

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: P560047

Luminaire Tested: FSR-12-2-LD4-1STD-35-UNV-93-97-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560047
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-LD4-1STD-35-UNV-93-97-EDD
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1461.0 lumens
Efficiency: N/A
Efficacy: 88.0 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

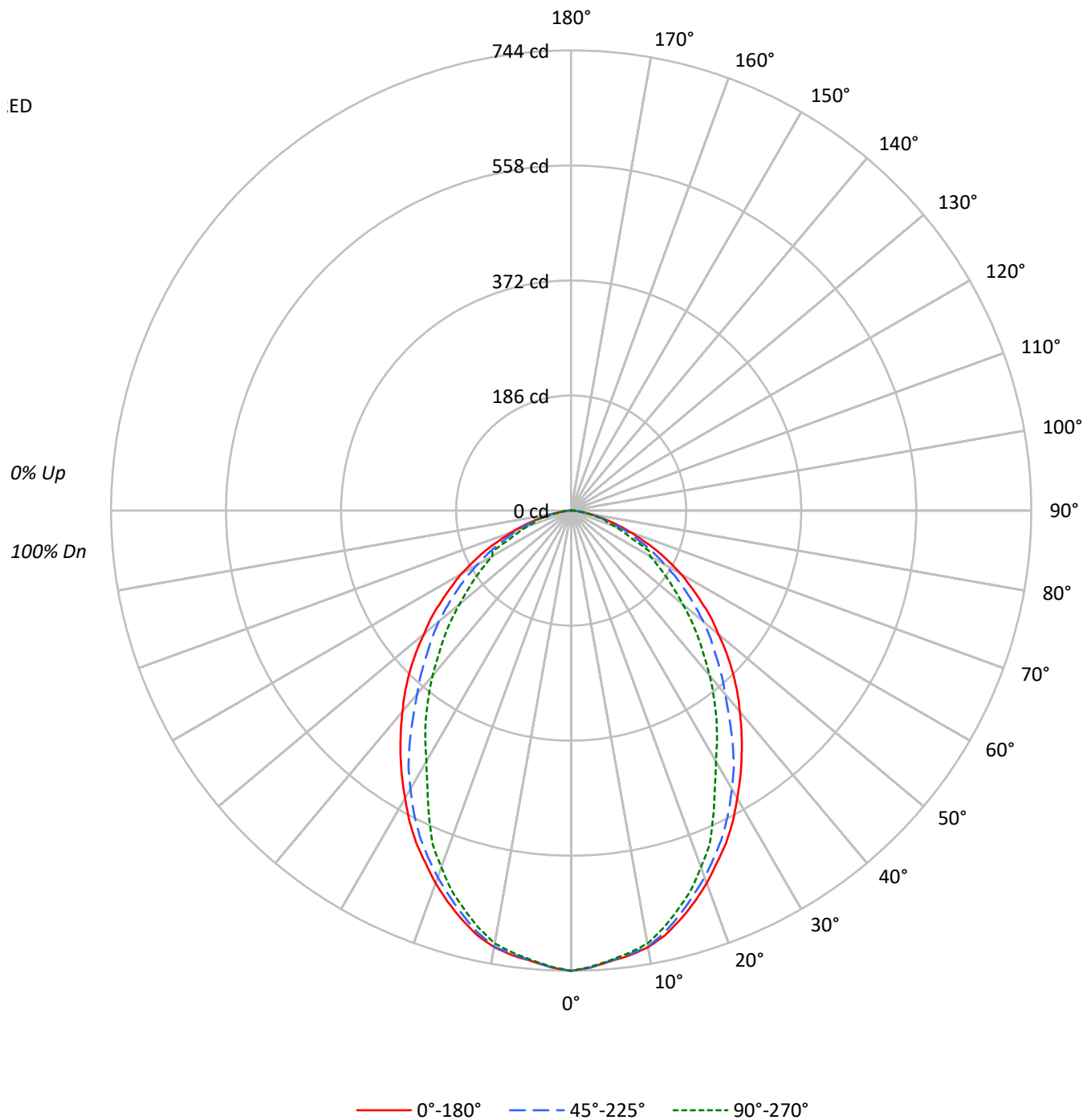
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	4005	4005	4005
5°	3951	3946	3942
10°	3917	3912	3884
15°	3811	3773	3720
20°	3671	3612	3513
25°	3520	3444	3229
30°	3337	3230	2908
35°	3160	2985	2690
40°	2980	2720	2448
45°	2809	2515	2213
50°	2601	2334	1973
55°	2406	2115	1768
60°	2204	1889	1583
65°	1940	1654	1402
70°	1597	1449	1191
75°	1271	1108	1162
80°	852	800	747
85°	531	636	741

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2809 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	69.3	4.7
10°-20°	190.1	13.0
20°-30°	263.2	18.0
30°-40°	280.7	19.2
40°-50°	256.0	17.5
50°-60°	200.6	13.7
60°-70°	130.7	8.9
70°-80°	57.9	4.0
80°-90°	12.4	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°	522.6	35.8
0°-40°	803.3	55.0
0°-60°	1259.9	86.2
0°-90°	1461.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1461.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	744	744	744	744	744	
5°	731	730	730	730	730	69
15°	684	684	677	670	668	192
25°	593	589	580	559	544	272
35°	481	478	454	420	410	301
45°	369	361	330	303	291	284
55°	256	249	225	199	188	230
65°	152	144	130	132	110	150
75°	61	57	53	51	56	65
85°	9	10	10	11	12	12
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	744.2	744.2	744.2	744.2	744.2
2.5°	739.1	739.1	739.1	738.2	738.2
5°	731.3	730.4	730.4	729.6	729.6
7.5°	725.3	724.4	723.6	722.7	721.0
10°	716.7	716.7	715.8	711.5	710.7
12.5°	702.9	702.1	698.6	692.6	690.9
15°	684.0	684.0	677.1	670.2	667.6
17.5°	663.3	662.5	653.9	647.0	643.6
20°	641.0	639.2	630.6	619.5	613.4
22.5°	616.0	616.0	605.7	591.1	585.0
25°	592.8	589.3	579.9	559.2	543.7
27.5°	566.1	561.0	550.6	521.4	503.3
30°	536.9	534.3	519.7	481.8	468.0
32.5°	509.3	505.0	489.5	450.0	438.8
35°	480.9	477.5	454.3	419.9	409.5
37.5°	452.6	448.2	419.0	391.5	378.6
40°	424.2	419.0	387.2	362.2	348.4
42.5°	397.5	390.6	359.6	333.0	317.5
45°	369.1	361.4	330.4	302.8	290.8
47.5°	340.7	333.8	305.4	277.0	263.3
50°	310.6	304.6	278.8	250.4	235.7
52.5°	285.6	276.2	251.2	222.8	210.8
55°	256.4	248.6	225.4	198.7	188.4
57.5°	229.7	222.0	200.5	175.5	166.9
60°	204.8	193.6	175.5	154.0	147.1
62.5°	177.2	168.6	153.1	135.1	143.7
65°	152.3	143.7	129.9	132.5	110.1
67.5°	124.8	120.5	108.4	96.4	92.9
70°	101.5	96.4	92.1	79.2	75.7
72.5°	80.9	75.7	69.7	62.8	60.2
75°	61.1	56.8	53.3	50.8	55.9
77.5°	42.2	40.4	37.9	35.3	34.4
80°	27.5	26.7	25.8	25.0	24.1
82.5°	16.3	16.3	16.3	16.3	16.3
85°	8.6	9.5	10.3	11.2	12.0
87.5°	5.2	5.2	6.0	6.9	7.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)