

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: P563888

Luminaire Tested: FSR-24-4-LD4-4LO-40-UNV-80-84-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563888
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-LD4-4LO-40-UNV-80-84-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRONM
SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9892.0 lumens
Efficiency: N/A
Efficacy: 105.7 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

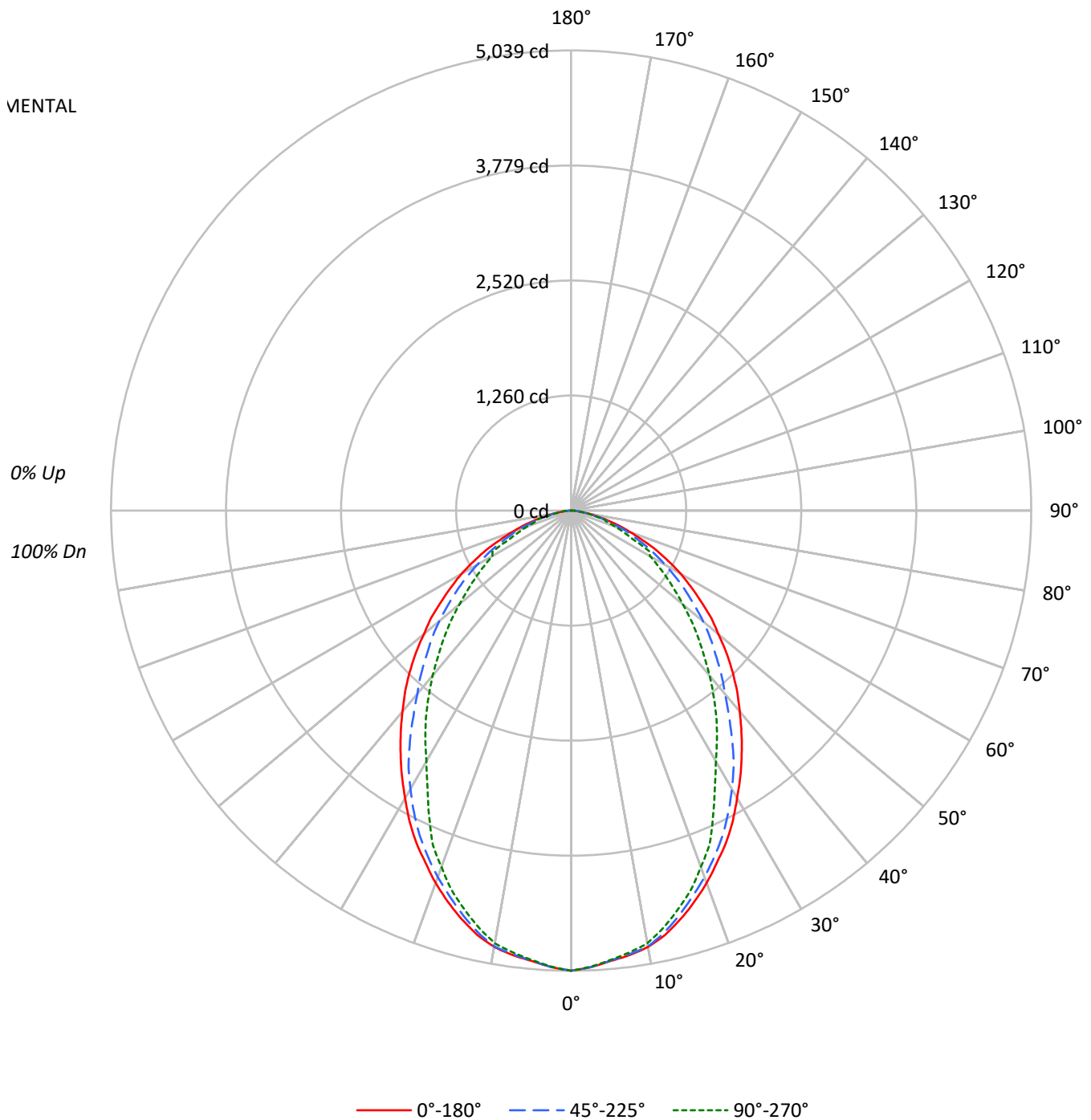
Input Watts (W): 93.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	6780	6780	6780
5°	6688	6680	6672
10°	6630	6622	6574
15°	6451	6386	6297
20°	6214	6114	5947
25°	5959	5829	5466
30°	5647	5466	4923
35°	5349	5052	4554
40°	5044	4604	4144
45°	4755	4256	3746
50°	4402	3951	3341
55°	4072	3580	2993
60°	3731	3198	2680
65°	3283	2800	2374
70°	2704	2452	2017
75°	2150	1878	1968
80°	1444	1354	1264
85°	900	1079	1260

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4755 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	469.0	4.7
10°-20°	1287.3	13.0
20°-30°	1782.1	18.0
30°-40°	1900.3	19.2
40°-50°	1733.6	17.5
50°-60°	1358.1	13.7
60°-70°	885.2	8.9
70°-80°	392.2	4.0
80°-90°	84.2	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°	3538.5	35.8
0°-40°	5438.7	55.0
0°-60°	8530.5	86.2
0°-90°	9892.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9892.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5039	5039	5039	5039	5039	
5°	4952	4946	4946	4940	4940	470
15°	4631	4631	4584	4538	4520	1302
25°	4014	3990	3926	3786	3682	1843
35°	3256	3233	3076	2843	2773	2036
45°	2499	2447	2237	2050	1969	1925
55°	1736	1684	1526	1346	1276	1557
65°	1031	973	880	897	746	1016
75°	414	384	361	344	379	443
85°	58	64	70	76	82	81
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5038.9	5038.9	5038.9	5038.9	5038.9
2.5°	5003.9	5003.9	5003.9	4998.1	4998.1
5°	4951.5	4945.6	4945.6	4939.8	4939.8
7.5°	4910.7	4904.9	4899.0	4893.2	4881.6
10°	4852.4	4852.4	4846.6	4817.5	4811.7
12.5°	4759.2	4753.4	4730.1	4689.3	4677.7
15°	4631.1	4631.1	4584.5	4537.9	4520.4
17.5°	4491.3	4485.5	4427.2	4380.6	4357.3
20°	4339.8	4328.2	4269.9	4194.2	4153.4
22.5°	4170.9	4170.9	4101.0	4002.0	3961.2
25°	4013.6	3990.3	3926.2	3786.4	3681.6
27.5°	3833.0	3798.1	3728.2	3530.1	3407.8
30°	3635.0	3617.5	3518.5	3262.1	3168.9
32.5°	3448.6	3419.4	3314.6	3046.6	2970.9
35°	3256.3	3233.0	3075.7	2842.7	2772.8
37.5°	3064.1	3035.0	2836.9	2650.5	2563.1
40°	2871.9	2836.9	2621.4	2452.4	2359.2
42.5°	2691.3	2644.7	2435.0	2254.4	2149.5
45°	2499.0	2446.6	2236.9	2050.5	1968.9
47.5°	2306.8	2260.2	2068.0	1875.7	1782.5
50°	2102.9	2062.1	1887.4	1695.2	1596.1
52.5°	1934.0	1869.9	1701.0	1508.7	1427.2
55°	1735.9	1683.5	1526.2	1345.6	1275.7
57.5°	1555.3	1502.9	1357.3	1188.4	1130.1
60°	1386.4	1310.7	1188.4	1042.7	996.1
62.5°	1200.0	1141.8	1036.9	914.6	972.8
65°	1031.1	972.8	879.6	897.1	745.6
67.5°	844.7	815.5	734.0	652.4	629.1
70°	687.4	652.4	623.3	535.9	512.6
72.5°	547.6	512.6	471.8	425.2	407.8
75°	413.6	384.5	361.2	343.7	378.6
77.5°	285.4	273.8	256.3	238.8	233.0
80°	186.4	180.6	174.8	168.9	163.1
82.5°	110.7	110.7	110.7	110.7	110.7
85°	58.3	64.1	69.9	75.7	81.6
87.5°	35.0	35.0	40.8	46.6	52.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)