

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: P562962

Luminaire Tested: FSR-24-4-LD4-2STD-40-UNV-82-85-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562962
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-40-UNV-82-85-EDD-90
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6037.0 lumens
Efficiency: N/A
Efficacy: 90.6 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

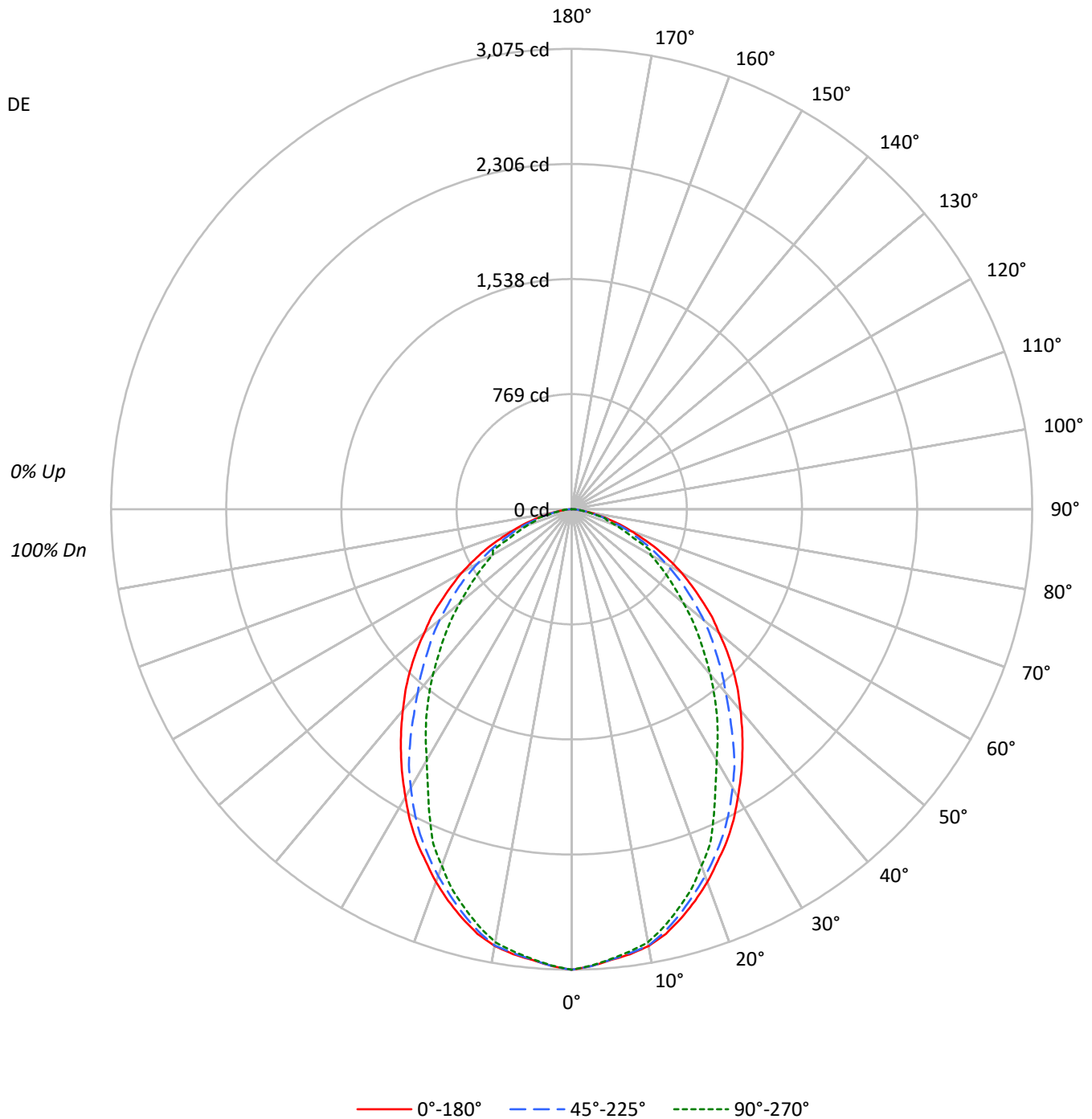
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	4138	4138	4138
5°	4081	4077	4072
10°	4046	4041	4012
15°	3937	3897	3843
20°	3792	3731	3629
25°	3636	3557	3336
30°	3447	3336	3005
35°	3264	3083	2780
40°	3078	2810	2529
45°	2902	2598	2286
50°	2686	2411	2039
55°	2485	2185	1826
60°	2277	1951	1636
65°	2004	1709	1449
70°	1650	1496	1231
75°	1312	1146	1201
80°	882	827	771
85°	550	659	769

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2902 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	286.3	4.7
10°-20°	785.6	13.0
20°-30°	1087.6	18.0
30°-40°	1159.7	19.2
40°-50°	1058.0	17.5
50°-60°	828.9	13.7
60°-70°	540.2	8.9
70°-80°	239.3	4.0
80°-90°	51.4	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°	2159.5	35.8
0°-40°	3319.2	55.0
0°-60°	5206.1	86.2
0°-90°	6037.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6037.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3075	3075	3075	3075	3075	
5°	3022	3018	3018	3015	3015	287
15°	2826	2826	2798	2769	2759	795
25°	2450	2435	2396	2311	2247	1125
35°	1987	1973	1877	1735	1692	1242
45°	1525	1493	1365	1251	1202	1175
55°	1059	1027	931	821	779	950
65°	629	594	537	548	455	620
75°	252	235	220	210	231	271
85°	36	39	43	46	50	49
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3075.2	3075.2	3075.2	3075.2	3075.2
2.5°	3053.8	3053.8	3053.8	3050.3	3050.3
5°	3021.8	3018.3	3018.3	3014.7	3014.7
7.5°	2997.0	2993.4	2989.8	2986.3	2979.2
10°	2961.4	2961.4	2957.8	2940.1	2936.5
12.5°	2904.5	2901.0	2886.7	2861.9	2854.8
15°	2826.3	2826.3	2797.9	2769.4	2758.8
17.5°	2741.0	2737.4	2701.9	2673.4	2659.2
20°	2648.6	2641.4	2605.9	2559.7	2534.8
22.5°	2545.5	2545.5	2502.8	2442.4	2417.5
25°	2449.5	2435.2	2396.1	2310.8	2246.8
27.5°	2339.3	2317.9	2275.3	2154.4	2079.7
30°	2218.4	2207.7	2147.3	1990.9	1934.0
32.5°	2104.6	2086.8	2022.9	1859.3	1813.1
35°	1987.3	1973.1	1877.1	1734.9	1692.2
37.5°	1870.0	1852.2	1731.3	1617.6	1564.2
40°	1752.7	1731.3	1599.8	1496.7	1439.8
42.5°	1642.5	1614.0	1486.0	1375.8	1311.8
45°	1525.1	1493.1	1365.2	1251.4	1201.6
47.5°	1407.8	1379.4	1262.1	1144.7	1087.9
50°	1283.4	1258.5	1151.9	1034.5	974.1
52.5°	1180.3	1141.2	1038.1	920.8	871.0
55°	1059.4	1027.4	931.4	821.2	778.6
57.5°	949.2	917.2	828.3	725.2	689.7
60°	846.1	799.9	725.2	636.4	607.9
62.5°	732.4	696.8	632.8	558.2	593.7
65°	629.3	593.7	536.8	547.5	455.1
67.5°	515.5	497.7	447.9	398.2	384.0
70°	419.5	398.2	380.4	327.1	312.8
72.5°	334.2	312.8	288.0	259.5	248.9
75°	252.4	234.6	220.4	209.8	231.1
77.5°	174.2	167.1	156.4	145.8	142.2
80°	113.8	110.2	106.7	103.1	99.5
82.5°	67.5	67.5	67.5	67.5	67.5
85°	35.6	39.1	42.7	46.2	49.8
87.5°	21.3	21.3	24.9	28.4	32.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)