

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: P562891

Luminaire Tested: FSR-24-4-LD4-2STD-35-UNV-81-94-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562891
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-24-4-LD4-2STD-35-UNV-81-94-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7432.0 lumens
Efficiency: N/A
Efficacy: 111.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

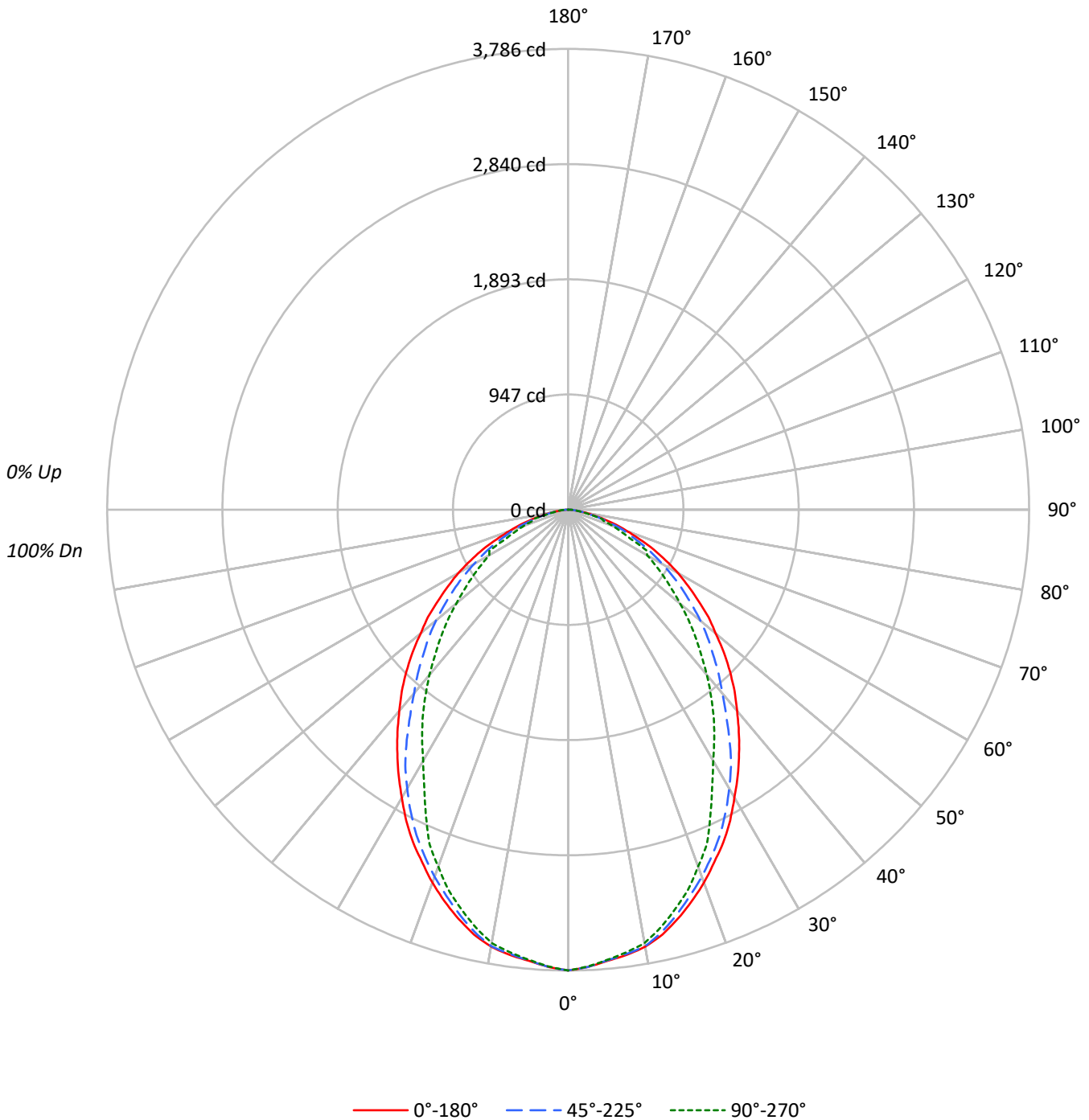
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	5094	5094	5094
5°	5024	5019	5013
10°	4981	4975	4939
15°	4847	4798	4731
20°	4669	4593	4468
25°	4477	4379	4106
30°	4243	4107	3699
35°	4018	3796	3422
40°	3790	3459	3113
45°	3573	3198	2815
50°	3307	2968	2510
55°	3059	2690	2248
60°	2803	2403	2014
65°	2466	2104	1784
70°	2031	1842	1515
75°	1615	1410	1479
80°	1086	1017	949
85°	676	810	946

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3573 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	352.4	4.7
10°-20°	967.1	13.0
20°-30°	1338.9	18.0
30°-40°	1427.7	19.2
40°-50°	1302.5	17.5
50°-60°	1020.4	13.7
60°-70°	665.0	8.9
70°-80°	294.6	4.0
80°-90°	63.3	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°	2658.5	35.8
0°-40°	4086.2	55.0
0°-60°	6409.1	86.2
0°-90°	7432.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7432.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3786	3786	3786	3786	3786	
5°	3720	3716	3716	3711	3711	353
15°	3479	3479	3444	3409	3396	978
25°	3016	2998	2950	2845	2766	1384
35°	2446	2429	2311	2136	2083	1530
45°	1878	1838	1681	1541	1479	1446
55°	1304	1265	1147	1011	958	1170
65°	775	731	661	674	560	763
75°	311	289	271	258	284	333
85°	44	48	52	57	61	61
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3785.8	3785.8	3785.8	3785.8	3785.8
2.5°	3759.5	3759.5	3759.5	3755.1	3755.1
5°	3720.1	3715.7	3715.7	3711.4	3711.4
7.5°	3689.5	3685.1	3680.7	3676.3	3667.6
10°	3645.7	3645.7	3641.3	3619.5	3615.1
12.5°	3575.7	3571.3	3553.8	3523.2	3514.4
15°	3479.4	3479.4	3444.4	3409.4	3396.2
17.5°	3374.4	3370.0	3326.2	3291.2	3273.7
20°	3260.6	3251.8	3208.0	3151.2	3120.5
22.5°	3133.6	3133.6	3081.1	3006.7	2976.1
25°	3015.5	2998.0	2949.8	2844.8	2766.0
27.5°	2879.8	2853.5	2801.0	2652.2	2560.3
30°	2731.0	2717.9	2643.5	2450.9	2380.9
32.5°	2590.9	2569.1	2490.3	2289.0	2232.1
35°	2446.5	2429.0	2310.8	2135.8	2083.3
37.5°	2302.1	2280.2	2131.4	1991.4	1925.7
40°	2157.7	2131.4	1969.5	1842.5	1772.5
42.5°	2022.0	1987.0	1829.4	1693.7	1615.0
45°	1877.6	1838.2	1680.6	1540.6	1479.3
47.5°	1733.1	1698.1	1553.7	1409.3	1339.2
50°	1580.0	1549.3	1418.0	1273.6	1199.2
52.5°	1453.0	1404.9	1278.0	1133.5	1072.3
55°	1304.2	1264.8	1146.7	1011.0	958.5
57.5°	1168.6	1129.2	1019.7	892.8	849.1
60°	1041.6	984.7	892.8	783.4	748.4
62.5°	901.6	857.8	779.0	687.1	730.9
65°	774.7	730.9	660.9	674.0	560.2
67.5°	634.6	612.7	551.5	490.2	472.7
70°	516.4	490.2	468.3	402.6	385.1
72.5°	411.4	385.1	354.5	319.5	306.4
75°	310.7	288.9	271.3	258.2	284.5
77.5°	214.5	205.7	192.6	179.4	175.1
80°	140.1	135.7	131.3	126.9	122.5
82.5°	83.2	83.2	83.2	83.2	83.2
85°	43.8	48.1	52.5	56.9	61.3
87.5°	26.3	26.3	30.6	35.0	39.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)