

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: P563128

Luminaire Tested: FSR-24-4-LD4-3HI-40-UNV-80-88-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563128
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-LD4-3HI-40-UNV-80-88-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRON
SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

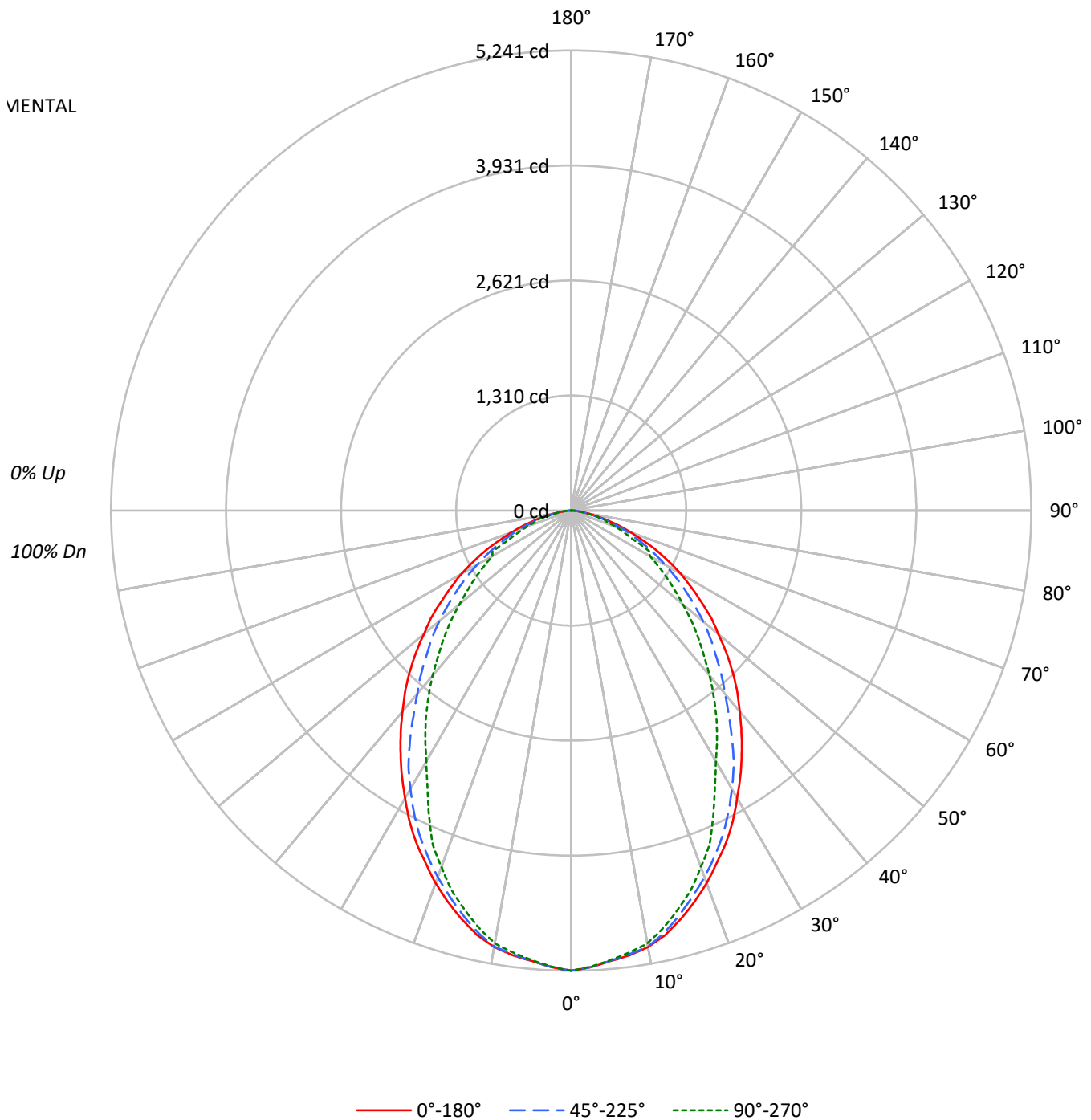
Lumens per Lamp: N/A
Luminaire Lumens: 10289.0 lumens
Efficiency: N/A
Efficacy: 79.4 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 129.6
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°	7052	7052	7052
5°	6956	6948	6940
10°	6896	6887	6838
15°	6710	6642	6549
20°	6463	6359	6186
25°	6198	6063	5685
30°	5874	5686	5121
35°	5563	5255	4737
40°	5247	4789	4310
45°	4946	4427	3897
50°	4578	4109	3475
55°	4236	3724	3113
60°	3881	3326	2788
65°	3415	2913	2469
70°	2813	2550	2098
75°	2236	1953	2047
80°	1502	1409	1315
85°	936	1122	1309

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4946 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	487.9	4.7
10°-20°	1338.9	13.0
20°-30°	1853.7	18.0
30°-40°	1976.5	19.2
40°-50°	1803.2	17.5
50°-60°	1412.6	13.7
60°-70°	920.7	8.9
70°-80°	407.9	4.0
80°-90°	87.6	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°	3680.5	35.8
0°-40°	5657.0	55.0
0°-60°	8872.8	86.2
0°-90°	10289.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10289.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5241	5241	5241	5241	5241	
5°	5150	5144	5144	5138	5138	489
15°	4817	4817	4768	4720	4702	1354
25°	4175	4150	4084	3938	3829	1917
35°	3387	3363	3199	2957	2884	2118
45°	2599	2545	2327	2133	2048	2002
55°	1806	1751	1588	1400	1327	1620
65°	1072	1012	915	933	776	1057
75°	430	400	376	358	394	461
85°	61	67	73	79	85	84
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5241.1	5241.1	5241.1	5241.1	5241.1
2.5°	5204.7	5204.7	5204.7	5198.7	5198.7
5°	5150.2	5144.1	5144.1	5138.1	5138.1
7.5°	5107.8	5101.7	5095.7	5089.6	5077.5
10°	5047.2	5047.2	5041.1	5010.8	5004.8
12.5°	4950.2	4944.2	4919.9	4877.5	4865.4
15°	4816.9	4816.9	4768.5	4720.0	4701.8
17.5°	4671.5	4665.5	4604.9	4556.4	4532.2
20°	4514.0	4501.9	4441.3	4362.5	4320.1
22.5°	4338.3	4338.3	4265.6	4162.6	4120.2
25°	4174.7	4150.4	4083.8	3938.4	3829.3
27.5°	3986.9	3950.5	3877.8	3671.8	3544.5
30°	3780.8	3762.7	3659.7	3393.1	3296.1
32.5°	3587.0	3556.7	3447.6	3168.9	3090.1
35°	3387.0	3362.8	3199.2	2956.8	2884.1
37.5°	3187.1	3156.8	2950.8	2756.9	2666.0
40°	2987.1	2950.8	2726.6	2550.9	2453.9
42.5°	2799.3	2750.8	2532.7	2344.9	2235.8
45°	2599.3	2544.8	2326.7	2132.8	2048.0
47.5°	2399.4	2350.9	2151.0	1951.0	1854.1
50°	2187.3	2144.9	1963.1	1763.2	1660.2
52.5°	2011.6	1945.0	1769.2	1569.3	1484.5
55°	1805.6	1751.1	1587.5	1399.6	1326.9
57.5°	1617.8	1563.2	1411.8	1236.0	1175.5
60°	1442.1	1363.3	1236.0	1084.6	1036.1
62.5°	1248.2	1187.6	1078.5	951.3	1011.9
65°	1072.5	1011.9	914.9	933.1	775.6
67.5°	878.6	848.3	763.4	678.6	654.4
70°	715.0	678.6	648.3	557.4	533.2
72.5°	569.6	533.2	490.8	442.3	424.1
75°	430.2	399.9	375.7	357.5	393.8
77.5°	296.9	284.8	266.6	248.4	242.4
80°	193.9	187.8	181.8	175.7	169.7
82.5°	115.1	115.1	115.1	115.1	115.1
85°	60.6	66.6	72.7	78.8	84.8
87.5°	36.4	36.4	42.4	48.5	54.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)