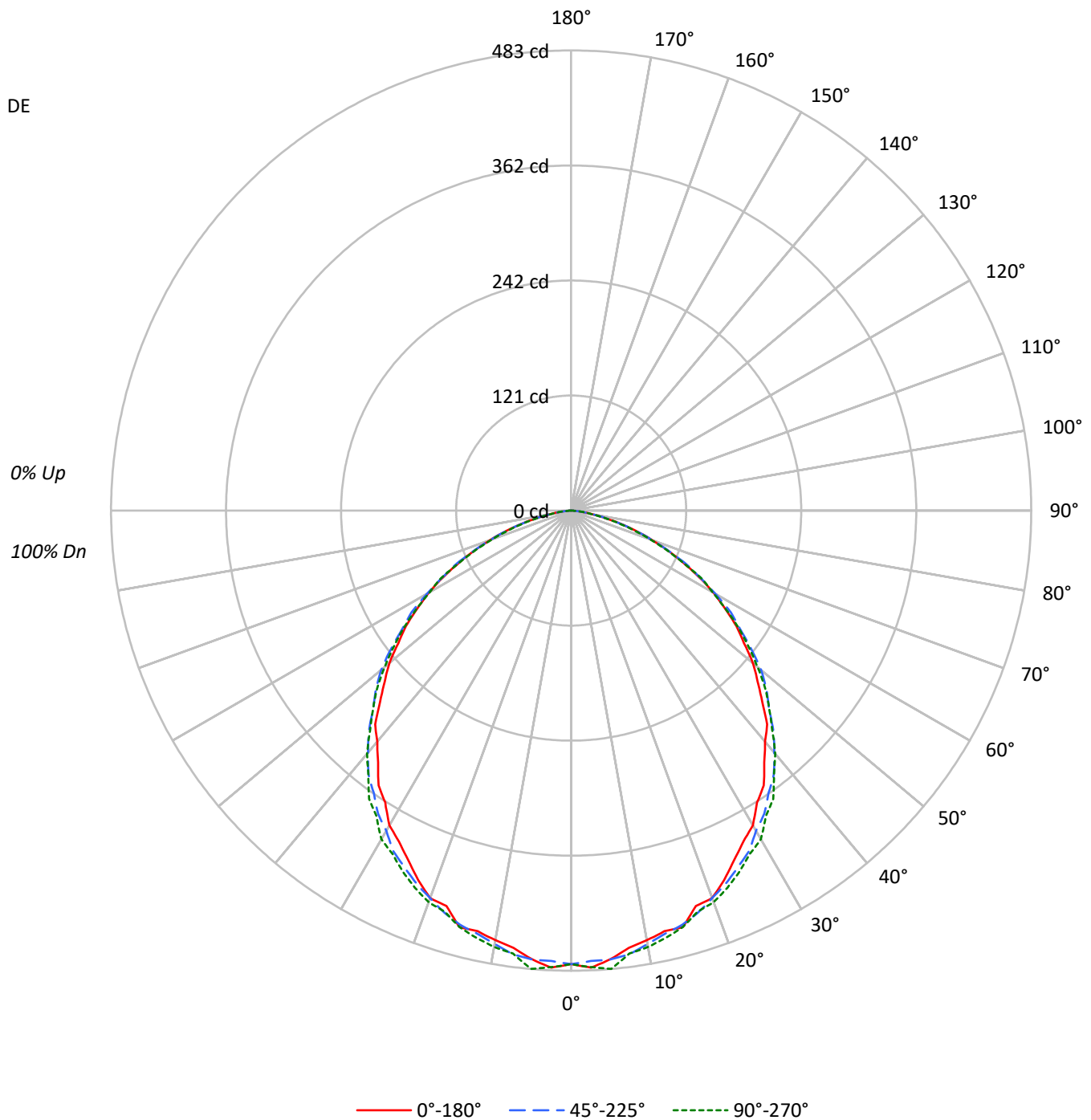
Lumens per Lamp: N/A
Luminaire Lumens: 1200.0 lumens
Efficiency: N/A
Efficacy: 102.6 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 11.7
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	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1281	1281	1281
5°	1277	1277	1304
10°	1251	1262	1271
15°	1261	1254	1261
20°	1240	1240	1253
25°	1202	1228	1241
30°	1185	1206	1238
35°	1157	1188	1214
40°	1112	1166	1171
45°	1079	1117	1118
50°	1043	1090	1069
55°	994	1013	1006
60°	929	939	922
65°	828	850	823
70°	711	714	694
75°	564	561	540
80°	377	367	352
85°	204	204	188

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 1145 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	44.8	3.7
10°-20°	126.9	10.6
20°-30°	190.2	15.8
30°-40°	225.4	18.8
40°-50°	225.8	18.8
50°-60°	191.7	16.0
60°-70°	129.2	10.8
70°-80°	56.8	4.7
80°-90°	9.2	0.8
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°	361.9	30.2
0°-40°	587.3	48.9
0°-60°	1004.8	83.7
0°-90°	1200.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1200.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	476	476	476	476	476	
5°	473	472	473	472	483	45
15°	453	447	450	452	453	126
25°	405	407	414	419	418	187
35°	352	353	362	370	370	219
45°	283	289	294	301	294	219
55°	212	210	216	214	214	188
65°	130	128	134	128	129	129
75°	54	53	54	50	52	58
85°	7	6	7	6	6	10
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	476.1	476.1	476.1	476.1	476.1
2.5°	480.2	476.6	473.2	477.2	479.6
5°	472.7	471.6	472.9	471.5	482.9
7.5°	463.0	467.3	469.7	468.2	468.9
10°	457.9	456.4	461.9	465.7	465.1
12.5°	452.3	454.6	454.9	459.0	459.3
15°	452.6	447.4	450.2	452.5	452.7
17.5°	435.1	440.7	442.6	448.0	441.3
20°	432.9	428.8	432.9	438.4	437.5
22.5°	419.7	415.1	423.9	428.8	428.5
25°	404.7	406.9	413.5	419.0	418.1
27.5°	391.5	394.1	403.6	411.0	406.2
30°	381.4	380.1	388.1	394.7	398.4
32.5°	363.3	367.9	377.3	383.9	380.4
35°	352.3	353.3	361.5	369.8	369.6
37.5°	333.0	337.9	349.4	351.7	349.6
40°	316.6	321.5	331.8	334.4	333.3
42.5°	304.5	305.4	314.3	317.2	312.5
45°	283.4	288.7	293.5	301.0	293.9
47.5°	265.5	267.9	278.2	280.3	276.5
50°	249.2	250.0	260.4	257.9	255.4
52.5°	228.7	232.3	238.2	237.7	234.8
55°	211.8	210.4	216.0	214.5	214.4
57.5°	191.6	194.1	198.6	196.3	192.5
60°	172.7	172.7	174.4	171.8	171.3
62.5°	151.6	152.3	152.7	149.4	154.7
65°	130.1	128.4	133.5	128.4	129.2
67.5°	110.4	111.3	110.8	107.6	108.8
70°	90.4	91.5	90.7	87.0	88.2
72.5°	72.0	70.7	71.6	67.0	69.1
75°	54.2	53.1	54.0	50.2	51.9
77.5°	36.9	37.7	37.1	35.1	36.3
80°	24.3	23.7	23.7	22.5	22.7
82.5°	14.2	13.5	13.3	13.0	13.5
85°	6.6	6.5	6.6	6.4	6.1
87.5°	2.4	2.5	2.5	2.3	2.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)