

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: P590432

Luminaire Tested: FSR-24-2-LD4-3HI-35-UNV-81-87-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590432
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-1)
Test Lab: INNOVATION CENTER
Issue Date: 12/8/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-2-LD4-3HI-35-UNV-81-87-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

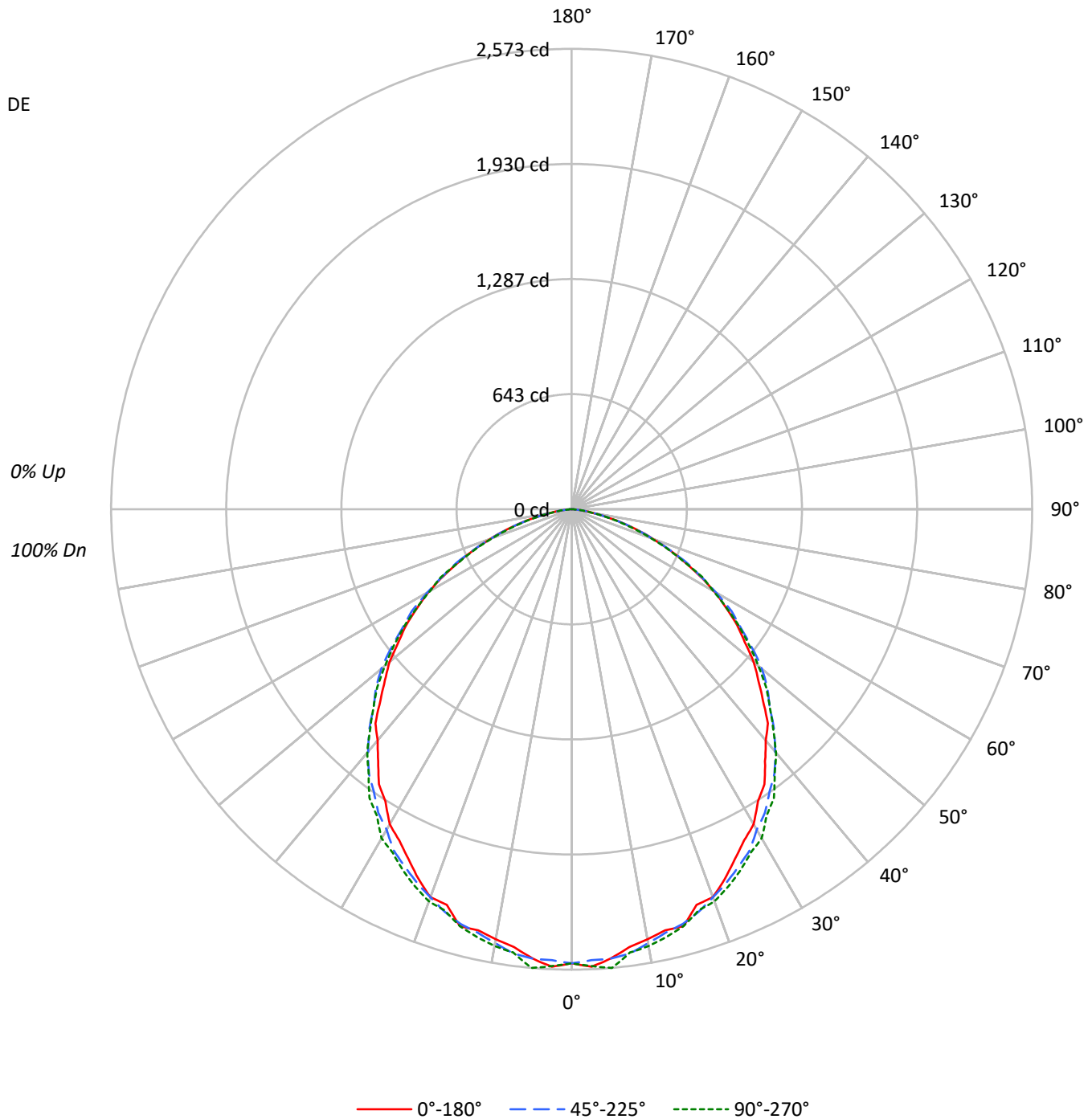
Lumens per Lamp: N/A
Luminaire Lumens: 6395.0 lumens
Efficiency: N/A
Efficacy: 98.7 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 64.8
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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6828	6828	6828
5°	6806	6808	6951
10°	6668	6726	6773
15°	6720	6684	6721
20°	6607	6607	6677
25°	6404	6544	6616
30°	6316	6426	6598
35°	6167	6328	6470
40°	5927	6212	6240
45°	5748	5952	5961
50°	5559	5810	5699
55°	5297	5400	5361
60°	4953	5002	4912
65°	4416	4529	4385
70°	3789	3802	3696
75°	3001	2994	2878
80°	2010	1954	1878
85°	1093	1084	1013

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 6105 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	238.7	3.7
10°-20°	676.4	10.6
20°-30°	1013.5	15.8
30°-40°	1201.1	18.8
40°-50°	1203.4	18.8
50°-60°	1021.5	16.0
60°-70°	688.7	10.8
70°-80°	302.6	4.7
80°-90°	49.2	0.8
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°	1928.6	30.2
0°-40°	3129.7	48.9
0°-60°	5354.6	83.7
0°-90°	6395.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6395.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2537	2537	2537	2537	2537	
5°	2519	2514	2520	2513	2573	238
15°	2412	2384	2399	2412	2413	672
25°	2157	2168	2204	2233	2228	997
35°	1877	1883	1926	1971	1970	1166
45°	1510	1538	1564	1604	1566	1168
55°	1129	1121	1151	1143	1143	1004
65°	694	684	711	684	689	690
75°	289	283	288	268	277	309
85°	35	34	35	34	33	51
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2537.4	2537.4	2537.4	2537.4	2537.4
2.5°	2559.3	2540.0	2522.0	2542.9	2555.7
5°	2519.4	2513.5	2520.3	2512.8	2573.4
7.5°	2467.6	2490.2	2503.3	2495.1	2498.7
10°	2440.1	2432.2	2461.4	2481.7	2478.7
12.5°	2410.6	2422.4	2424.0	2446.0	2447.9
15°	2412.2	2384.4	2399.1	2411.6	2412.6
17.5°	2318.5	2348.7	2358.8	2387.3	2351.9
20°	2307.1	2285.1	2307.1	2336.2	2331.6
22.5°	2236.6	2212.1	2259.2	2285.1	2283.5
25°	2156.7	2168.5	2203.9	2232.7	2228.1
27.5°	2086.6	2100.3	2150.8	2190.4	2164.9
30°	2032.5	2025.6	2068.2	2103.6	2123.3
32.5°	1935.9	1960.8	2010.6	2045.6	2027.0
35°	1877.2	1882.8	1926.4	1970.9	1969.6
37.5°	1774.7	1800.6	1861.8	1874.3	1862.8
40°	1687.2	1713.1	1768.5	1781.9	1776.3
42.5°	1622.7	1627.3	1674.8	1690.2	1665.6
45°	1510.3	1538.5	1564.0	1604.3	1566.3
47.5°	1414.6	1427.7	1482.8	1493.6	1473.6
50°	1327.8	1332.4	1387.8	1374.3	1361.2
52.5°	1218.7	1238.1	1269.2	1266.6	1251.2
55°	1129.0	1121.4	1150.9	1143.0	1142.7
57.5°	1021.2	1034.3	1058.5	1046.1	1026.1
60°	920.3	920.6	929.4	915.4	912.7
62.5°	807.9	811.8	813.8	796.4	824.6
65°	693.6	684.4	711.3	684.1	688.6
67.5°	588.4	593.0	590.4	573.3	579.9
70°	481.6	487.5	483.2	463.9	469.8
72.5°	384.0	376.8	381.3	357.1	368.2
75°	288.6	282.7	288.0	267.7	276.8
77.5°	196.6	201.2	197.9	187.1	193.3
80°	129.7	126.1	126.1	119.9	121.2
82.5°	75.7	72.1	71.1	69.1	72.1
85°	35.4	34.4	35.1	34.1	32.8
87.5°	12.8	13.1	13.1	12.4	11.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)