

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: P560459

Luminaire Tested: FSR-12-2-LD4-2LO-40-UNV-81-94-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560459
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-LD4-2LO-40-UNV-81-94-EDD
Description: 1X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2191.0 lumens
Efficiency: N/A
Efficacy: 93.6 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

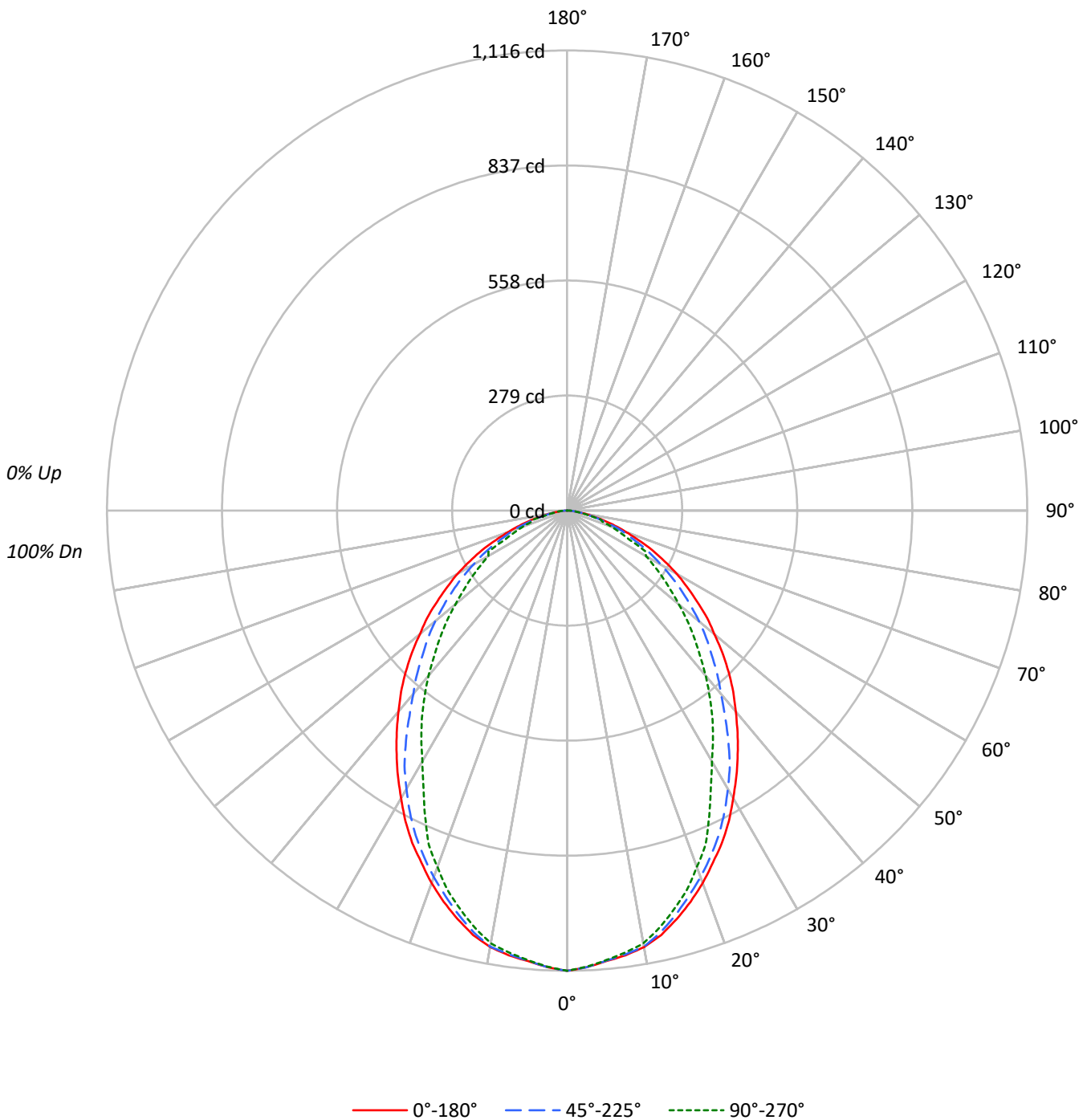
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	6007	6007	6007
5°	5925	5918	5911
10°	5874	5867	5824
15°	5715	5658	5578
20°	5505	5417	5269
25°	5279	5164	4842
30°	5003	4843	4362
35°	4738	4476	4035
40°	4469	4079	3672
45°	4213	3771	3319
50°	3900	3500	2960
55°	3608	3172	2652
60°	3306	2833	2375
65°	2909	2481	2104
70°	2395	2173	1786
75°	1905	1664	1745
80°	1280	1199	1119
85°	797	957	1118

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4213 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	103.9	4.7
10°-20°	285.1	13.0
20°-30°	394.7	18.0
30°-40°	420.9	19.2
40°-50°	384.0	17.5
50°-60°	300.8	13.7
60°-70°	196.1	8.9
70°-80°	86.9	4.0
80°-90°	18.6	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°	783.7	35.8
0°-40°	1204.6	55.0
0°-60°	1889.4	86.2
0°-90°	2191.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2191.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1116	1116	1116	1116	1116	
5°	1097	1095	1095	1094	1094	104
15°	1026	1026	1015	1005	1001	288
25°	889	884	870	839	815	408
35°	721	716	681	630	614	451
45°	554	542	496	454	436	426
55°	384	373	338	298	283	345
65°	228	216	195	199	165	225
75°	92	85	80	76	84	98
85°	13	14	16	17	18	18
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1116.1	1116.1	1116.1	1116.1	1116.1
2.5°	1108.3	1108.3	1108.3	1107.0	1107.0
5°	1096.7	1095.4	1095.4	1094.1	1094.1
7.5°	1087.7	1086.4	1085.1	1083.8	1081.2
10°	1074.8	1074.8	1073.5	1067.0	1065.7
12.5°	1054.1	1052.8	1047.7	1038.7	1036.1
15°	1025.7	1025.7	1015.4	1005.1	1001.2
17.5°	994.8	993.5	980.6	970.3	965.1
20°	961.2	958.7	945.8	929.0	919.9
22.5°	923.8	923.8	908.3	886.4	877.4
25°	889.0	883.8	869.6	838.7	815.4
27.5°	849.0	841.2	825.8	781.9	754.8
30°	805.1	801.2	779.3	722.5	701.9
32.5°	763.8	757.4	734.2	674.8	658.0
35°	721.2	716.1	681.3	629.6	614.2
37.5°	678.7	672.2	628.4	587.1	567.7
40°	636.1	628.4	580.6	543.2	522.6
42.5°	596.1	585.8	539.3	499.3	476.1
45°	553.5	541.9	495.5	454.2	436.1
47.5°	510.9	500.6	458.0	415.5	394.8
50°	465.8	456.7	418.0	375.5	353.5
52.5°	428.4	414.2	376.8	334.2	316.1
55°	384.5	372.9	338.0	298.0	282.6
57.5°	344.5	332.9	300.6	263.2	250.3
60°	307.1	290.3	263.2	231.0	220.6
62.5°	265.8	252.9	229.7	202.6	215.5
65°	228.4	215.5	194.8	198.7	165.2
67.5°	187.1	180.6	162.6	144.5	139.3
70°	152.2	144.5	138.1	118.7	113.5
72.5°	121.3	113.5	104.5	94.2	90.3
75°	91.6	85.2	80.0	76.1	83.9
77.5°	63.2	60.6	56.8	52.9	51.6
80°	41.3	40.0	38.7	37.4	36.1
82.5°	24.5	24.5	24.5	24.5	24.5
85°	12.9	14.2	15.5	16.8	18.1
87.5°	7.7	7.7	9.0	10.3	11.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)