

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: P562583

Luminaire Tested: FSR-24-4-LD4-2HI-40-UNV-82-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562583
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-40-UNV-82-87-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8431.0 lumens
Efficiency: N/A
Efficacy: 97.6 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

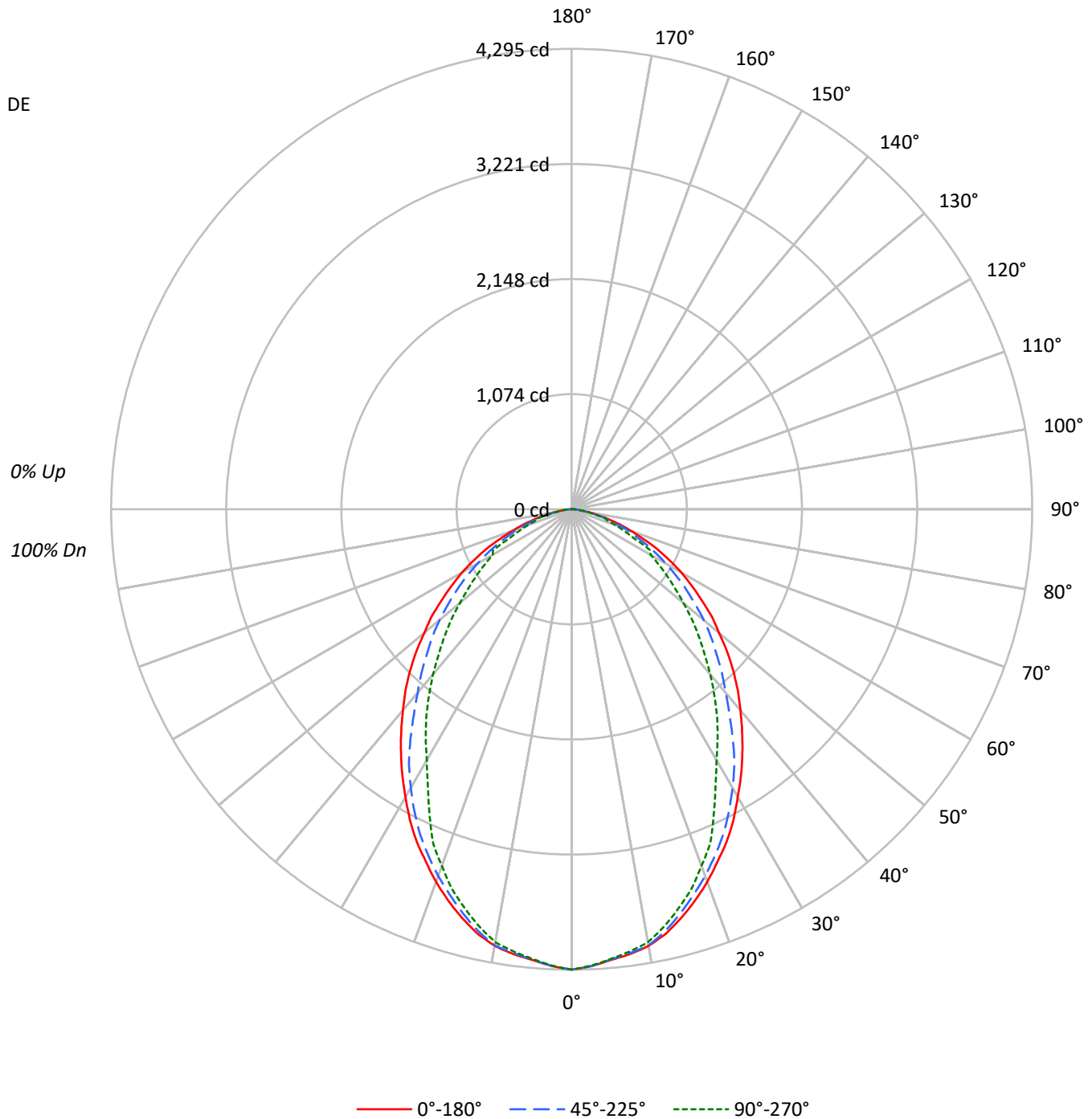
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	5778	5778	5778
5°	5700	5693	5686
10°	5651	5644	5603
15°	5498	5443	5367
20°	5296	5211	5069
25°	5078	4968	4658
30°	4813	4659	4196
35°	4559	4306	3882
40°	4299	3924	3532
45°	4053	3628	3193
50°	3752	3367	2848
55°	3471	3051	2551
60°	3180	2725	2285
65°	2798	2387	2023
70°	2305	2090	1719
75°	1832	1600	1678
80°	1231	1154	1077
85°	766	920	1073

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4053 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	399.8	4.7
10°-20°	1097.1	13.0
20°-30°	1518.9	18.0
30°-40°	1619.6	19.2
40°-50°	1477.6	17.5
50°-60°	1157.5	13.7
60°-70°	754.4	8.9
70°-80°	334.3	4.0
80°-90°	71.8	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°	3015.8	35.8
0°-40°	4635.4	55.0
0°-60°	7270.5	86.2
0°-90°	8431.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8431.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4295	4295	4295	4295	4295	
5°	4220	4215	4215	4210	4210	401
15°	3947	3947	3907	3868	3853	1110
25°	3421	3401	3346	3227	3138	1570
35°	2775	2756	2622	2423	2363	1735
45°	2130	2085	1906	1748	1678	1641
55°	1480	1435	1301	1147	1087	1327
65°	879	829	750	765	636	866
75°	352	328	308	293	323	378
85°	50	55	60	64	70	69
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4294.6	4294.6	4294.6	4294.6	4294.6
2.5°	4264.8	4264.8	4264.8	4259.9	4259.9
5°	4220.2	4215.2	4215.2	4210.2	4210.2
7.5°	4185.4	4180.4	4175.5	4170.5	4160.6
10°	4135.8	4135.8	4130.8	4106.0	4101.0
12.5°	4056.3	4051.4	4031.5	3996.7	3986.8
15°	3947.1	3947.1	3907.4	3867.7	3852.8
17.5°	3827.9	3823.0	3773.3	3733.6	3713.7
20°	3698.9	3688.9	3639.3	3574.7	3540.0
22.5°	3554.9	3554.9	3495.3	3410.9	3376.1
25°	3420.8	3401.0	3346.3	3227.2	3137.8
27.5°	3266.9	3237.1	3177.5	3008.7	2904.5
30°	3098.1	3083.2	2998.8	2780.3	2700.9
32.5°	2939.2	2914.4	2825.0	2596.6	2532.1
35°	2775.4	2755.5	2621.5	2422.9	2363.3
37.5°	2611.5	2586.7	2417.9	2259.0	2184.6
40°	2447.7	2417.9	2234.2	2090.2	2010.8
42.5°	2293.8	2254.1	2075.3	1921.4	1832.0
45°	2129.9	2085.3	1906.5	1747.6	1678.1
47.5°	1966.1	1926.4	1762.5	1598.7	1519.3
50°	1792.3	1757.6	1608.6	1444.8	1360.4
52.5°	1648.3	1593.7	1449.8	1285.9	1216.4
55°	1479.5	1434.9	1300.8	1146.9	1087.3
57.5°	1325.6	1280.9	1156.8	1012.8	963.2
60°	1181.6	1117.1	1012.8	888.7	849.0
62.5°	1022.8	973.1	883.8	779.5	829.1
65°	878.8	829.1	749.7	764.6	635.5
67.5°	719.9	695.1	625.6	556.1	536.2
70°	585.9	556.1	531.2	456.8	436.9
72.5°	466.7	436.9	402.2	362.4	347.5
75°	352.5	327.7	307.8	292.9	322.7
77.5°	243.3	233.4	218.5	203.6	198.6
80°	158.9	153.9	148.9	144.0	139.0
82.5°	94.3	94.3	94.3	94.3	94.3
85°	49.6	54.6	59.6	64.5	69.5
87.5°	29.8	29.8	34.8	39.7	44.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)