

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: P558732

Luminaire Tested: FSR-12-1-LD4-1LO-40-UNV-81-96-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P558732
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-LD4-1LO-40-UNV-81-96-EDD-90
Description: 1X1 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 470.0 lumens
Efficiency: N/A
Efficacy: 81.0 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

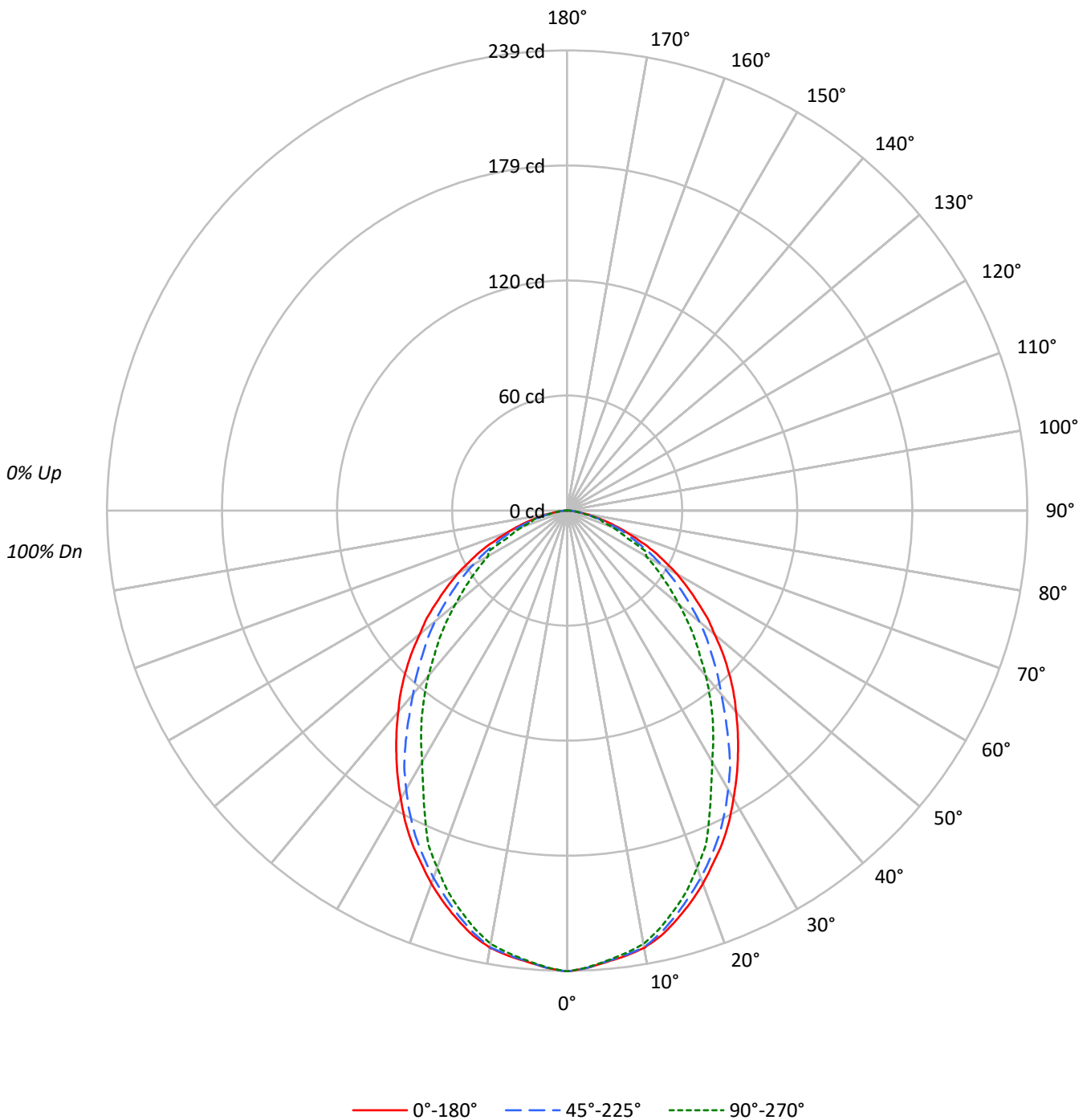
Input Watts (W): 5.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	47	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°	2577	2577	2577
5°	2542	2539	2536
10°	2520	2517	2499
15°	2452	2427	2394
20°	2362	2324	2260
25°	2265	2215	2077
30°	2147	2078	1872
35°	2033	1920	1731
40°	1918	1749	1575
45°	1807	1618	1425
50°	1673	1502	1269
55°	1548	1361	1137
60°	1419	1216	1018
65°	1248	1065	902
70°	1029	932	768
75°	819	715	749
80°	552	514	477
85°	346	408	482

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1807 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	22.3	4.7
10°-20°	61.2	13.0
20°-30°	84.7	18.0
30°-40°	90.3	19.2
40°-50°	82.4	17.5
50°-60°	64.5	13.7
60°-70°	42.1	8.9
70°-80°	18.6	4.0
80°-90°	4.0	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°	168.1	35.8
0°-40°	258.4	55.0
0°-60°	405.3	86.2
0°-90°	470.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	470.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	239	239	239	239	239	
5°	235	235	235	235	235	22
15°	220	220	218	216	215	62
25°	191	190	186	180	175	88
35°	155	154	146	135	132	97
45°	119	116	106	97	94	91
55°	82	80	72	64	61	74
65°	49	46	42	43	35	48
75°	20	18	17	16	18	21
85°	3	3	3	4	4	4
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	239.4	239.4	239.4	239.4	239.4
2.5°	237.8	237.8	237.8	237.5	237.5
5°	235.3	235.0	235.0	234.7	234.7
7.5°	233.3	233.0	232.8	232.5	231.9
10°	230.6	230.6	230.3	228.9	228.6
12.5°	226.1	225.8	224.7	222.8	222.3
15°	220.0	220.0	217.8	215.6	214.8
17.5°	213.4	213.1	210.4	208.1	207.0
20°	206.2	205.6	202.9	199.3	197.3
22.5°	198.2	198.2	194.9	190.1	188.2
25°	190.7	189.6	186.5	179.9	174.9
27.5°	182.1	180.5	177.1	167.7	161.9
30°	172.7	171.9	167.2	155.0	150.6
32.5°	163.9	162.5	157.5	144.8	141.2
35°	154.7	153.6	146.1	135.1	131.7
37.5°	145.6	144.2	134.8	125.9	121.8
40°	136.5	134.8	124.5	116.5	112.1
42.5°	127.9	125.7	115.7	107.1	102.1
45°	118.7	116.2	106.3	97.4	93.6
47.5°	109.6	107.4	98.3	89.1	84.7
50°	99.9	98.0	89.7	80.5	75.8
52.5°	91.9	88.8	80.8	71.7	67.8
55°	82.5	80.0	72.5	63.9	60.6
57.5°	73.9	71.4	64.5	56.5	53.7
60°	65.9	62.3	56.5	49.5	47.3
62.5°	57.0	54.2	49.3	43.5	46.2
65°	49.0	46.2	41.8	42.6	35.4
67.5°	40.1	38.7	34.9	31.0	29.9
70°	32.7	31.0	29.6	25.5	24.4
72.5°	26.0	24.4	22.4	20.2	19.4
75°	19.7	18.3	17.2	16.3	18.0
77.5°	13.6	13.0	12.2	11.3	11.1
80°	8.9	8.6	8.3	8.0	7.7
82.5°	5.3	5.3	5.3	5.3	5.3
85°	2.8	3.0	3.3	3.6	3.9
87.5°	1.7	1.7	1.9	2.2	2.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)