

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: P560213

Luminaire Tested: FSR-12-2-LD4-2HI-35-UNV-82-86-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560213
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-LD4-2HI-35-UNV-82-86-EDD
Description: 1X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

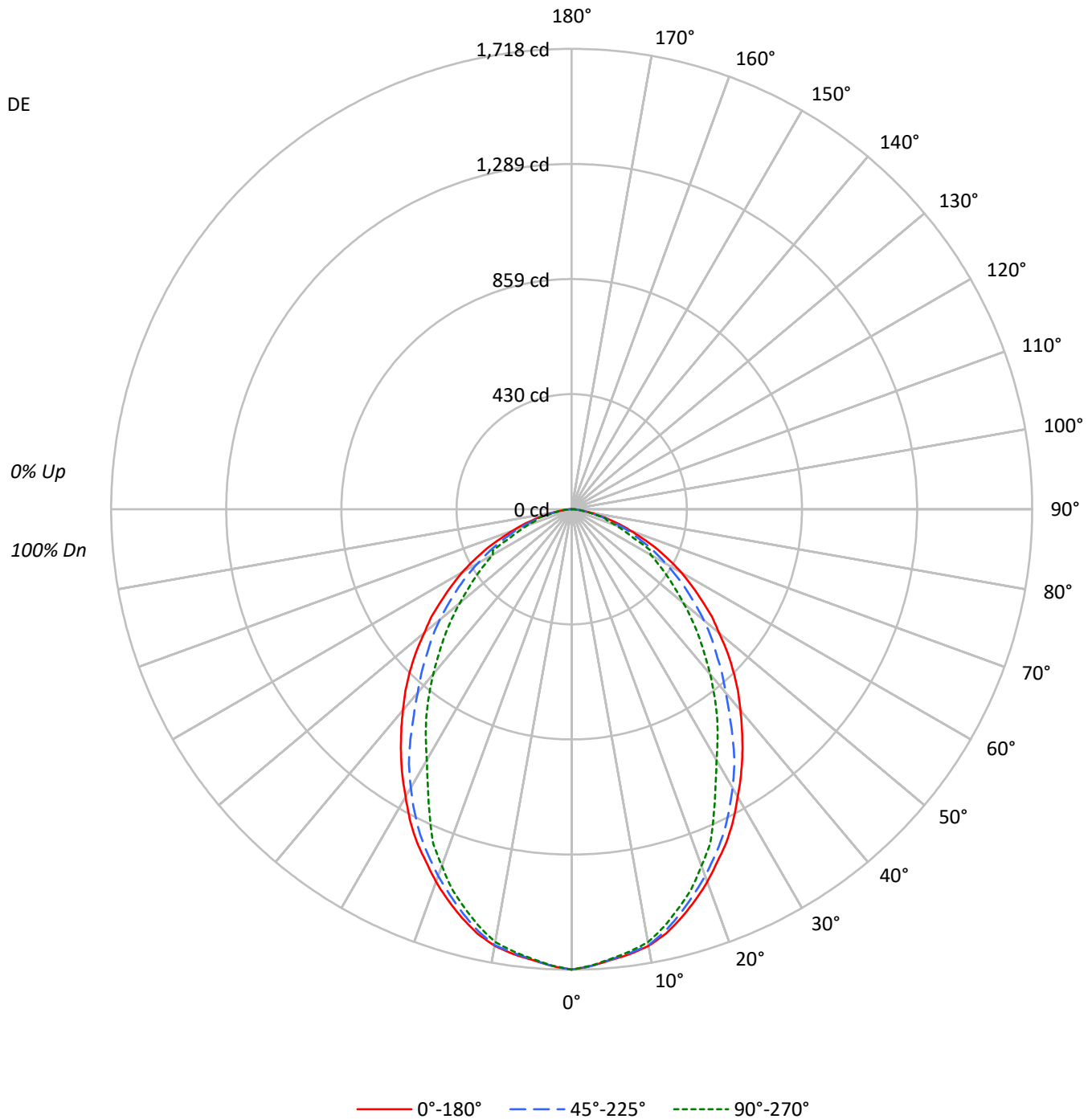
Lumens per Lamp: N/A
Luminaire Lumens: 3372.0 lumens
Efficiency: N/A
Efficacy: 78.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 43.2
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°	9245	9245	9245
5°	9119	9108	9097
10°	9040	9029	8964
15°	8796	8708	8586
20°	8473	8336	8109
25°	8125	7948	7453
30°	7700	7454	6713
35°	7293	6889	6210
40°	6878	6278	5650
45°	6484	5804	5109
50°	6002	5387	4556
55°	5552	4882	4081
60°	5087	4360	3655
65°	4476	3818	3237
70°	3687	3344	2749
75°	2932	2560	2685
80°	1968	1847	1723
85°	1229	1470	1717

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6484 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	159.9	4.7
10°-20°	438.8	13.0
20°-30°	607.5	18.0
30°-40°	647.8	19.2
40°-50°	590.9	17.5
50°-60°	463.0	13.7
60°-70°	301.7	8.9
70°-80°	133.7	4.0
80°-90°	28.7	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°	1206.2	35.8
0°-40°	1854.0	55.0
0°-60°	2907.9	86.2
0°-90°	3372.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3372.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1718	1718	1718	1718	1718	
5°	1688	1686	1686	1684	1684	160
15°	1579	1579	1563	1547	1541	444
25°	1368	1360	1338	1291	1255	628
35°	1110	1102	1048	969	945	694
45°	852	834	762	699	671	656
55°	592	574	520	459	435	531
65°	352	332	300	306	254	346
75°	141	131	123	117	129	151
85°	20	22	24	26	28	28
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1717.7	1717.7	1717.7	1717.7	1717.7
2.5°	1705.7	1705.7	1705.7	1703.8	1703.8
5°	1687.9	1685.9	1685.9	1683.9	1683.9
7.5°	1674.0	1672.0	1670.0	1668.0	1664.0
10°	1654.1	1654.1	1652.1	1642.2	1640.2
12.5°	1622.3	1620.4	1612.4	1598.5	1594.5
15°	1578.7	1578.7	1562.8	1546.9	1540.9
17.5°	1531.0	1529.0	1509.2	1493.3	1485.3
20°	1479.4	1475.4	1455.5	1429.7	1415.8
22.5°	1421.8	1421.8	1398.0	1364.2	1350.3
25°	1368.2	1360.2	1338.4	1290.7	1255.0
27.5°	1306.6	1294.7	1270.9	1203.3	1161.6
30°	1239.1	1233.1	1199.4	1112.0	1080.2
32.5°	1175.5	1165.6	1129.9	1038.5	1012.7
35°	1110.0	1102.1	1048.5	969.0	945.2
37.5°	1044.5	1034.6	967.0	903.5	873.7
40°	979.0	967.0	893.6	836.0	804.2
42.5°	917.4	901.5	830.0	768.5	732.7
45°	851.9	834.0	762.5	699.0	671.2
47.5°	786.3	770.5	704.9	639.4	607.6
50°	716.8	702.9	643.4	577.8	544.1
52.5°	659.3	637.4	579.8	514.3	486.5
55°	591.7	573.9	520.3	458.7	434.9
57.5°	530.2	512.3	462.7	405.1	385.2
60°	472.6	446.8	405.1	355.4	339.6
62.5°	409.1	389.2	353.5	311.8	331.6
65°	351.5	331.6	299.8	305.8	254.2
67.5°	287.9	278.0	250.2	222.4	214.5
70°	234.3	222.4	212.5	182.7	174.7
72.5°	186.7	174.7	160.8	145.0	139.0
75°	141.0	131.1	123.1	117.2	129.1
77.5°	97.3	93.3	87.4	81.4	79.4
80°	63.5	61.6	59.6	57.6	55.6
82.5°	37.7	37.7	37.7	37.7	37.7
85°	19.9	21.8	23.8	25.8	27.8
87.5°	11.9	11.9	13.9	15.9	17.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)