

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: P559746

Luminaire Tested: FSR-12-2-LD4-1HI-50-UNV-81-85-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559746
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-LD4-1HI-50-UNV-81-85-EDD-90
Description: 1X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1557.0 lumens
Efficiency: N/A
Efficacy: 72.1 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

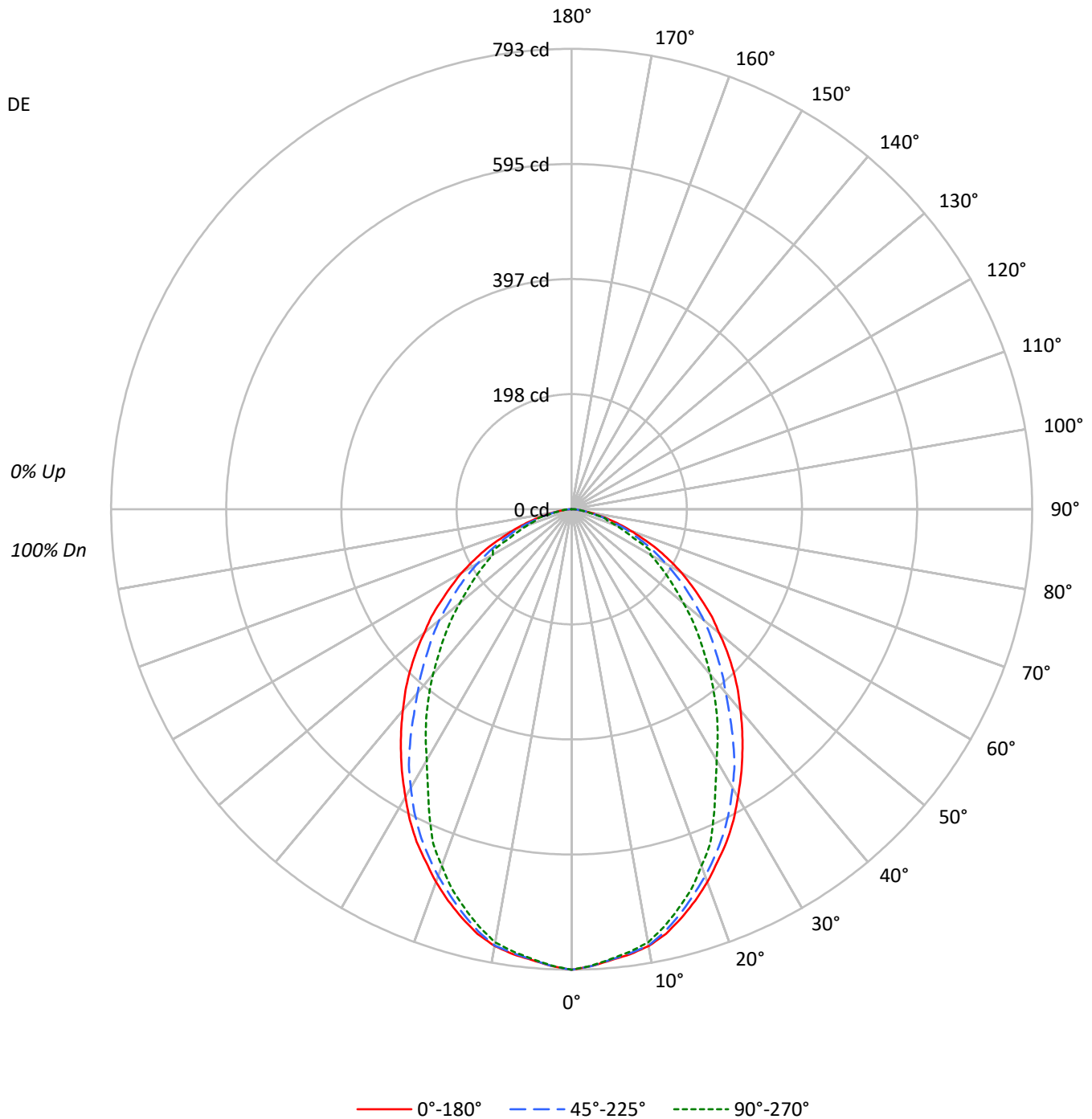
Input Watts (W): 21.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	4268	4268	4268
5°	4211	4205	4200
10°	4174	4169	4139
15°	4061	4021	3964
20°	3912	3849	3744
25°	3751	3670	3441
30°	3555	3442	3100
35°	3367	3181	2867
40°	3176	2899	2609
45°	2993	2680	2359
50°	2771	2488	2103
55°	2563	2254	1884
60°	2349	2013	1688
65°	2067	1764	1495
70°	1703	1544	1270
75°	1354	1181	1239
80°	908	852	797
85°	568	679	790

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2993 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.8	4.7
10°-20°	202.6	13.0
20°-30°	280.5	18.0
30°-40°	299.1	19.2
40°-50°	272.9	17.5
50°-60°	213.8	13.7
60°-70°	139.3	8.9
70°-80°	61.7	4.0
80°-90°	13.2	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°	557.0	35.8
0°-40°	856.0	55.0
0°-60°	1342.7	86.2
0°-90°	1557.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1557.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	793	793	793	793	793	
5°	779	778	778	778	778	74
15°	729	729	722	714	712	205
25°	632	628	618	596	580	290
35°	512	509	484	447	436	320
45°	393	385	352	323	310	303
55°	273	265	240	212	201	245
65°	162	153	138	141	117	160
75°	65	60	57	54	60	70
85°	9	10	11	12	13	13
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	793.1	793.1	793.1	793.1	793.1
2.5°	787.6	787.6	787.6	786.7	786.7
5°	779.4	778.4	778.4	777.5	777.5
7.5°	772.9	772.0	771.1	770.2	768.4
10°	763.8	763.8	762.9	758.3	757.4
12.5°	749.1	748.2	744.5	738.1	736.3
15°	728.9	728.9	721.6	714.3	711.5
17.5°	706.9	706.0	696.8	689.5	685.8
20°	683.1	681.3	672.1	660.2	653.7
22.5°	656.5	656.5	645.5	629.9	623.5
25°	631.7	628.1	618.0	596.0	579.5
27.5°	603.3	597.8	586.8	555.6	536.4
30°	572.1	569.4	553.8	513.5	498.8
32.5°	542.8	538.2	521.7	479.5	467.6
35°	512.5	508.9	484.1	447.4	436.4
37.5°	482.3	477.7	446.5	417.2	403.4
40°	452.0	446.5	412.6	386.0	371.3
42.5°	423.6	416.3	383.3	354.8	338.3
45°	393.3	385.1	352.1	322.7	309.9
47.5°	363.1	355.8	325.5	295.2	280.6
50°	331.0	324.6	297.1	266.8	251.2
52.5°	304.4	294.3	267.7	237.5	224.6
55°	273.2	265.0	240.2	211.8	200.8
57.5°	244.8	236.6	213.6	187.0	177.9
60°	218.2	206.3	187.0	164.1	156.8
62.5°	188.9	179.7	163.2	144.0	153.1
65°	162.3	153.1	138.5	141.2	117.4
67.5°	132.9	128.4	115.5	102.7	99.0
70°	108.2	102.7	98.1	84.4	80.7
72.5°	86.2	80.7	74.3	66.9	64.2
75°	65.1	60.5	56.8	54.1	59.6
77.5°	44.9	43.1	40.3	37.6	36.7
80°	29.3	28.4	27.5	26.6	25.7
82.5°	17.4	17.4	17.4	17.4	17.4
85°	9.2	10.1	11.0	11.9	12.8
87.5°	5.5	5.5	6.4	7.3	8.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)