

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: P562882

Luminaire Tested: FSR-24-4-LD4-2STD-35-UNV-81-85-EDD-90

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P562882  
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-LD4-2STD-35-UNV-81-85-EDD-90  
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

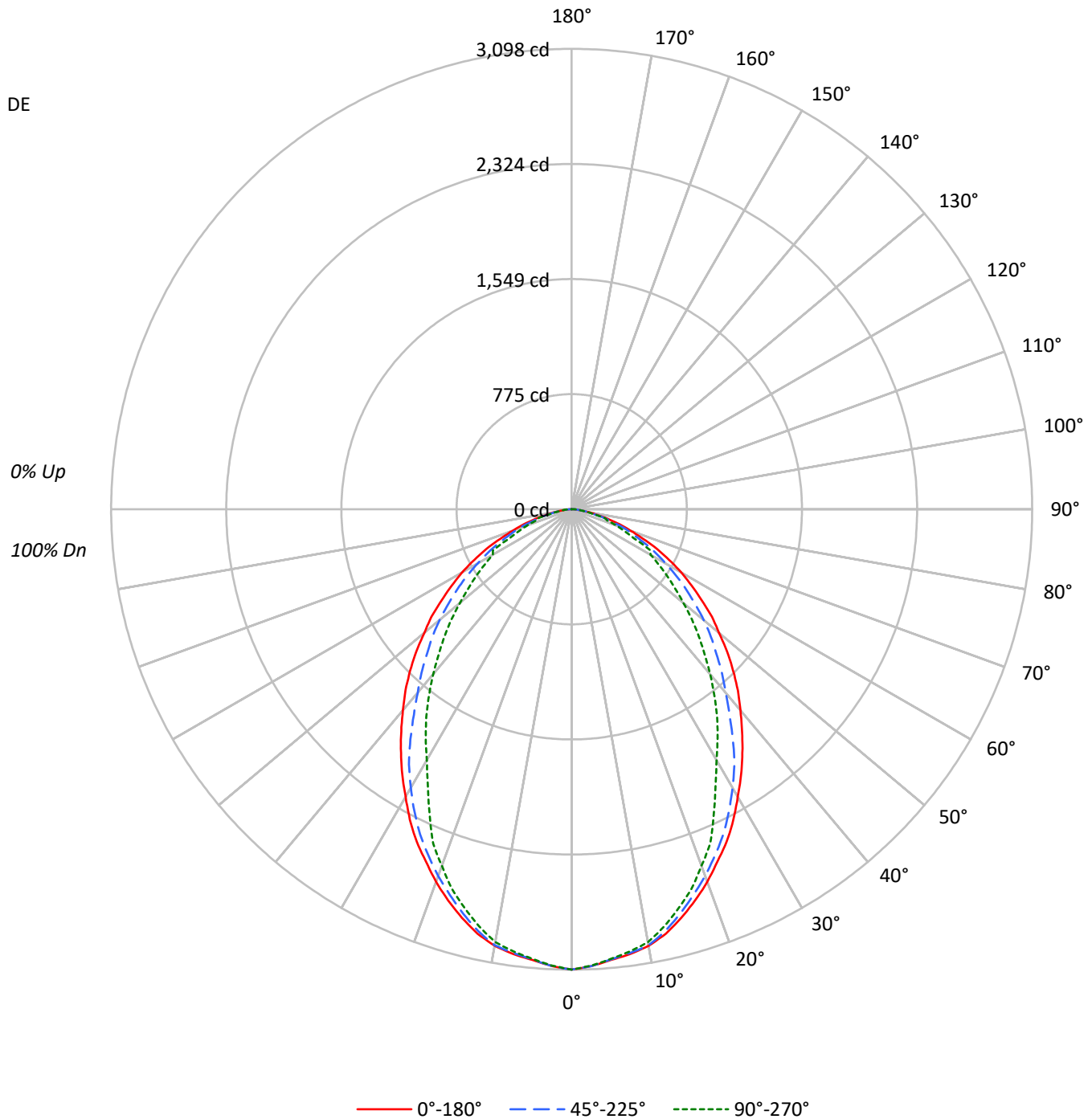
Lumens per Lamp: N/A  
Luminaire Lumens: 6081.0 lumens  
Efficiency: N/A  
Efficacy: 91.3 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 66.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	4168	4168	4168
5°	4111	4106	4101
10°	4076	4071	4041
15°	3966	3926	3871
20°	3820	3758	3656
25°	3663	3583	3360
30°	3472	3360	3027
35°	3288	3106	2800
40°	3101	2830	2547
45°	2923	2617	2303
50°	2706	2429	2054
55°	2503	2201	1840
60°	2294	1966	1648
65°	2018	1721	1459
70°	1662	1507	1240
75°	1322	1154	1210
80°	888	832	777
85°	553	664	773

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2923 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	288.3	4.7
10°-20°	791.3	13.0
20°-30°	1095.5	18.0
30°-40°	1168.2	19.2
40°-50°	1065.7	17.5
50°-60°	834.9	13.7
60°-70°	544.1	8.9
70°-80°	241.1	4.0
80°-90°	51.8	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°	2175.2	35.8
0°-40°	3343.4	55.0
0°-60°	5244.0	86.2
0°-90°	6081.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6081.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3098	3098	3098	3098	3098	
5°	3044	3040	3040	3037	3037	289
15°	2847	2847	2818	2790	2779	800
25°	2467	2453	2414	2328	2263	1133
35°	2002	1988	1891	1748	1705	1251
45°	1536	1504	1375	1260	1210	1183
55°	1067	1035	938	827	784	957
65°	634	598	541	552	458	625
75°	254	236	222	211	233	273
85°	36	39	43	47	50	50
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3097.6	3097.6	3097.6	3097.6	3097.6
2.5°	3076.1	3076.1	3076.1	3072.5	3072.5
5°	3043.9	3040.3	3040.3	3036.7	3036.7
7.5°	3018.8	3015.2	3011.6	3008.1	3000.9
10°	2983.0	2983.0	2979.4	2961.5	2957.9
12.5°	2925.7	2922.1	2907.8	2882.7	2875.6
15°	2846.9	2846.9	2818.3	2789.6	2778.9
17.5°	2761.0	2757.4	2721.6	2692.9	2678.6
20°	2667.9	2660.7	2624.9	2578.3	2553.3
22.5°	2564.0	2564.0	2521.0	2460.2	2435.1
25°	2467.3	2453.0	2413.6	2327.7	2263.2
27.5°	2356.3	2334.8	2291.9	2170.1	2094.9
30°	2234.6	2223.8	2162.9	2005.4	1948.1
32.5°	2120.0	2102.1	2037.6	1872.9	1826.3
35°	2001.8	1987.5	1890.8	1747.5	1704.6
37.5°	1883.6	1865.7	1744.0	1629.4	1575.6
40°	1765.4	1744.0	1611.5	1507.6	1450.3
42.5°	1654.4	1625.8	1496.9	1385.9	1321.4
45°	1536.3	1504.0	1375.1	1260.5	1210.4
47.5°	1418.1	1389.4	1271.3	1153.1	1095.8
50°	1292.7	1267.7	1160.2	1042.1	981.2
52.5°	1188.9	1149.5	1045.7	927.5	877.3
55°	1067.1	1034.9	938.2	827.2	784.2
57.5°	956.1	923.9	834.4	730.5	694.7
60°	852.3	805.7	730.5	641.0	612.4
62.5°	737.7	701.9	637.4	562.2	598.0
65°	633.8	598.0	540.7	551.5	458.4
67.5°	519.2	501.3	451.2	401.1	386.7
70°	422.6	401.1	383.2	329.5	315.1
72.5°	336.6	315.1	290.1	261.4	250.7
75°	254.3	236.3	222.0	211.3	232.8
77.5°	175.5	168.3	157.6	146.8	143.2
80°	114.6	111.0	107.4	103.8	100.3
82.5°	68.0	68.0	68.0	68.0	68.0
85°	35.8	39.4	43.0	46.6	50.1
87.5°	21.5	21.5	25.1	28.6	32.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)