

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: P563008

Luminaire Tested: FSR-24-4-LD4-2STD-50-UNV-81-84-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563008
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-50-UNV-81-84-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6626.0 lumens
Efficiency: N/A
Efficacy: 99.5 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

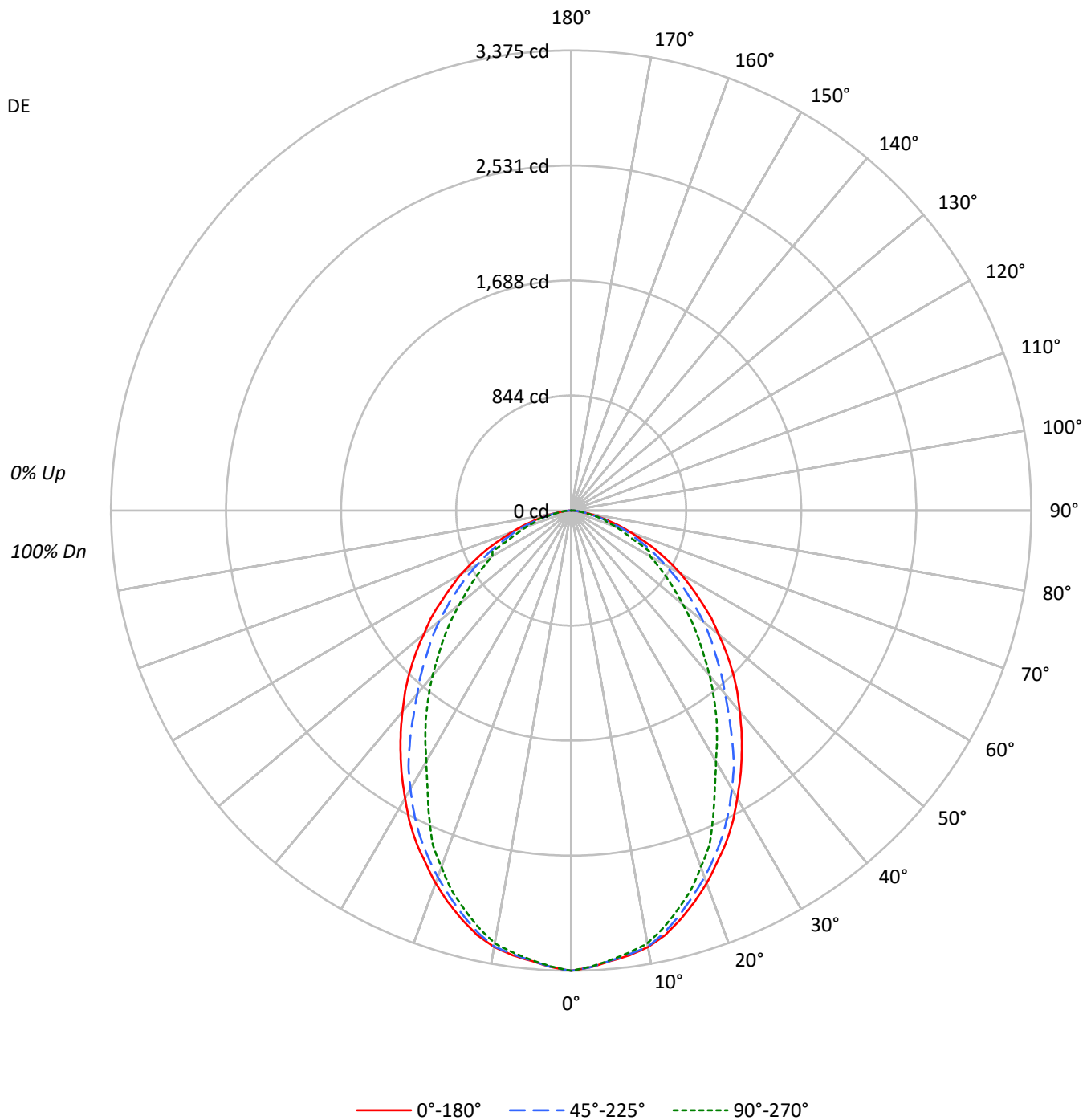
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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				
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°	4541	4541	4541
5°	4480	4474	4469
10°	4441	4435	4403
15°	4321	4277	4218
20°	4162	4095	3984
25°	3991	3904	3661
30°	3783	3662	3298
35°	3583	3384	3051
40°	3379	3084	2776
45°	3185	2851	2510
50°	2948	2646	2238
55°	2728	2398	2004
60°	2499	2142	1795
65°	2199	1876	1590
70°	1811	1642	1351
75°	1440	1258	1318
80°	968	907	847
85°	602	722	843

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3185 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	314.2	4.7
10°-20°	862.3	13.0
20°-30°	1193.7	18.0
30°-40°	1272.9	19.2
40°-50°	1161.2	17.5
50°-60°	909.7	13.7
60°-70°	592.9	8.9
70°-80°	262.7	4.0
80°-90°	56.4	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°	2370.2	35.8
0°-40°	3643.0	55.0
0°-60°	5714.0	86.2
0°-90°	6626.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6626.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3375	3375	3375	3375	3375	
5°	3317	3313	3313	3309	3309	315
15°	3102	3102	3071	3040	3028	872
25°	2688	2673	2630	2536	2466	1234
35°	2181	2166	2060	1904	1857	1364
45°	1674	1639	1498	1374	1319	1289
55°	1163	1128	1022	901	854	1043
65°	691	652	589	601	500	681
75°	277	258	242	230	254	297
85°	39	43	47	51	55	54
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3375.2	3375.2	3375.2	3375.2	3375.2
2.5°	3351.8	3351.8	3351.8	3347.9	3347.9
5°	3316.7	3312.8	3312.8	3308.9	3308.9
7.5°	3289.4	3285.5	3281.5	3277.6	3269.8
10°	3250.3	3250.3	3246.4	3226.9	3223.0
12.5°	3187.9	3184.0	3168.4	3141.1	3133.3
15°	3102.1	3102.1	3070.8	3039.6	3027.9
17.5°	3008.4	3004.5	2965.5	2934.3	2918.7
20°	2907.0	2899.2	2860.1	2809.4	2782.1
22.5°	2793.8	2793.8	2747.0	2680.6	2653.3
25°	2688.5	2672.8	2629.9	2536.3	2466.0
27.5°	2567.5	2544.1	2497.3	2364.6	2282.6
30°	2434.8	2423.1	2356.8	2185.1	2122.7
32.5°	2310.0	2290.5	2220.2	2040.7	1990.0
35°	2181.2	2165.6	2060.2	1904.2	1857.3
37.5°	2052.4	2032.9	1900.3	1775.4	1716.9
40°	1923.7	1900.3	1755.9	1642.7	1580.3
42.5°	1802.7	1771.5	1631.0	1510.1	1439.8
45°	1673.9	1638.8	1498.4	1373.5	1318.9
47.5°	1545.2	1514.0	1385.2	1256.4	1194.0
50°	1408.6	1381.3	1264.2	1135.5	1069.1
52.5°	1295.5	1252.5	1139.4	1010.6	956.0
55°	1162.8	1127.7	1022.3	901.4	854.5
57.5°	1041.8	1006.7	909.2	796.0	757.0
60°	928.7	877.9	796.0	698.5	667.2
62.5°	803.8	764.8	694.5	612.6	651.6
65°	690.6	651.6	589.2	600.9	499.5
67.5°	565.8	546.3	491.6	437.0	421.4
70°	460.4	437.0	417.5	359.0	343.4
72.5°	366.8	343.4	316.1	284.8	273.1
75°	277.0	257.5	241.9	230.2	253.6
77.5°	191.2	183.4	171.7	160.0	156.1
80°	124.9	121.0	117.1	113.2	109.3
82.5°	74.1	74.1	74.1	74.1	74.1
85°	39.0	42.9	46.8	50.7	54.6
87.5°	23.4	23.4	27.3	31.2	35.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)