

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: P562915

Luminaire Tested: FSR-24-4-LD4-2STD-35-UNV-93-85-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P562915  
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-93-85-EDD  
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

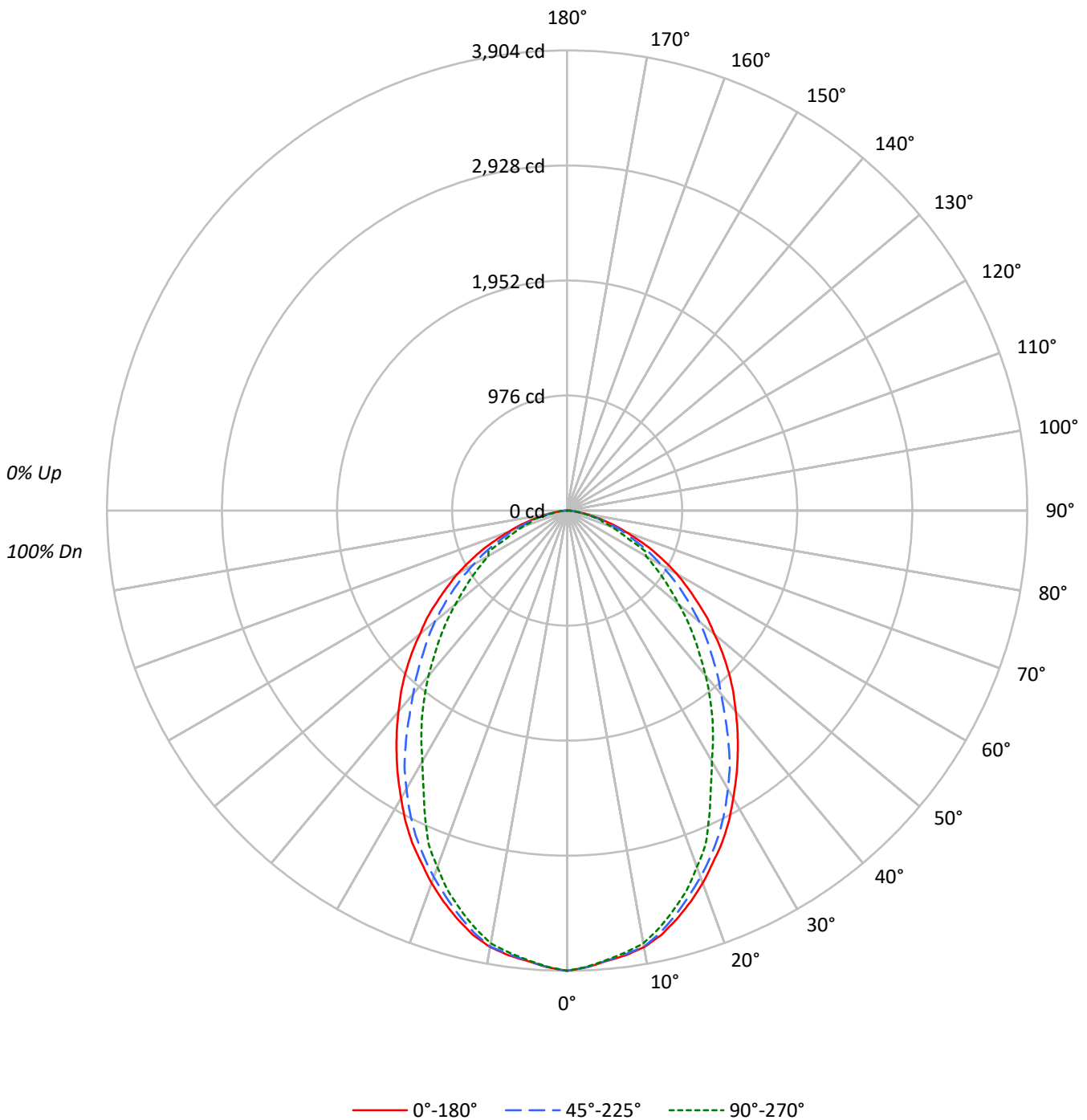
Lumens per Lamp: N/A  
Luminaire Lumens: 7665.0 lumens  
Efficiency: N/A  
Efficacy: 115.1 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 66.6  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	5253	5253	5253
5°	5182	5176	5170
10°	5137	5131	5094
15°	4999	4948	4879
20°	4815	4737	4608
25°	4617	4517	4235
30°	4376	4236	3815
35°	4144	3915	3529
40°	3909	3568	3211
45°	3685	3298	2903
50°	3411	3061	2589
55°	3155	2774	2319
60°	2891	2478	2077
65°	2543	2170	1840
70°	2095	1900	1563
75°	1666	1455	1525
80°	1119	1049	979
85°	696	837	976

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3685 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	363.5	4.7
10°-20°	997.5	13.0
20°-30°	1380.9	18.0
30°-40°	1472.5	19.2
40°-50°	1343.3	17.5
50°-60°	1052.4	13.7
60°-70°	685.9	8.9
70°-80°	303.9	4.0
80°-90°	65.3	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°	2741.8	35.8
0°-40°	4214.3	55.0
0°-60°	6610.0	86.2
0°-90°	7665.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7665.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3904	3904	3904	3904	3904	
5°	3837	3832	3832	3828	3828	364
15°	3588	3588	3552	3516	3503	1009
25°	3110	3092	3042	2934	2853	1428
35°	2523	2505	2383	2203	2149	1577
45°	1936	1896	1733	1589	1526	1492
55°	1345	1304	1183	1043	988	1206
65°	799	754	682	695	578	787
75°	320	298	280	266	293	343
85°	45	50	54	59	63	63
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3904.4	3904.4	3904.4	3904.4	3904.4
2.5°	3877.4	3877.4	3877.4	3872.9	3872.9
5°	3836.7	3832.2	3832.2	3827.7	3827.7
7.5°	3805.1	3800.6	3796.1	3791.6	3782.6
10°	3760.0	3760.0	3755.5	3732.9	3728.4
12.5°	3687.8	3683.3	3665.2	3633.6	3624.6
15°	3588.5	3588.5	3552.4	3516.3	3502.7
17.5°	3480.2	3475.6	3430.5	3394.4	3376.3
20°	3362.8	3353.8	3308.6	3249.9	3218.3
22.5°	3231.9	3231.9	3177.7	3101.0	3069.4
25°	3110.0	3092.0	3042.3	2934.0	2852.7
27.5°	2970.1	2943.0	2888.8	2735.4	2640.6
30°	2816.6	2803.1	2726.3	2527.7	2455.5
32.5°	2672.2	2649.6	2568.4	2360.7	2302.0
35°	2523.2	2505.2	2383.3	2202.7	2148.6
37.5°	2374.3	2351.7	2198.2	2053.8	1986.1
40°	2225.3	2198.2	2031.2	1900.3	1828.1
42.5°	2085.4	2049.3	1886.8	1746.8	1665.6
45°	1936.4	1895.8	1733.3	1588.9	1525.7
47.5°	1787.5	1751.4	1602.4	1453.4	1381.2
50°	1629.5	1597.9	1462.5	1313.5	1236.8
52.5°	1498.6	1448.9	1318.0	1169.1	1105.9
55°	1345.1	1304.5	1182.6	1042.7	988.5
57.5°	1205.2	1164.6	1051.7	920.8	875.7
60°	1074.3	1015.6	920.8	808.0	771.9
62.5°	929.8	884.7	803.5	708.7	753.8
65°	798.9	753.8	681.6	695.1	577.8
67.5°	654.5	631.9	568.7	505.5	487.5
70°	532.6	505.5	483.0	415.3	397.2
72.5°	424.3	397.2	365.6	329.5	316.0
75°	320.5	297.9	279.9	266.3	293.4
77.5°	221.2	212.1	198.6	185.1	180.6
80°	144.4	139.9	135.4	130.9	126.4
82.5°	85.8	85.8	85.8	85.8	85.8
85°	45.1	49.7	54.2	58.7	63.2
87.5°	27.1	27.1	31.6	36.1	40.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)