

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: P563831

Luminaire Tested: FSR-24-4-LD4-4LO-35-UNV-80-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563831
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-35-UNV-80-87-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

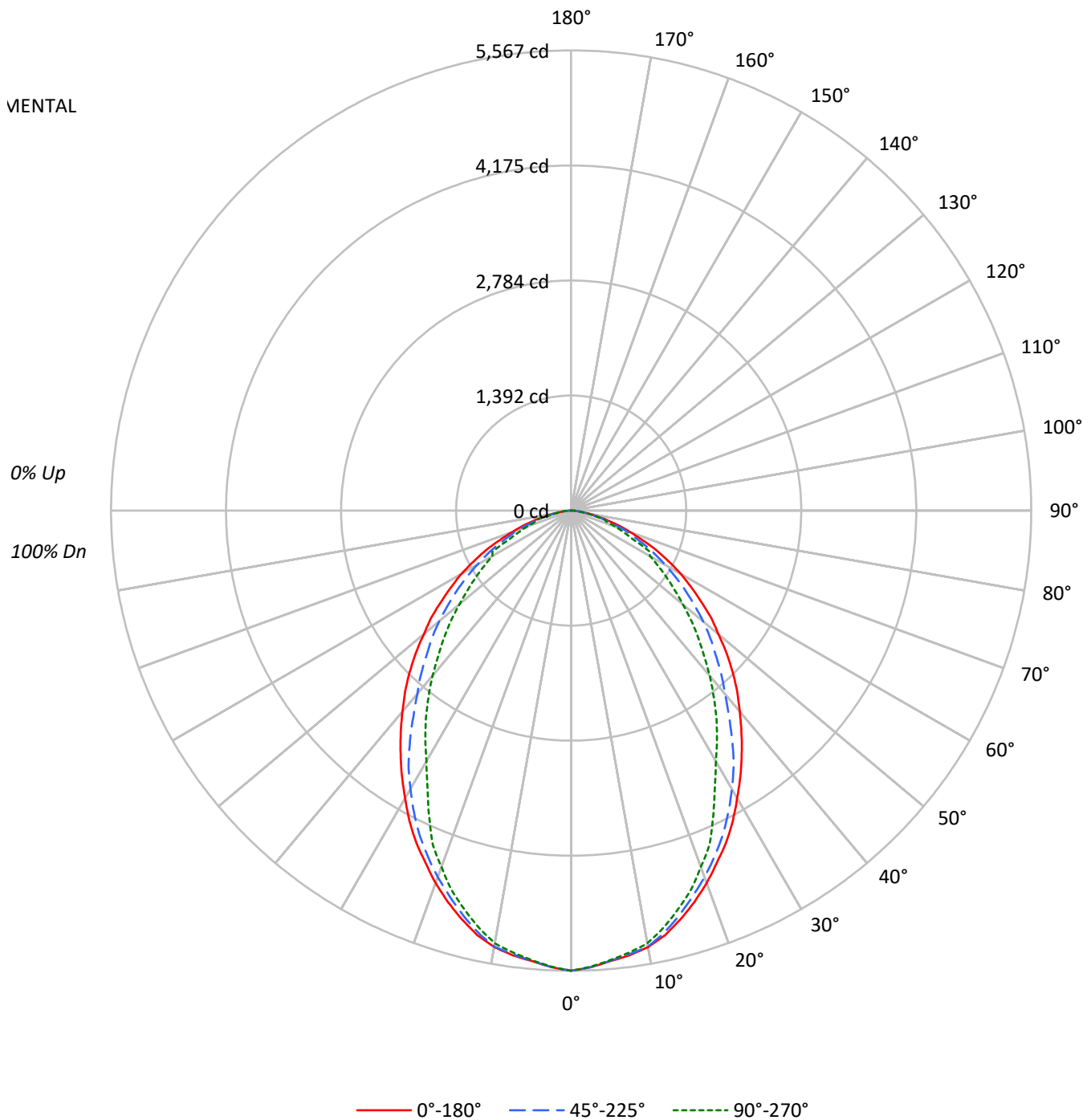
Lumens per Lamp: N/A
Luminaire Lumens: 10929.0 lumens
Efficiency: N/A
Efficacy: 116.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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	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°	7490	7490	7490
5°	7389	7380	7371
10°	7325	7316	7263
15°	7127	7055	6957
20°	6865	6755	6570
25°	6583	6440	6039
30°	6239	6039	5440
35°	5909	5582	5032
40°	5573	5087	4578
45°	5254	4703	4139
50°	4863	4365	3691
55°	4499	3955	3306
60°	4122	3533	2961
65°	3627	3094	2623
70°	2987	2709	2228
75°	2376	2074	2175
80°	1596	1496	1396
85°	994	1192	1391

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5254 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	518.2	4.7
10°-20°	1422.2	13.0
20°-30°	1969.0	18.0
30°-40°	2099.5	19.2
40°-50°	1915.3	17.5
50°-60°	1500.5	13.7
60°-70°	977.9	8.9
70°-80°	433.3	4.0
80°-90°	93.0	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°	3909.4	35.8
0°-40°	6008.9	55.0
0°-60°	9424.7	86.2
0°-90°	10929.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10929.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5567	5567	5567	5567	5567	
5°	5470	5464	5464	5458	5458	519
15°	5117	5117	5065	5014	4994	1438
25°	4434	4409	4338	4183	4068	2036
35°	3598	3572	3398	3141	3064	2249
45°	2761	2703	2471	2266	2175	2127
55°	1918	1860	1686	1487	1410	1720
65°	1139	1075	972	991	824	1123
75°	457	425	399	380	418	490
85°	64	71	77	84	90	89
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5567.1	5567.1	5567.1	5567.1	5567.1
2.5°	5528.5	5528.5	5528.5	5522.0	5522.0
5°	5470.5	5464.1	5464.1	5457.7	5457.7
7.5°	5425.5	5419.1	5412.6	5406.2	5393.3
10°	5361.1	5361.1	5354.7	5322.5	5316.1
12.5°	5258.2	5251.7	5226.0	5180.9	5168.1
15°	5116.6	5116.6	5065.1	5013.6	4994.3
17.5°	4962.1	4955.7	4891.3	4839.8	4814.1
20°	4794.8	4781.9	4717.5	4633.9	4588.8
22.5°	4608.1	4608.1	4530.9	4421.5	4376.4
25°	4434.4	4408.6	4337.8	4183.4	4067.5
27.5°	4234.8	4196.2	4119.0	3900.2	3765.0
30°	4016.0	3996.7	3887.3	3604.1	3501.2
32.5°	3810.1	3777.9	3662.0	3366.0	3282.3
35°	3597.7	3571.9	3398.2	3140.7	3063.5
37.5°	3385.3	3353.1	3134.3	2928.4	2831.8
40°	3172.9	3134.3	2896.2	2709.5	2606.6
42.5°	2973.4	2921.9	2690.2	2490.7	2374.9
45°	2761.0	2703.1	2471.4	2265.5	2175.3
47.5°	2548.6	2497.1	2284.8	2072.4	1969.4
50°	2323.4	2278.3	2085.2	1872.9	1763.4
52.5°	2136.7	2065.9	1879.3	1666.9	1576.8
55°	1917.9	1860.0	1686.2	1486.7	1409.5
57.5°	1718.4	1660.5	1499.6	1312.9	1248.6
60°	1531.8	1448.1	1312.9	1152.0	1100.5
62.5°	1325.8	1261.4	1145.6	1010.4	1074.8
65°	1139.2	1074.8	971.8	991.1	823.8
67.5°	933.2	901.0	810.9	720.8	695.1
70°	759.4	720.8	688.6	592.1	566.4
72.5°	605.0	566.4	521.3	469.8	450.5
75°	457.0	424.8	399.0	379.7	418.3
77.5°	315.4	302.5	283.2	263.9	257.4
80°	206.0	199.5	193.1	186.6	180.2
82.5°	122.3	122.3	122.3	122.3	122.3
85°	64.4	70.8	77.2	83.7	90.1
87.5°	38.6	38.6	45.1	51.5	57.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)