

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: P560051

Luminaire Tested: FSR-12-2-LD4-1STD-40-UNV-80-85-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560051  
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-12-2-LD4-1STD-40-UNV-80-85-EDD  
Description: 1X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRONM  
SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

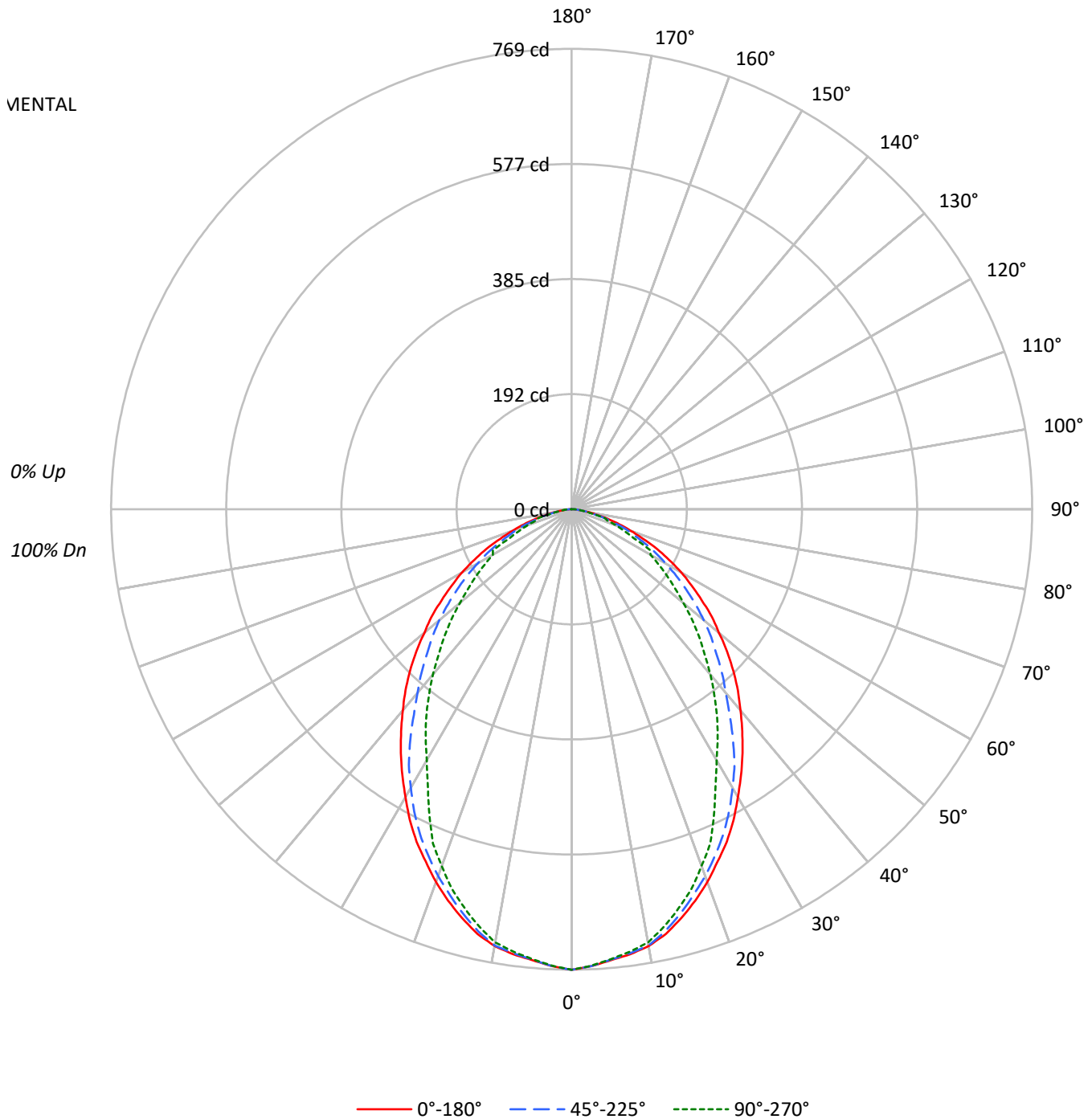
Lumens per Lamp: N/A  
Luminaire Lumens: 1510.0 lumens  
Efficiency: N/A  
Efficacy: 91.0 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 16.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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°	4140	4140	4140
5°	4083	4078	4074
10°	4048	4043	4014
15°	3939	3899	3845
20°	3794	3733	3631
25°	3638	3559	3337
30°	3448	3338	3006
35°	3266	3085	2781
40°	3080	2811	2530
45°	2904	2599	2288
50°	2688	2412	2040
55°	2487	2186	1827
60°	2278	1953	1637
65°	2004	1710	1449
70°	1651	1496	1232
75°	1312	1146	1202
80°	883	828	772
85°	550	661	766

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2904 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	71.6	4.7
10°-20°	196.5	13.0
20°-30°	272.0	18.0
30°-40°	290.1	19.2
40°-50°	264.6	17.5
50°-60°	207.3	13.7
60°-70°	135.1	8.9
70°-80°	59.9	4.0
80°-90°	12.9	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°	540.1	35.8
0°-40°	830.2	55.0
0°-60°	1302.2	86.2
0°-90°	1510.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1510.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	769	769	769	769	769	
5°	756	755	755	754	754	72
15°	707	707	700	693	690	199
25°	613	609	599	578	562	281
35°	497	494	470	434	423	311
45°	382	374	342	313	301	294
55°	265	257	233	205	195	238
65°	157	148	134	137	114	155
75°	63	59	55	52	58	68
85°	9	10	11	12	12	12
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	769.2	769.2	769.2	769.2	769.2
2.5°	763.8	763.8	763.8	762.9	762.9
5°	755.8	754.9	754.9	754.1	754.1
7.5°	749.6	748.7	747.8	746.9	745.2
10°	740.7	740.7	739.8	735.4	734.5
12.5°	726.5	725.6	722.0	715.8	714.0
15°	706.9	706.9	699.8	692.7	690.0
17.5°	685.6	684.7	675.8	668.7	665.1
20°	662.5	660.7	651.8	640.2	634.0
22.5°	636.7	636.7	626.0	610.9	604.7
25°	612.7	609.1	599.3	578.0	562.0
27.5°	585.1	579.8	569.1	538.9	520.2
30°	554.9	552.2	537.1	498.0	483.7
32.5°	526.4	522.0	506.0	465.1	453.5
35°	497.1	493.5	469.5	433.9	423.3
37.5°	467.7	463.3	433.0	404.6	391.3
40°	438.4	433.0	400.1	374.4	360.1
42.5°	410.8	403.7	371.7	344.1	328.1
45°	381.5	373.5	341.5	313.0	300.6
47.5°	352.1	345.0	315.7	286.3	272.1
50°	321.0	314.8	288.1	258.8	243.6
52.5°	295.2	285.4	259.7	230.3	217.9
55°	265.0	257.0	233.0	205.4	194.7
57.5°	237.4	229.4	207.2	181.4	172.5
60°	211.6	200.1	181.4	159.2	152.1
62.5°	183.2	174.3	158.3	139.6	148.5
65°	157.4	148.5	134.3	136.9	113.8
67.5°	128.9	124.5	112.0	99.6	96.0
70°	104.9	99.6	95.1	81.8	78.3
72.5°	83.6	78.3	72.0	64.9	62.2
75°	63.1	58.7	55.1	52.5	57.8
77.5°	43.6	41.8	39.1	36.5	35.6
80°	28.5	27.6	26.7	25.8	24.9
82.5°	16.9	16.9	16.9	16.9	16.9
85°	8.9	9.8	10.7	11.6	12.4
87.5°	5.3	5.3	6.2	7.1	8.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)