

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: P562546

Luminaire Tested: FSR-24-4-LD4-2HI-40-UNV-80-85-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562546
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-80-85-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRONM
SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7963.0 lumens
Efficiency: N/A
Efficacy: 92.2 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

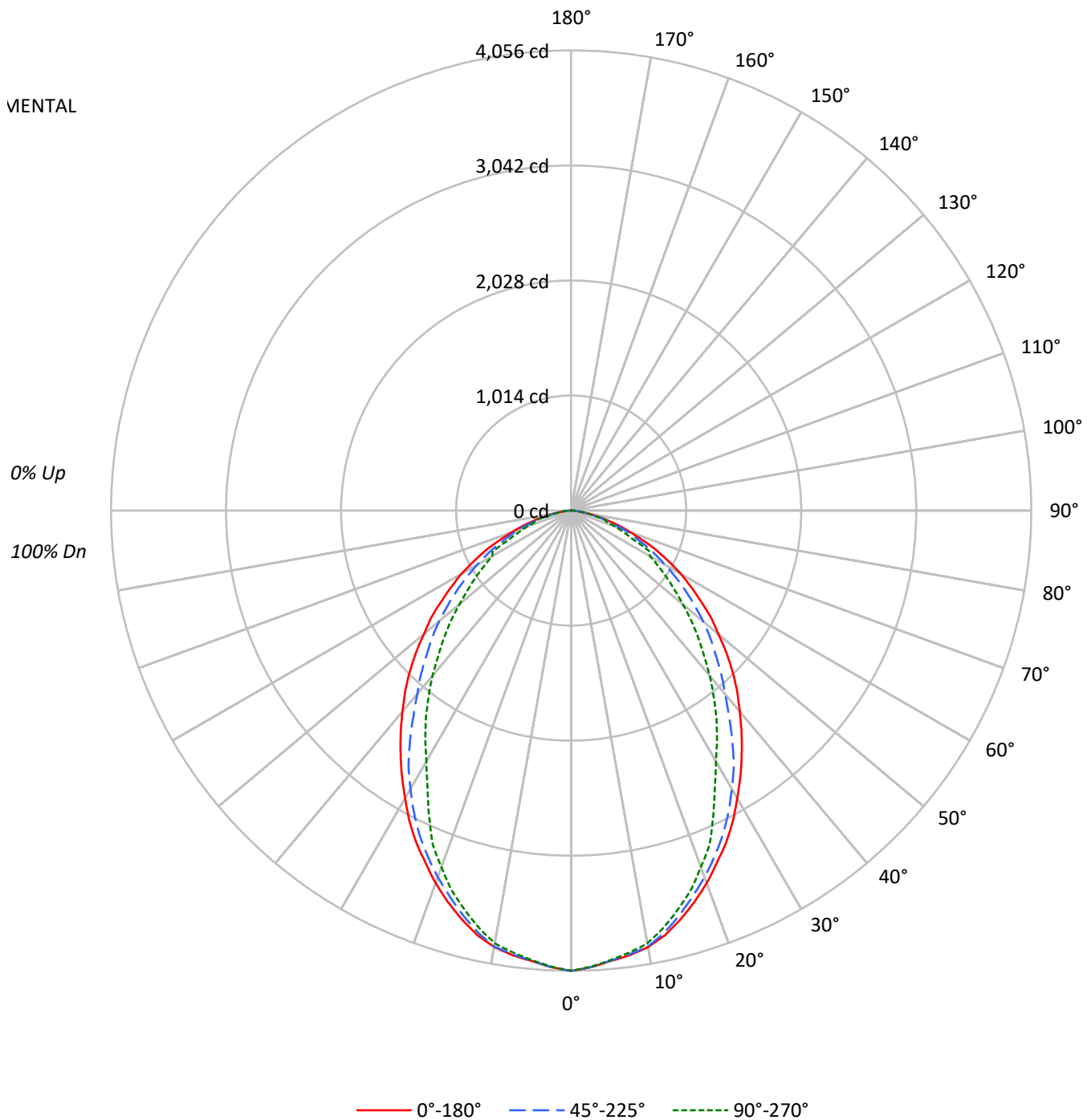
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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				
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°	5458	5458	5458
5°	5383	5377	5371
10°	5337	5330	5292
15°	5193	5141	5069
20°	5002	4922	4787
25°	4797	4692	4400
30°	4546	4400	3963
35°	4306	4067	3666
40°	4060	3706	3336
45°	3828	3426	3016
50°	3543	3180	2690
55°	3278	2882	2409
60°	3003	2574	2158
65°	2642	2254	1911
70°	2177	1974	1624
75°	1731	1511	1585
80°	1163	1090	1017
85°	724	869	1014

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3828 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	377.6	4.7
10°-20°	1036.2	13.0
20°-30°	1434.6	18.0
30°-40°	1529.7	19.2
40°-50°	1395.5	17.5
50°-60°	1093.3	13.7
60°-70°	712.6	8.9
70°-80°	315.7	4.0
80°-90°	67.8	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°	2848.4	35.8
0°-40°	4378.1	55.0
0°-60°	6867.0	86.2
0°-90°	7963.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7963.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4056	4056	4056	4056	4056	
5°	3986	3981	3981	3976	3976	378
15°	3728	3728	3690	3653	3639	1048
25°	3231	3212	3161	3048	2964	1483
35°	2621	2603	2476	2288	2232	1639
45°	2012	1970	1801	1651	1585	1550
55°	1397	1355	1229	1083	1027	1253
65°	830	783	708	722	600	818
75°	333	310	291	277	305	357
85°	47	52	56	61	66	65
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4056.2	4056.2	4056.2	4056.2	4056.2
2.5°	4028.1	4028.1	4028.1	4023.4	4023.4
5°	3985.9	3981.2	3981.2	3976.5	3976.5
7.5°	3953.1	3948.4	3943.7	3939.0	3929.6
10°	3906.2	3906.2	3901.5	3878.1	3873.4
12.5°	3831.2	3826.5	3807.7	3774.9	3765.5
15°	3728.0	3728.0	3690.5	3653.0	3638.9
17.5°	3615.5	3610.8	3563.9	3526.4	3507.6
20°	3493.5	3484.2	3437.3	3376.3	3343.5
22.5°	3357.5	3357.5	3301.3	3221.6	3188.7
25°	3230.9	3212.2	3160.6	3048.0	2963.6
27.5°	3085.6	3057.4	3001.2	2841.7	2743.2
30°	2926.1	2912.1	2832.3	2626.0	2551.0
32.5°	2776.1	2752.6	2668.2	2452.5	2391.5
35°	2621.3	2602.6	2476.0	2288.4	2232.1
37.5°	2466.6	2443.1	2283.7	2133.6	2063.3
40°	2311.8	2283.7	2110.2	1974.2	1899.2
42.5°	2166.5	2128.9	1960.1	1814.8	1730.4
45°	2011.7	1969.5	1800.7	1650.6	1585.0
47.5°	1857.0	1819.4	1664.7	1510.0	1434.9
50°	1692.8	1660.0	1519.3	1364.6	1284.9
52.5°	1556.8	1505.3	1369.3	1214.5	1148.9
55°	1397.4	1355.2	1228.6	1083.2	1027.0
57.5°	1252.0	1209.8	1092.6	956.6	909.7
60°	1116.1	1055.1	956.6	839.4	801.9
62.5°	966.0	919.1	834.7	736.2	783.1
65°	830.0	783.1	708.1	722.2	600.2
67.5°	679.9	656.5	590.9	525.2	506.4
70°	553.3	525.2	501.8	431.4	412.7
72.5°	440.8	412.7	379.8	342.3	328.3
75°	332.9	309.5	290.7	276.7	304.8
77.5°	229.8	220.4	206.3	192.3	187.6
80°	150.1	145.4	140.7	136.0	131.3
82.5°	89.1	89.1	89.1	89.1	89.1
85°	46.9	51.6	56.3	61.0	65.7
87.5°	28.1	28.1	32.8	37.5	42.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)