

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: P560657

Luminaire Tested: FSR-12-2-LD4-2STD-40-UNV-82-84-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560657
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-12-2-LD4-2STD-40-UNV-82-84-EDD
Description: 1X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2866.0 lumens
Efficiency: N/A
Efficacy: 86.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

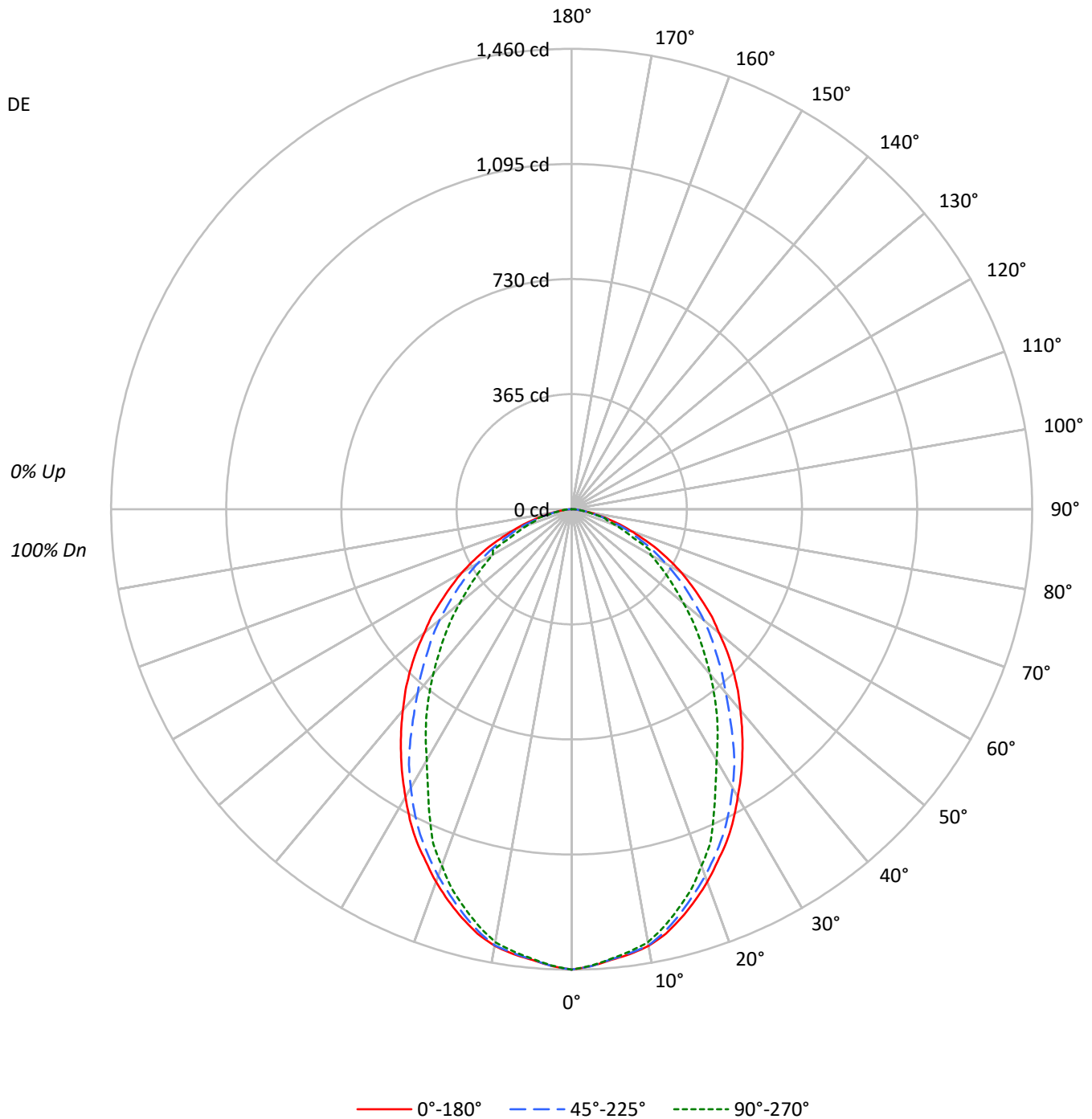
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	7857	7857	7857
5°	7750	7741	7732
10°	7683	7674	7619
15°	7476	7401	7297
20°	7202	7085	6892
25°	6906	6755	6334
30°	6545	6335	5706
35°	6199	5855	5278
40°	5846	5336	4802
45°	5511	4933	4342
50°	5102	4578	3872
55°	4719	4149	3468
60°	4324	3706	3106
65°	3804	3245	2751
70°	3135	2842	2337
75°	2491	2175	2281
80°	1674	1568	1466
85°	1044	1254	1457

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5511 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	135.9	4.7
10°-20°	373.0	13.0
20°-30°	516.3	18.0
30°-40°	550.6	19.2
40°-50°	502.3	17.5
50°-60°	393.5	13.7
60°-70°	256.5	8.9
70°-80°	113.6	4.0
80°-90°	24.4	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°	1025.2	35.8
0°-40°	1575.8	55.0
0°-60°	2471.5	86.2
0°-90°	2866.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2866.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1460	1460	1460	1460	1460	
5°	1435	1433	1433	1431	1431	136
15°	1342	1342	1328	1315	1310	377
25°	1163	1156	1138	1097	1067	534
35°	944	937	891	824	803	590
45°	724	709	648	594	570	558
55°	503	488	442	390	370	451
65°	299	282	255	260	216	294
75°	120	111	105	100	110	128
85°	17	19	20	22	24	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1459.9	1459.9	1459.9	1459.9	1459.9
2.5°	1449.8	1449.8	1449.8	1448.1	1448.1
5°	1434.6	1432.9	1432.9	1431.2	1431.2
7.5°	1422.8	1421.1	1419.4	1417.7	1414.3
10°	1405.9	1405.9	1404.2	1395.8	1394.1
12.5°	1378.9	1377.2	1370.5	1358.6	1355.3
15°	1341.8	1341.8	1328.3	1314.8	1309.7
17.5°	1301.3	1299.6	1282.7	1269.2	1262.4
20°	1257.4	1254.0	1237.1	1215.2	1203.4
22.5°	1208.4	1208.4	1188.2	1159.5	1147.7
25°	1162.9	1156.1	1137.5	1097.0	1066.7
27.5°	1110.5	1100.4	1080.2	1022.8	987.3
30°	1053.2	1048.1	1019.4	945.1	918.1
32.5°	999.1	990.7	960.3	882.7	860.8
35°	943.5	936.7	891.1	823.6	803.4
37.5°	887.8	879.3	821.9	767.9	742.6
40°	832.1	821.9	759.5	710.5	683.5
42.5°	779.7	766.2	705.5	653.2	622.8
45°	724.0	708.9	648.1	594.1	570.5
47.5°	668.3	654.8	599.2	543.5	516.5
50°	609.3	597.5	546.8	491.1	462.4
52.5°	560.3	541.8	492.8	437.1	413.5
55°	502.9	487.8	442.2	389.9	369.6
57.5°	450.6	435.4	393.2	344.3	327.4
60°	401.7	379.7	344.3	302.1	288.6
62.5°	347.7	330.8	300.4	265.0	281.9
65°	298.7	281.9	254.8	259.9	216.0
67.5°	244.7	236.3	212.7	189.0	182.3
70°	199.2	189.0	180.6	155.3	148.5
72.5°	158.6	148.5	136.7	123.2	118.1
75°	119.8	111.4	104.6	99.6	109.7
77.5°	82.7	79.3	74.3	69.2	67.5
80°	54.0	52.3	50.6	48.9	47.3
82.5°	32.1	32.1	32.1	32.1	32.1
85°	16.9	18.6	20.3	21.9	23.6
87.5°	10.1	10.1	11.8	13.5	15.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)