

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: P560664

Luminaire Tested: FSR-12-2-LD4-2STD-40-UNV-82-88-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560664
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-LD4-2STD-40-UNV-82-88-EDD-90
Description: 1X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2033.0 lumens
Efficiency: N/A
Efficacy: 61.1 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

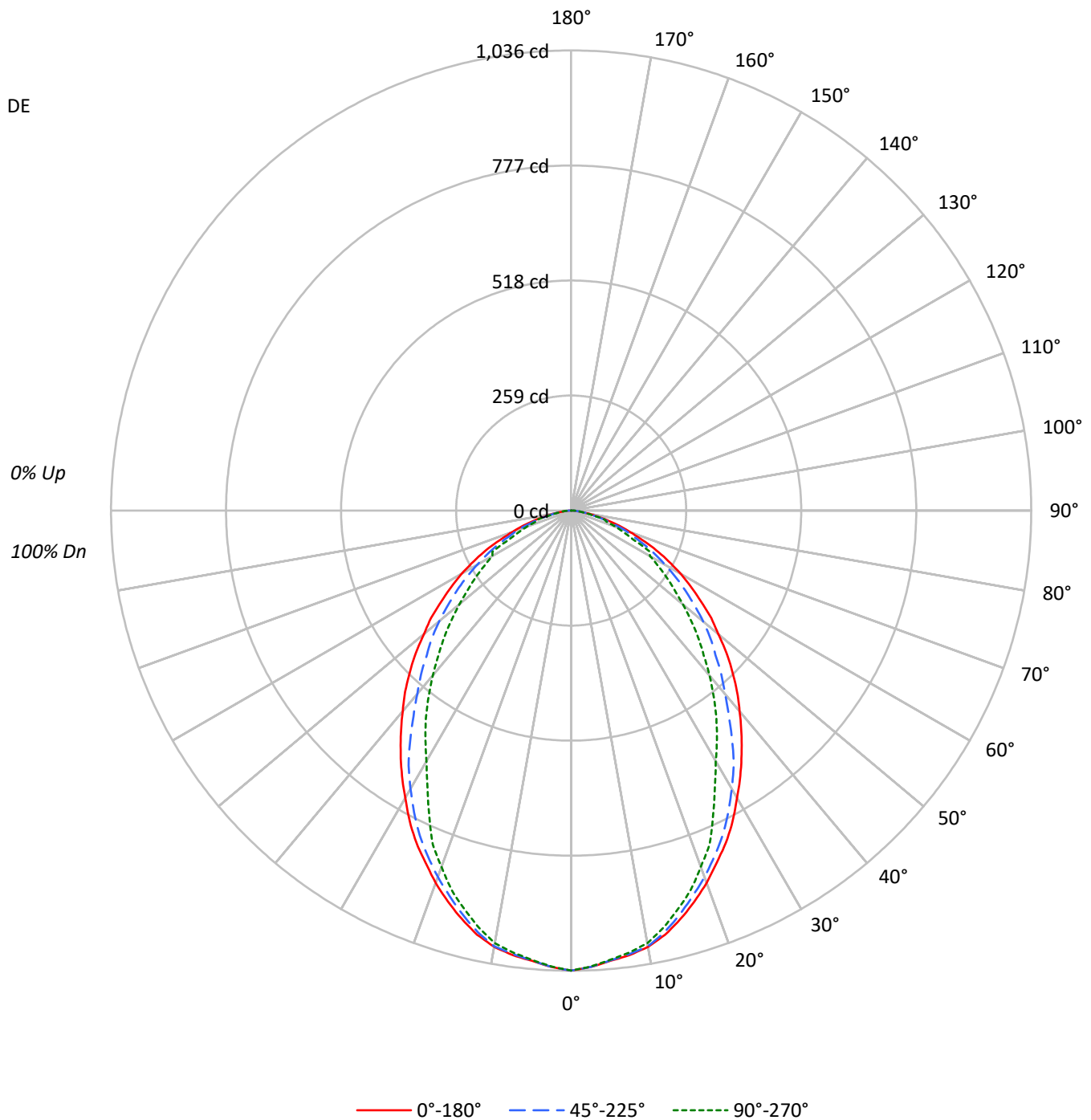
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	0																			
RCR																																														
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100																												
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87																												
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75																												
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65																												
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56																												
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50																												
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44																												
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40																												
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36																												
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33																												
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5574	5574	5574
5°	5498	5491	5485
10°	5450	5444	5404
15°	5303	5250	5176
20°	5108	5026	4889
25°	4899	4792	4493
30°	4643	4494	4048
35°	4397	4153	3744
40°	4147	3785	3407
45°	3909	3499	3080
50°	3619	3248	2746
55°	3348	2943	2460
60°	3067	2629	2203
65°	2699	2302	1951
70°	2223	2016	1659
75°	1768	1543	1618
80°	1187	1113	1038
85°	741	889	1037

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3909 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	96.4	4.7
10°-20°	264.6	13.0
20°-30°	366.3	18.0
30°-40°	390.5	19.2
40°-50°	356.3	17.5
50°-60°	279.1	13.7
60°-70°	181.9	8.9
70°-80°	80.6	4.0
80°-90°	17.3	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°	727.2	35.8
0°-40°	1117.8	55.0
0°-60°	1753.2	86.2
0°-90°	2033.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2033.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1036	1036	1036	1036	1036	
5°	1018	1016	1016	1015	1015	97
15°	952	952	942	933	929	268
25°	825	820	807	778	757	379
35°	669	664	632	584	570	418
45°	514	503	460	421	405	396
55°	357	346	314	277	262	320
65°	212	200	181	184	153	209
75°	85	79	74	71	78	91
85°	12	13	14	16	17	17
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1035.6	1035.6	1035.6	1035.6	1035.6
2.5°	1028.4	1028.4	1028.4	1027.2	1027.2
5°	1017.6	1016.4	1016.4	1015.2	1015.2
7.5°	1009.2	1008.0	1006.9	1005.7	1003.3
10°	997.3	997.3	996.1	990.1	988.9
12.5°	978.1	976.9	972.1	963.8	961.4
15°	951.8	951.8	942.2	932.6	929.0
17.5°	923.0	921.8	909.9	900.3	895.5
20°	891.9	889.5	877.6	862.0	853.6
22.5°	857.2	857.2	842.8	822.5	814.1
25°	824.9	820.1	806.9	778.2	756.6
27.5°	787.8	780.6	766.2	725.5	700.4
30°	747.1	743.5	723.1	670.4	651.3
32.5°	708.7	702.8	681.2	626.1	610.6
35°	669.2	664.4	632.1	584.2	569.9
37.5°	629.7	623.7	583.0	544.7	526.8
40°	590.2	583.0	538.7	504.0	484.9
42.5°	553.1	543.5	500.4	463.3	441.8
45°	513.6	502.8	459.7	421.4	404.7
47.5°	474.1	464.5	425.0	385.5	366.3
50°	432.2	423.8	387.9	348.4	328.0
52.5°	397.5	384.3	349.6	310.1	293.3
55°	356.8	346.0	313.7	276.6	262.2
57.5°	319.7	308.9	278.9	244.2	232.3
60°	284.9	269.4	244.2	214.3	204.7
62.5°	246.6	234.7	213.1	188.0	199.9
65°	211.9	199.9	180.8	184.4	153.2
67.5°	173.6	167.6	150.8	134.1	129.3
70°	141.3	134.1	128.1	110.1	105.4
72.5°	112.5	105.4	97.0	87.4	83.8
75°	85.0	79.0	74.2	70.6	77.8
77.5°	58.7	56.3	52.7	49.1	47.9
80°	38.3	37.1	35.9	34.7	33.5
82.5°	22.7	22.7	22.7	22.7	22.7
85°	12.0	13.2	14.4	15.6	16.8
87.5°	7.2	7.2	8.4	9.6	10.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)