

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: P560275

Luminaire Tested: FSR-12-2-LD4-2HI-40-UNV-82-85-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560275  
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-LD4-2HI-40-UNV-82-85-EDD  
Description: 1X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

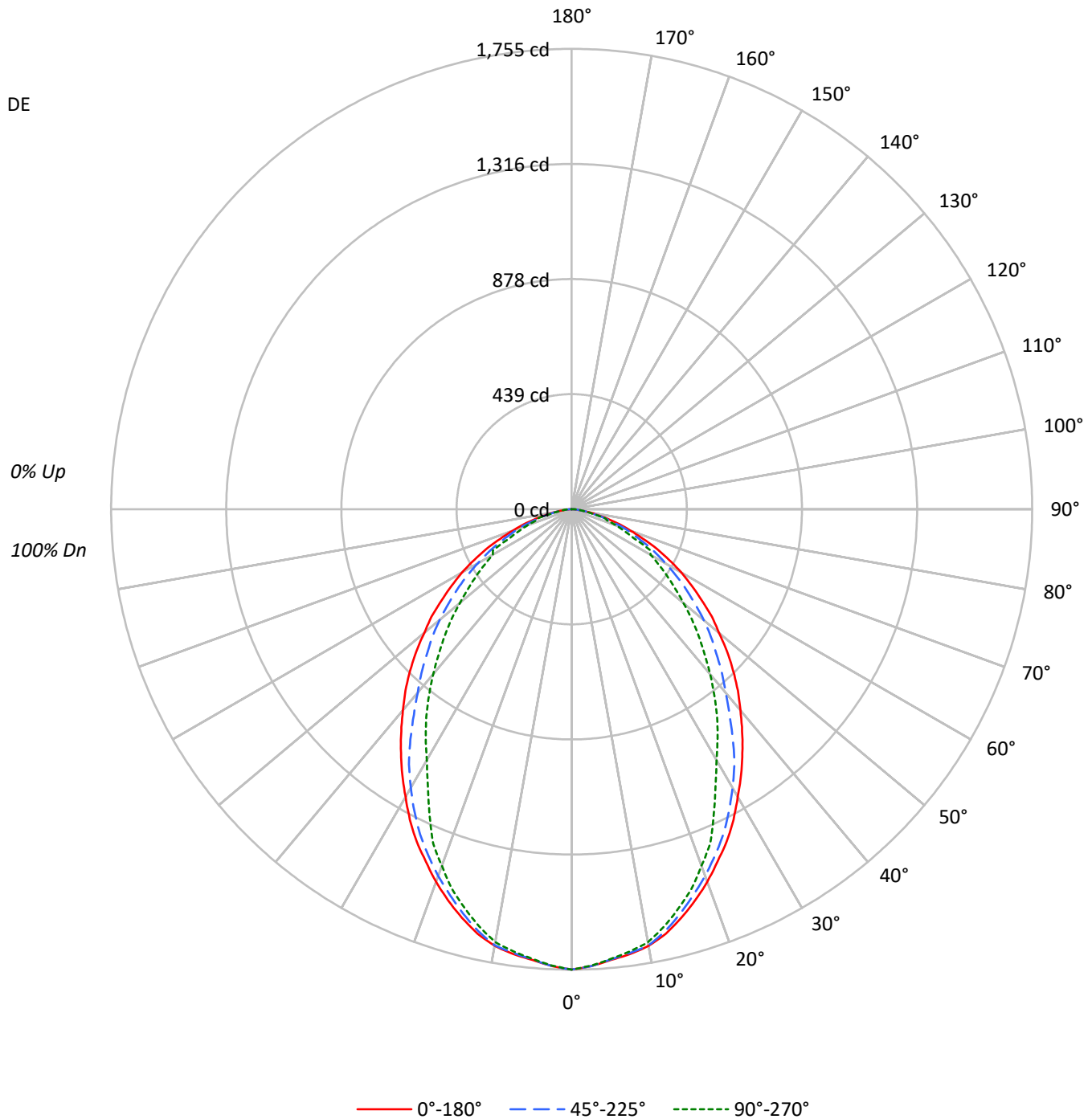
Lumens per Lamp: N/A  
Luminaire Lumens: 3445.0 lumens  
Efficiency: N/A  
Efficacy: 79.7 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15  
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 43.2  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage 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	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°	9444	9444	9444
5°	9316	9305	9294
10°	9235	9224	9158
15°	8986	8896	8772
20°	8656	8517	8285
25°	8301	8120	7614
30°	7867	7615	6858
35°	7451	7038	6345
40°	7027	6414	5772
45°	6624	5929	5219
50°	6132	5503	4654
55°	5673	4987	4169
60°	5197	4455	3734
65°	4573	3901	3307
70°	3767	3416	2809
75°	2994	2616	2743
80°	2011	1888	1760
85°	1254	1501	1754

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 6624 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	163.4	4.7
10°-20°	448.3	13.0
20°-30°	620.6	18.0
30°-40°	661.8	19.2
40°-50°	603.7	17.5
50°-60°	473.0	13.7
60°-70°	308.3	8.9
70°-80°	136.6	4.0
80°-90°	29.3	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°	1232.3	35.8
0°-40°	1894.1	55.0
0°-60°	2970.8	86.2
0°-90°	3445.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3445.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1755	1755	1755	1755	1755	
5°	1724	1722	1722	1720	1720	164
15°	1613	1613	1597	1580	1574	453
25°	1398	1390	1367	1319	1282	642
35°	1134	1126	1071	990	966	709
45°	870	852	779	714	686	670
55°	605	586	532	469	444	542
65°	359	339	306	312	260	354
75°	144	134	126	120	132	154
85°	20	22	24	26	28	28
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1754.8	1754.8	1754.8	1754.8	1754.8
2.5°	1742.7	1742.7	1742.7	1740.6	1740.6
5°	1724.4	1722.4	1722.4	1720.3	1720.3
7.5°	1710.2	1708.2	1706.1	1704.1	1700.1
10°	1689.9	1689.9	1687.9	1677.7	1675.7
12.5°	1657.5	1655.4	1647.3	1633.1	1629.1
15°	1612.8	1612.8	1596.6	1580.4	1574.3
17.5°	1564.1	1562.1	1541.8	1525.6	1517.5
20°	1511.4	1507.3	1487.0	1460.7	1446.5
22.5°	1452.6	1452.6	1428.2	1393.7	1379.5
25°	1397.8	1389.7	1367.4	1318.7	1282.1
27.5°	1334.9	1322.7	1298.4	1229.4	1186.8
30°	1265.9	1259.8	1225.3	1136.1	1103.6
32.5°	1201.0	1190.9	1154.3	1061.0	1034.6
35°	1134.1	1125.9	1071.2	990.0	965.7
37.5°	1067.1	1057.0	988.0	923.1	892.6
40°	1000.2	988.0	912.9	854.1	821.6
42.5°	937.3	921.0	848.0	785.1	748.6
45°	870.3	852.1	779.0	714.1	685.7
47.5°	803.4	787.1	720.2	653.2	620.8
50°	732.4	718.2	657.3	590.4	555.9
52.5°	673.5	651.2	592.4	525.4	497.0
55°	604.6	586.3	531.5	468.6	444.3
57.5°	541.7	523.4	472.7	413.9	393.6
60°	482.8	456.5	413.9	363.1	346.9
62.5°	417.9	397.6	361.1	318.5	338.8
65°	359.1	338.8	306.3	312.4	259.7
67.5°	294.2	284.0	255.6	227.2	219.1
70°	239.4	227.2	217.1	186.6	178.5
72.5°	190.7	178.5	164.3	148.1	142.0
75°	144.0	133.9	125.8	119.7	131.9
77.5°	99.4	95.3	89.3	83.2	81.1
80°	64.9	62.9	60.9	58.8	56.8
82.5°	38.5	38.5	38.5	38.5	38.5
85°	20.3	22.3	24.3	26.4	28.4
87.5°	12.2	12.2	14.2	16.2	18.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)