

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: P562642

Luminaire Tested: FSR-24-4-LD4-2HI-50-UNV-82-85-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562642
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-LD4-2HI-50-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 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7798.0 lumens
Efficiency: N/A
Efficacy: 90.3 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

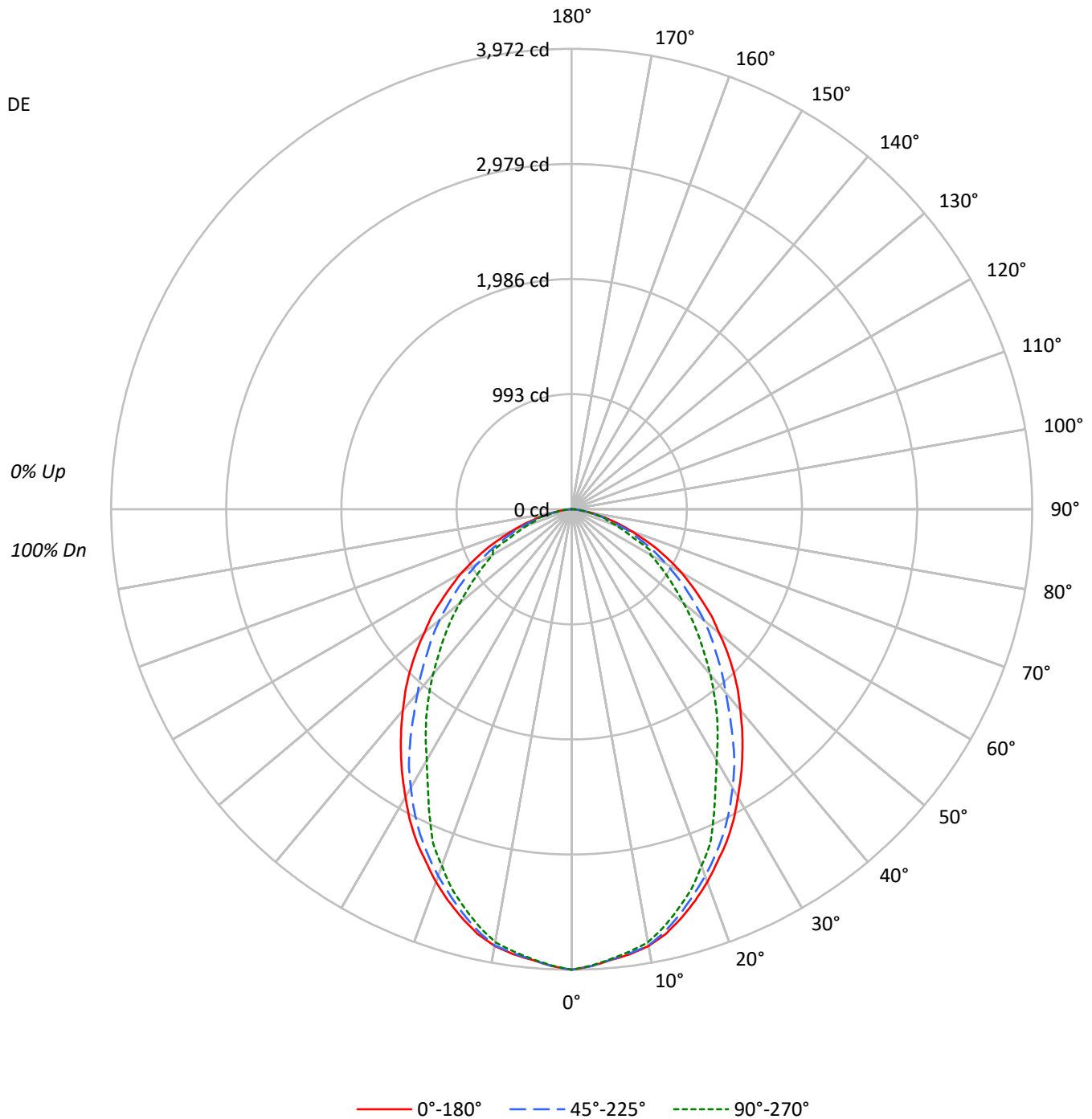
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	5345	5345	5345
5°	5272	5266	5259
10°	5226	5220	5182
15°	5085	5034	4964
20°	4898	4820	4688
25°	4697	4595	4309
30°	4452	4309	3881
35°	4216	3983	3590
40°	3976	3630	3267
45°	3749	3355	2953
50°	3470	3114	2634
55°	3210	2822	2359
60°	2941	2521	2113
65°	2588	2208	1871
70°	2132	1933	1590
75°	1695	1480	1552
80°	1138	1068	996
85°	709	851	993

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3749 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	369.8	4.7
10°-20°	1014.8	13.0
20°-30°	1404.9	18.0
30°-40°	1498.0	19.2
40°-50°	1366.6	17.5
50°-60°	1070.6	13.7
60°-70°	697.8	8.9
70°-80°	309.2	4.0
80°-90°	66.4	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°	2789.4	35.8
0°-40°	4287.4	55.0
0°-60°	6724.7	86.2
0°-90°	7798.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7798.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3972	3972	3972	3972	3972	
5°	3903	3899	3899	3894	3894	371
15°	3651	3651	3614	3577	3564	1026
25°	3164	3146	3095	2985	2902	1453
35°	2567	2549	2425	2241	2186	1605
45°	1970	1929	1763	1616	1552	1518
55°	1368	1327	1203	1061	1006	1227
65°	813	767	693	707	588	801
75°	326	303	285	271	298	349
85°	46	50	55	60	64	64
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3972.2	3972.2	3972.2	3972.2	3972.2
2.5°	3944.6	3944.6	3944.6	3940.1	3940.1
5°	3903.3	3898.7	3898.7	3894.1	3894.1
7.5°	3871.2	3866.6	3862.0	3857.4	3848.2
10°	3825.2	3825.2	3820.7	3797.7	3793.1
12.5°	3751.8	3747.2	3728.8	3696.7	3687.5
15°	3650.7	3650.7	3614.0	3577.3	3563.5
17.5°	3540.5	3535.9	3490.0	3453.3	3434.9
20°	3421.1	3412.0	3366.0	3306.3	3274.2
22.5°	3288.0	3288.0	3232.9	3154.8	3122.7
25°	3164.0	3145.6	3095.1	2984.9	2902.2
27.5°	3021.6	2994.1	2939.0	2782.8	2686.4
30°	2865.5	2851.7	2773.6	2571.6	2498.1
32.5°	2718.5	2695.6	2612.9	2401.7	2342.0
35°	2567.0	2548.6	2424.6	2241.0	2185.9
37.5°	2415.5	2392.5	2236.4	2089.4	2020.5
40°	2263.9	2236.4	2066.5	1933.3	1859.8
42.5°	2121.6	2084.8	1919.5	1777.2	1694.5
45°	1970.0	1928.7	1763.4	1616.4	1552.1
47.5°	1818.5	1781.7	1630.2	1478.7	1405.2
50°	1657.8	1625.6	1487.9	1336.3	1258.2
52.5°	1524.6	1474.1	1340.9	1189.4	1125.1
55°	1368.5	1327.1	1203.1	1060.8	1005.7
57.5°	1226.1	1184.8	1070.0	936.8	890.9
60°	1092.9	1033.2	936.8	822.0	785.3
62.5°	946.0	900.1	817.4	721.0	766.9
65°	812.8	766.9	693.4	707.2	587.8
67.5°	665.9	642.9	578.6	514.3	496.0
70°	541.9	514.3	491.4	422.5	404.1
72.5°	431.7	404.1	372.0	335.2	321.4
75°	326.0	303.1	284.7	270.9	298.5
77.5°	225.0	215.8	202.1	188.3	183.7
80°	146.9	142.4	137.8	133.2	128.6
82.5°	87.3	87.3	87.3	87.3	87.3
85°	45.9	50.5	55.1	59.7	64.3
87.5°	27.6	27.6	32.1	36.7	41.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)