

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: P560265

Luminaire Tested: FSR-12-2-LD4-2HI-40-UNV-81-88-EDD

Issue Date: 7/20/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P560265  
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-81-88-EDD  
Description: 1X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI  
LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

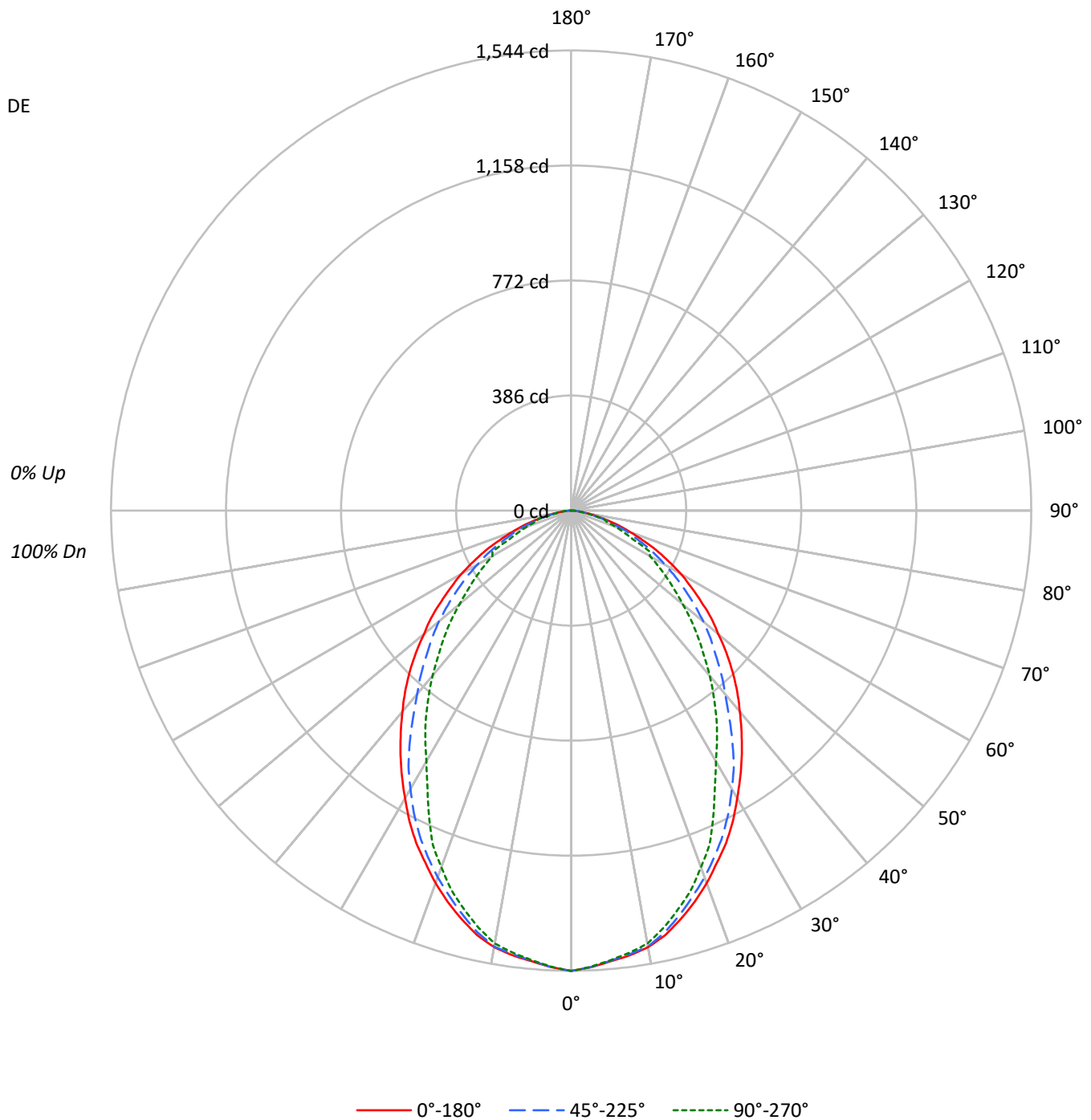
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3032.0 lumens  
Efficiency: N/A  
Efficacy: 70.2 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	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				
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°	8312	8312	8312
5°	8199	8190	8180
10°	8128	8118	8060
15°	7909	7830	7720
20°	7619	7496	7292
25°	7305	7146	6701
30°	6924	6702	6036
35°	6558	6194	5584
40°	6185	5645	5080
45°	5830	5218	4593
50°	5397	4844	4096
55°	4993	4389	3669
60°	4574	3920	3286
65°	4024	3433	2910
70°	3316	3006	2472
75°	2637	2302	2414
80°	1770	1661	1550
85°	1105	1321	1544

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 5830 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	143.8	4.7
10°-20°	394.6	13.0
20°-30°	546.2	18.0
30°-40°	582.4	19.2
40°-50°	531.4	17.5
50°-60°	416.3	13.7
60°-70°	271.3	8.9
70°-80°	120.2	4.0
80°-90°	25.8	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°	1084.6	35.8
0°-40°	1667.0	55.0
0°-60°	2614.7	86.2
0°-90°	3032.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3032.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1544	1544	1544	1544	1544	
5°	1518	1516	1516	1514	1514	144
15°	1420	1420	1405	1391	1386	399
25°	1230	1223	1203	1161	1128	565
35°	998	991	943	871	850	624
45°	766	750	686	628	604	590
55°	532	516	468	412	391	477
65°	316	298	270	275	228	311
75°	127	118	111	105	116	136
85°	18	20	21	23	25	25
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1544.5	1544.5	1544.5	1544.5	1544.5
2.5°	1533.7	1533.7	1533.7	1532.0	1532.0
5°	1517.7	1515.9	1515.9	1514.1	1514.1
7.5°	1505.2	1503.4	1501.6	1499.8	1496.3
10°	1487.3	1487.3	1485.5	1476.6	1474.8
12.5°	1458.8	1457.0	1449.8	1437.3	1433.8
15°	1419.5	1419.5	1405.2	1390.9	1385.6
17.5°	1376.6	1374.8	1357.0	1342.7	1335.6
20°	1330.2	1326.6	1308.8	1285.6	1273.1
22.5°	1278.4	1278.4	1257.0	1226.6	1214.1
25°	1230.2	1223.1	1203.4	1160.6	1128.4
27.5°	1174.9	1164.1	1142.7	1082.0	1044.5
30°	1114.2	1108.8	1078.4	999.9	971.3
32.5°	1057.0	1048.1	1016.0	933.8	910.6
35°	998.1	991.0	942.7	871.3	849.9
37.5°	939.2	930.2	869.5	812.4	785.6
40°	880.3	869.5	803.5	751.7	723.1
42.5°	824.9	810.6	746.3	691.0	658.9
45°	766.0	749.9	685.6	628.5	603.5
47.5°	707.1	692.8	633.9	574.9	546.4
50°	644.6	632.1	578.5	519.6	489.2
52.5°	592.8	573.1	521.4	462.4	437.4
55°	532.1	516.0	467.8	412.5	391.0
57.5°	476.7	460.7	416.0	364.2	346.4
60°	424.9	401.7	364.2	319.6	305.3
62.5°	367.8	350.0	317.8	280.3	298.2
65°	316.0	298.2	269.6	275.0	228.5
67.5°	258.9	250.0	225.0	200.0	192.8
70°	210.7	200.0	191.0	164.3	157.1
72.5°	167.8	157.1	144.6	130.3	125.0
75°	126.8	117.8	110.7	105.3	116.1
77.5°	87.5	83.9	78.6	73.2	71.4
80°	57.1	55.4	53.6	51.8	50.0
82.5°	33.9	33.9	33.9	33.9	33.9
85°	17.9	19.6	21.4	23.2	25.0
87.5°	10.7	10.7	12.5	14.3	16.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)