

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: P590168

Luminaire Tested: FSR-24-2-LD4-2HI-40-UNV-80-87-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590168
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-1)
Test Lab: INNOVATION CENTER
Issue Date: 12/8/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-2-LD4-2HI-40-UNV-80-87-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

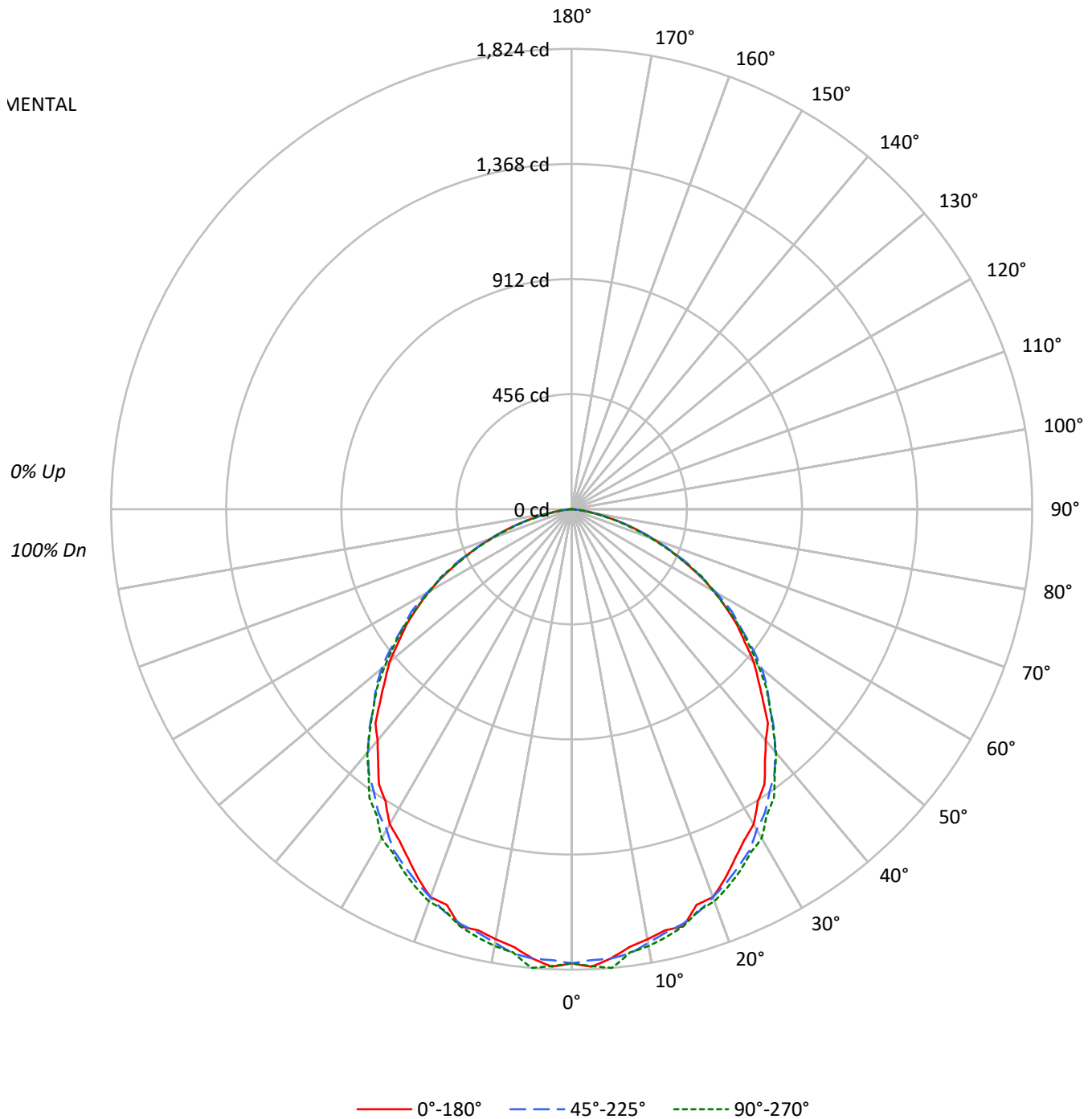
Lumens per Lamp: N/A
Luminaire Lumens: 4533.0 lumens
Efficiency: N/A
Efficacy: 104.9 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88					86				
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75					73				
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64					62				
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55					53				
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48					46				
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43					41				
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38					36				
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34					32				
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31					29				
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28					26				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4840	4840	4840
5°	4824	4826	4927
10°	4726	4767	4801
15°	4764	4738	4764
20°	4683	4683	4733
25°	4539	4638	4690
30°	4477	4555	4676
35°	4371	4486	4586
40°	4201	4403	4423
45°	4074	4219	4225
50°	3940	4118	4039
55°	3754	3827	3800
60°	3511	3546	3482
65°	3130	3210	3108
70°	2686	2695	2620
75°	2127	2122	2040
80°	1426	1385	1331
85°	775	766	716

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 4328 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	169.2	3.7
10°-20°	479.5	10.6
20°-30°	718.4	15.8
30°-40°	851.4	18.8
40°-50°	853.0	18.8
50°-60°	724.0	16.0
60°-70°	488.2	10.8
70°-80°	214.5	4.7
80°-90°	34.9	0.8
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°	1367.0	30.2
0°-40°	2218.5	48.9
0°-60°	3795.5	83.7
0°-90°	4533.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4533.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1799	1799	1799	1799	1799	
5°	1786	1782	1786	1781	1824	168
15°	1710	1690	1701	1709	1710	476
25°	1529	1537	1562	1583	1579	707
35°	1331	1335	1366	1397	1396	826
45°	1071	1090	1109	1137	1110	828
55°	800	795	816	810	810	712
65°	492	485	504	485	488	489
75°	205	200	204	190	196	219
85°	25	24	25	24	23	36
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1798.6	1798.6	1798.6	1798.6	1798.6
2.5°	1814.1	1800.4	1787.7	1802.5	1811.6
5°	1785.8	1781.6	1786.5	1781.2	1824.1
7.5°	1749.1	1765.1	1774.4	1768.6	1771.2
10°	1729.6	1724.0	1744.7	1759.1	1757.0
12.5°	1708.7	1717.1	1718.2	1733.8	1735.2
15°	1709.9	1690.1	1700.6	1709.4	1710.1
17.5°	1643.5	1664.8	1672.0	1692.2	1667.1
20°	1635.3	1619.8	1635.3	1656.0	1652.7
22.5°	1585.4	1568.0	1601.4	1619.8	1618.6
25°	1528.7	1537.1	1562.2	1582.6	1579.4
27.5°	1479.0	1488.8	1524.6	1552.7	1534.5
30°	1440.7	1435.8	1466.0	1491.1	1505.0
32.5°	1372.2	1389.9	1425.2	1450.0	1436.8
35°	1330.6	1334.6	1365.5	1397.1	1396.1
37.5°	1258.0	1276.3	1319.7	1328.6	1320.4
40°	1196.0	1214.3	1253.5	1263.1	1259.1
42.5°	1150.2	1153.5	1187.1	1198.0	1180.6
45°	1070.6	1090.5	1108.6	1137.2	1110.3
47.5°	1002.7	1012.0	1051.0	1058.7	1044.5
50°	941.2	944.5	983.7	974.2	964.9
52.5°	863.9	877.6	899.6	897.8	886.9
55°	800.2	794.9	815.8	810.2	810.0
57.5°	723.8	733.1	750.3	741.5	727.3
60°	652.3	652.6	658.8	648.8	647.0
62.5°	572.7	575.5	576.8	564.5	584.5
65°	491.6	485.1	504.2	484.9	488.1
67.5°	417.1	420.3	418.5	406.4	411.0
70°	341.4	345.6	342.5	328.8	333.0
72.5°	272.2	267.1	270.3	253.1	261.0
75°	204.6	200.4	204.1	189.7	196.2
77.5°	139.3	142.6	140.3	132.6	137.0
80°	92.0	89.4	89.4	85.0	85.9
82.5°	53.6	51.1	50.4	49.0	51.1
85°	25.1	24.4	24.8	24.2	23.2
87.5°	9.1	9.3	9.3	8.8	8.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)