

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: P559814

Luminaire Tested: FSR-12-2-LD4-1LO-35-UNV-81-87-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559814
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-LD4-1LO-35-UNV-81-87-EDD-90
Description: 1X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

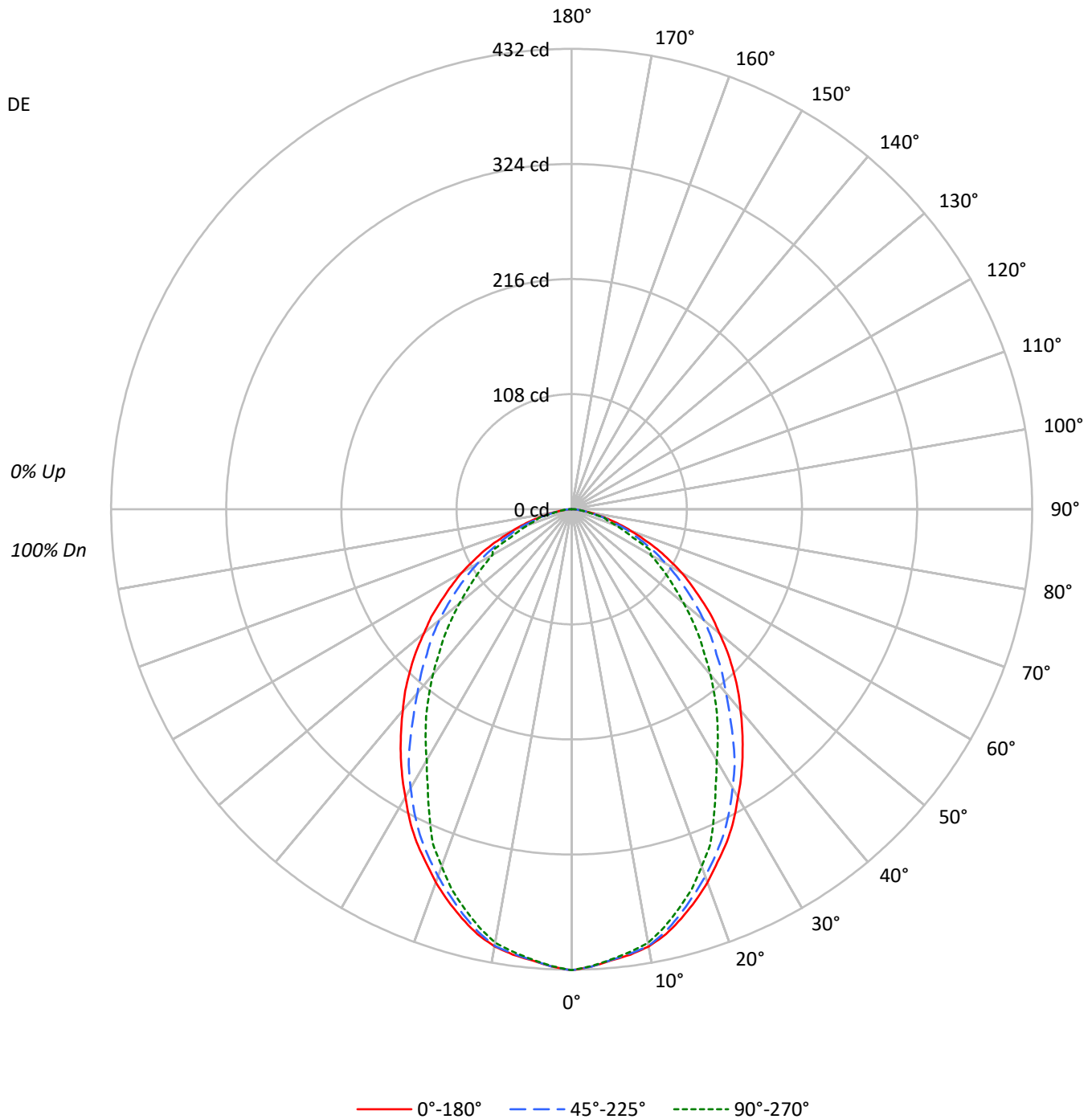
Lumens per Lamp: N/A
Luminaire Lumens: 849.1 lumens
Efficiency: N/A
Efficacy: 72.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 11.7
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°	2328	2328	2328
5°	2296	2293	2291
10°	2276	2273	2257
15°	2215	2193	2162
20°	2133	2099	2042
25°	2046	2001	1877
30°	1939	1877	1690
35°	1836	1735	1564
40°	1732	1581	1423
45°	1633	1461	1286
50°	1511	1356	1147
55°	1398	1229	1027
60°	1281	1098	920
65°	1127	961	815
70°	928	842	692
75°	738	645	676
80°	496	465	434
85°	309	371	432

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1633 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	40.3	4.7
10°-20°	110.5	13.0
20°-30°	153.0	18.0
30°-40°	163.1	19.2
40°-50°	148.8	17.5
50°-60°	116.6	13.7
60°-70°	76.0	8.9
70°-80°	33.7	4.0
80°-90°	7.2	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°	303.7	35.8
0°-40°	466.8	55.0
0°-60°	732.2	86.2
0°-90°	849.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	849.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	432	432	432	432	432	
5°	425	424	424	424	424	40
15°	398	398	394	390	388	112
25°	344	342	337	325	316	158
35°	280	278	264	244	238	175
45°	214	210	192	176	169	165
55°	149	144	131	116	110	134
65°	88	84	76	77	64	87
75°	36	33	31	30	32	38
85°	5	6	6	6	7	7
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	432.5	432.5	432.5	432.5	432.5
2.5°	429.5	429.5	429.5	429.0	429.0
5°	425.0	424.5	424.5	424.0	424.0
7.5°	421.5	421.0	420.5	420.0	419.0
10°	416.5	416.5	416.0	413.5	413.0
12.5°	408.5	408.0	406.0	402.5	401.5
15°	397.5	397.5	393.5	389.5	388.0
17.5°	385.5	385.0	380.0	376.0	374.0
20°	372.5	371.5	366.5	360.0	356.5
22.5°	358.0	358.0	352.0	343.5	340.0
25°	344.5	342.5	337.0	325.0	316.0
27.5°	329.0	326.0	320.0	303.0	292.5
30°	312.0	310.5	302.0	280.0	272.0
32.5°	296.0	293.5	284.5	261.5	255.0
35°	279.5	277.5	264.0	244.0	238.0
37.5°	263.0	260.5	243.5	227.5	220.0
40°	246.5	243.5	225.0	210.5	202.5
42.5°	231.0	227.0	209.0	193.5	184.5
45°	214.5	210.0	192.0	176.0	169.0
47.5°	198.0	194.0	177.5	161.0	153.0
50°	180.5	177.0	162.0	145.5	137.0
52.5°	166.0	160.5	146.0	129.5	122.5
55°	149.0	144.5	131.0	115.5	109.5
57.5°	133.5	129.0	116.5	102.0	97.0
60°	119.0	112.5	102.0	89.5	85.5
62.5°	103.0	98.0	89.0	78.5	83.5
65°	88.5	83.5	75.5	77.0	64.0
67.5°	72.5	70.0	63.0	56.0	54.0
70°	59.0	56.0	53.5	46.0	44.0
72.5°	47.0	44.0	40.5	36.5	35.0
75°	35.5	33.0	31.0	29.5	32.5
77.5°	24.5	23.5	22.0	20.5	20.0
80°	16.0	15.5	15.0	14.5	14.0
82.5°	9.5	9.5	9.5	9.5	9.5
85°	5.0	5.5	6.0	6.5	7.0
87.5°	3.0	3.0	3.5	4.0	4.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)