

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: P563731

Luminaire Tested: FSR-24-4-LD4-4HI-40-UNV-82-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563731
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-LD4-4HI-40-UNV-82-85-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 17627.0 lumens
Efficiency: N/A
Efficacy: 102.0 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

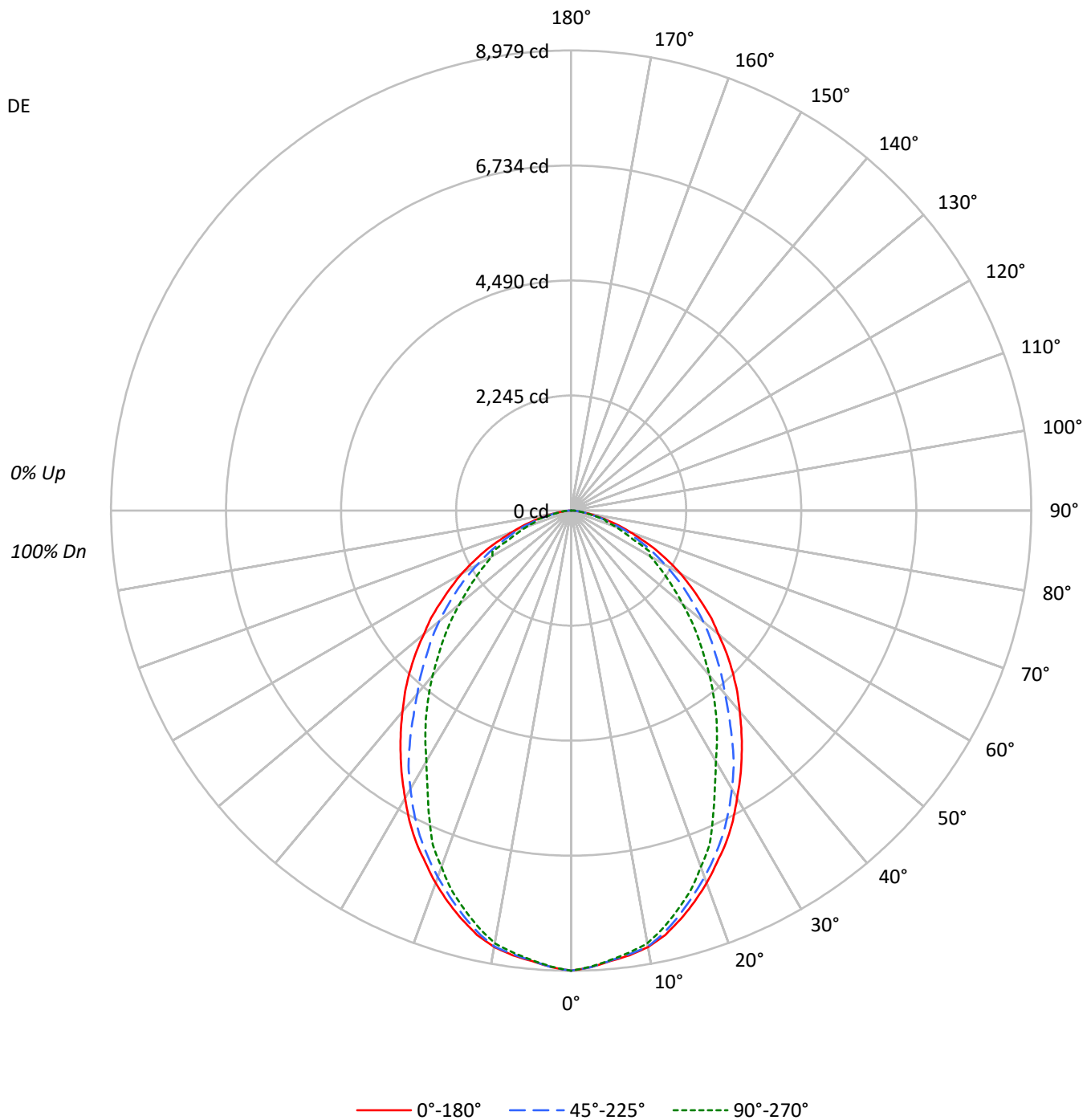
Input Watts (W): 172.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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	
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°	12081	12081	12081
5°	11917	11903	11889
10°	11814	11799	11714
15°	11495	11379	11220
20°	11073	10895	10597
25°	10618	10387	9739
30°	10063	9741	8773
35°	9531	9002	8116
40°	8988	8204	7384
45°	8473	7585	6676
50°	7844	7040	5954
55°	7256	6380	5333
60°	6648	5698	4776
65°	5849	4990	4230
70°	4819	4369	3594
75°	3831	3346	3507
80°	2574	2413	2252
85°	1602	1924	2243

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8473 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	835.8	4.7
10°-20°	2293.8	13.0
20°-30°	3175.7	18.0
30°-40°	3386.2	19.2
40°-50°	3089.2	17.5
50°-60°	2420.1	13.7
60°-70°	1577.3	8.9
70°-80°	698.8	4.0
80°-90°	150.0	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°	6305.3	35.8
0°-40°	9691.5	55.0
0°-60°	15200.8	86.2
0°-90°	17627.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	17627.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	8979	8979	8979	8979	8979	
5°	8823	8813	8813	8802	8802	838
15°	8252	8252	8169	8086	8055	2320
25°	7152	7110	6996	6747	6560	3283
35°	5803	5761	5481	5066	4941	3628
45°	4453	4360	3986	3654	3508	3430
55°	3093	3000	2720	2398	2273	2774
65°	1837	1734	1567	1599	1329	1811
75°	737	685	644	612	675	790
85°	104	114	125	135	145	144
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	8979.0	8979.0	8979.0	8979.0	8979.0
2.5°	8916.7	8916.7	8916.7	8906.3	8906.3
5°	8823.3	8812.9	8812.9	8802.5	8802.5
7.5°	8750.6	8740.2	8729.8	8719.5	8698.7
10°	8646.8	8646.8	8636.4	8584.5	8574.1
12.5°	8480.7	8470.3	8428.8	8356.1	8335.4
15°	8252.3	8252.3	8169.3	8086.3	8055.1
17.5°	8003.2	7992.8	7889.0	7806.0	7764.5
20°	7733.3	7712.6	7608.8	7473.8	7401.2
22.5°	7432.3	7432.3	7307.7	7131.3	7058.6
25°	7152.0	7110.5	6996.3	6747.2	6560.3
27.5°	6830.2	6768.0	6643.4	6290.5	6072.5
30°	6477.3	6446.2	6269.7	5813.0	5646.9
32.5°	6145.1	6093.2	5906.4	5428.9	5294.0
35°	5802.6	5761.1	5480.8	5065.6	4941.0
37.5°	5460.0	5408.1	5055.2	4723.0	4567.3
40°	5117.5	5055.2	4671.1	4370.1	4204.0
42.5°	4795.7	4712.7	4339.0	4017.2	3830.3
45°	4453.1	4359.7	3986.0	3653.9	3508.5
47.5°	4110.6	4027.6	3685.0	3342.5	3176.4
50°	3747.3	3674.6	3363.2	3020.7	2844.2
52.5°	3446.3	3332.1	3031.0	2688.5	2543.2
55°	3093.3	2999.9	2719.6	2397.8	2273.3
57.5°	2771.5	2678.1	2418.6	2117.6	2013.8
60°	2470.5	2335.6	2117.6	1858.1	1775.0
62.5°	2138.3	2034.5	1847.7	1629.7	1733.5
65°	1837.3	1733.5	1567.4	1598.6	1328.7
67.5°	1505.1	1453.2	1307.9	1162.6	1121.1
70°	1224.9	1162.6	1110.7	955.0	913.5
72.5°	975.7	913.5	840.8	757.8	726.6
75°	737.0	685.1	643.6	612.4	674.7
77.5°	508.6	487.9	456.7	425.6	415.2
80°	332.2	321.8	311.4	301.0	290.6
82.5°	197.2	197.2	197.2	197.2	197.2
85°	103.8	114.2	124.6	134.9	145.3
87.5°	62.3	62.3	72.7	83.0	93.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)