

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: P563120

Luminaire Tested: FSR-24-4-LD4-3HI-40-UNV-80-84-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563120
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-80-84-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

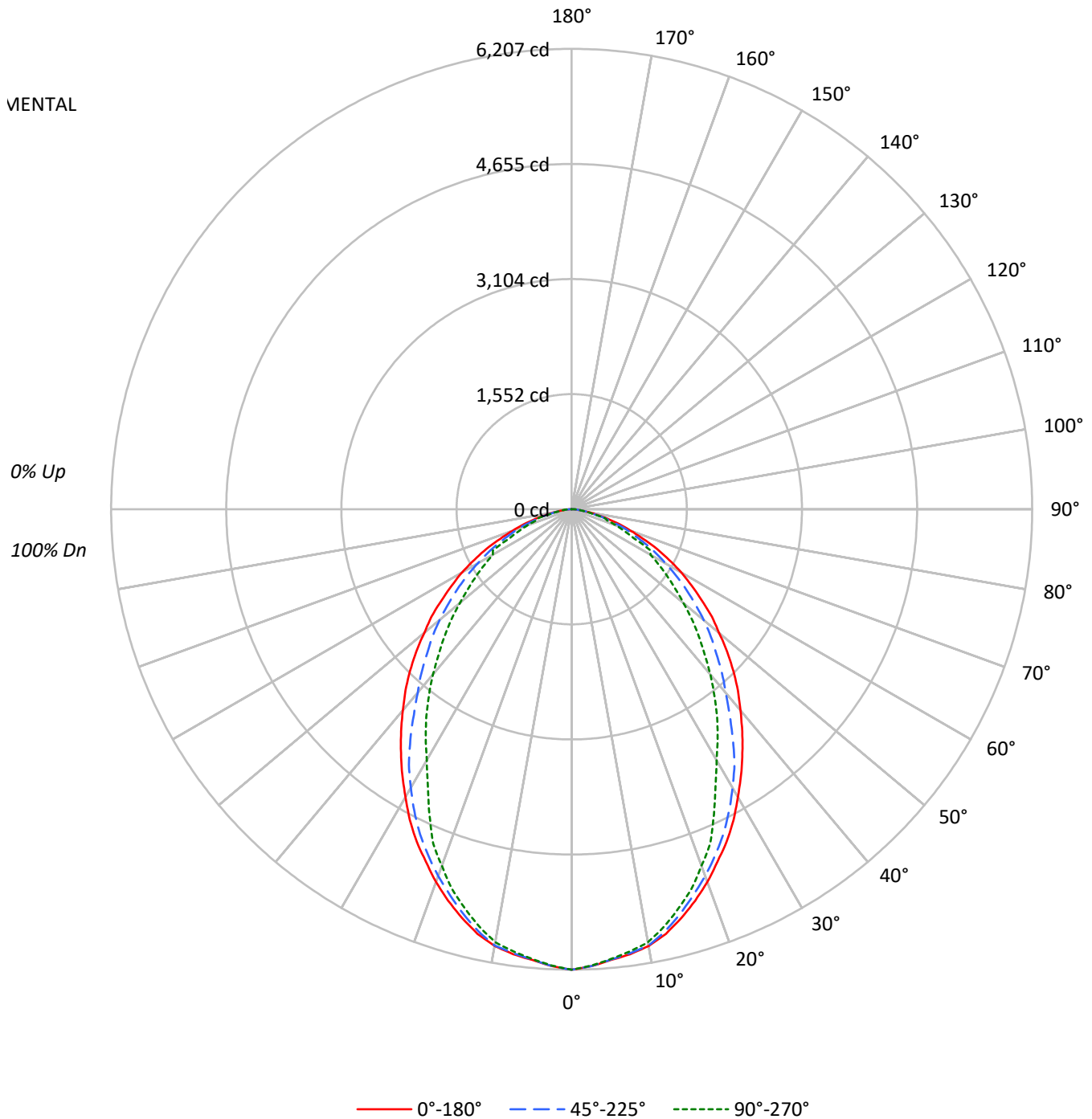
Lumens per Lamp: N/A
Luminaire Lumens: 12186.0 lumens
Efficiency: N/A
Efficacy: 94.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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	0																			
RCR																																														
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	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°	8352	8352	8352
5°	8238	8229	8219
10°	8167	8157	8098
15°	7947	7867	7757
20°	7655	7532	7326
25°	7340	7180	6733
30°	6957	6734	6065
35°	6589	6224	5611
40°	6214	5672	5105
45°	5858	5243	4615
50°	5423	4867	4116
55°	5016	4411	3687
60°	4596	3939	3302
65°	4044	3450	2924
70°	3331	3021	2484
75°	2649	2313	2425
80°	1779	1668	1557
85°	1108	1329	1551

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5858 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	577.8	4.7
10°-20°	1585.8	13.0
20°-30°	2195.4	18.0
30°-40°	2341.0	19.2
40°-50°	2135.6	17.5
50°-60°	1673.1	13.7
60°-70°	1090.4	8.9
70°-80°	483.1	4.0
80°-90°	103.7	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°	4359.0	35.8
0°-40°	6700.0	55.0
0°-60°	10508.7	86.2
0°-90°	12186.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12186.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6207	6207	6207	6207	6207	
5°	6100	6093	6093	6085	6085	579
15°	5705	5705	5648	5590	5569	1604
25°	4944	4916	4837	4664	4535	2270
35°	4012	3983	3789	3502	3416	2508
45°	3079	3014	2756	2526	2426	2371
55°	2138	2074	1880	1658	1572	1918
65°	1270	1198	1084	1105	918	1252
75°	510	474	445	423	466	546
85°	72	79	86	93	100	100
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6207.4	6207.4	6207.4	6207.4	6207.4
2.5°	6164.3	6164.3	6164.3	6157.2	6157.2
5°	6099.7	6092.6	6092.6	6085.4	6085.4
7.5°	6049.5	6042.3	6035.2	6028.0	6013.6
10°	5977.7	5977.7	5970.6	5934.7	5927.5
12.5°	5862.9	5855.8	5827.0	5776.8	5762.5
15°	5705.1	5705.1	5647.6	5590.2	5568.7
17.5°	5532.8	5525.6	5453.9	5396.5	5367.8
20°	5346.2	5331.9	5260.1	5166.8	5116.6
22.5°	5138.1	5138.1	5052.0	4930.0	4879.8
25°	4944.4	4915.7	4836.7	4664.5	4535.3
27.5°	4721.9	4678.9	4592.7	4348.8	4198.1
30°	4477.9	4456.4	4334.4	4018.7	3903.8
32.5°	4248.3	4212.4	4083.2	3753.1	3659.8
35°	4011.5	3982.8	3789.0	3502.0	3415.9
37.5°	3774.7	3738.8	3494.8	3265.2	3157.5
40°	3537.9	3494.8	3229.3	3021.2	2906.3
42.5°	3315.4	3258.0	2999.6	2777.2	2648.0
45°	3078.6	3014.0	2755.6	2526.0	2425.5
47.5°	2841.8	2784.4	2547.5	2310.7	2195.9
50°	2590.6	2540.4	2325.1	2088.3	1966.3
52.5°	2382.5	2303.6	2095.4	1858.6	1758.2
55°	2138.5	2073.9	1880.2	1657.7	1571.6
57.5°	1916.0	1851.5	1672.0	1463.9	1392.2
60°	1707.9	1614.6	1463.9	1284.5	1227.1
62.5°	1478.3	1406.5	1277.4	1126.7	1198.4
65°	1270.2	1198.4	1083.6	1105.1	918.5
67.5°	1040.5	1004.7	904.2	803.7	775.0
70°	846.8	803.7	767.9	660.2	631.5
72.5°	674.6	631.5	581.3	523.9	502.3
75°	509.5	473.6	444.9	423.4	466.5
77.5°	351.6	337.3	315.8	294.2	287.0
80°	229.6	222.5	215.3	208.1	200.9
82.5°	136.3	136.3	136.3	136.3	136.3
85°	71.8	78.9	86.1	93.3	100.5
87.5°	43.1	43.1	50.2	57.4	64.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)