

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: P559047

Luminaire Tested: FSR-12-1-LD4-2HI-35-UNV-81-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559047
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-35-UNV-81-87-EDD
Description: 1X1 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

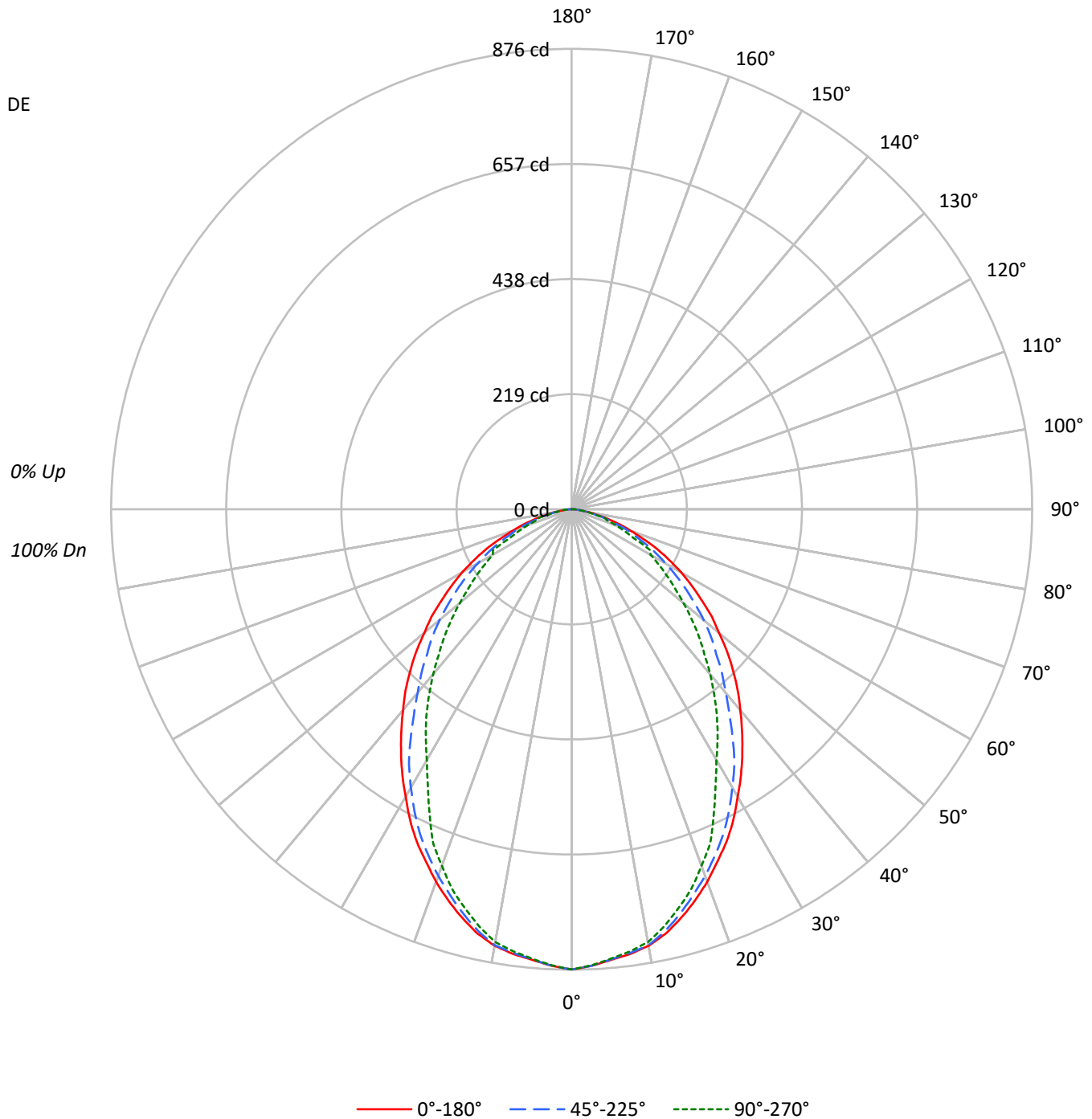
Lumens per Lamp: N/A
Luminaire Lumens: 1719.0 lumens
Efficiency: N/A
Efficacy: 79.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

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	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°	9425	9425	9425
5°	9298	9286	9275
10°	9216	9205	9140
15°	8968	8878	8753
20°	8639	8499	8268
25°	8284	8103	7599
30°	7851	7599	6845
35°	7436	7023	6332
40°	7013	6400	5761
45°	6611	5917	5209
50°	6119	5493	4645
55°	5662	4977	4160
60°	5186	4445	3726
65°	4564	3894	3301
70°	3761	3408	2804
75°	2990	2612	2737
80°	2008	1884	1754
85°	1247	1494	1754

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6611 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.5	4.7
10°-20°	223.7	13.0
20°-30°	309.7	18.0
30°-40°	330.2	19.2
40°-50°	301.3	17.5
50°-60°	236.0	13.7
60°-70°	153.8	8.9
70°-80°	68.2	4.0
80°-90°	14.6	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°	614.9	35.8
0°-40°	945.1	55.0
0°-60°	1482.4	86.2
0°-90°	1719.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1719.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	876	876	876	876	876	
5°	860	859	859	858	858	82
15°	805	805	797	789	786	226
25°	698	693	682	658	640	320
35°	566	562	534	494	482	354
45°	434	425	389	356	342	335
55°	302	293	265	234	222	271
65°	179	169	153	156	130	177
75°	72	67	63	60	66	77
85°	10	11	12	13	14	14
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	875.6	875.6	875.6	875.6	875.6
2.5°	869.6	869.6	869.6	868.5	868.5
5°	860.5	859.4	859.4	858.4	858.4
7.5°	853.4	852.4	851.3	850.3	848.3
10°	843.2	843.2	842.2	837.2	836.2
12.5°	827.0	826.0	822.0	814.9	812.9
15°	804.8	804.8	796.7	788.6	785.5
17.5°	780.5	779.5	769.3	761.2	757.2
20°	754.2	752.1	742.0	728.9	721.8
22.5°	724.8	724.8	712.7	695.4	688.4
25°	697.5	693.4	682.3	658.0	639.8
27.5°	666.1	660.0	647.9	613.5	592.2
30°	631.7	628.6	611.4	566.9	550.7
32.5°	599.3	594.2	576.0	529.4	516.3
35°	565.9	561.8	534.5	494.0	481.9
37.5°	532.5	527.4	493.0	460.6	445.4
40°	499.1	493.0	455.5	426.2	410.0
42.5°	467.7	459.6	423.1	391.8	373.5
45°	434.3	425.2	388.7	356.3	342.2
47.5°	400.9	392.8	359.4	326.0	309.8
50°	365.4	358.4	328.0	294.6	277.4
52.5°	336.1	324.9	295.6	262.2	248.0
55°	301.7	292.6	265.2	233.8	221.7
57.5°	270.3	261.2	235.9	206.5	196.4
60°	240.9	227.8	206.5	181.2	173.1
62.5°	208.5	198.4	180.2	158.9	169.1
65°	179.2	169.1	152.9	155.9	129.6
67.5°	146.8	141.7	127.5	113.4	109.3
70°	119.5	113.4	108.3	93.1	89.1
72.5°	95.2	89.1	82.0	73.9	70.9
75°	71.9	66.8	62.8	59.7	65.8
77.5°	49.6	47.6	44.5	41.5	40.5
80°	32.4	31.4	30.4	29.4	28.3
82.5°	19.2	19.2	19.2	19.2	19.2
85°	10.1	11.1	12.1	13.2	14.2
87.5°	6.1	6.1	7.1	8.1	9.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)