

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: P560283

Luminaire Tested: FSR-12-2-LD4-2HI-40-UNV-82-94-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560283
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-82-94-EDD
Description: 1X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3523.0 lumens
Efficiency: N/A
Efficacy: 81.6 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

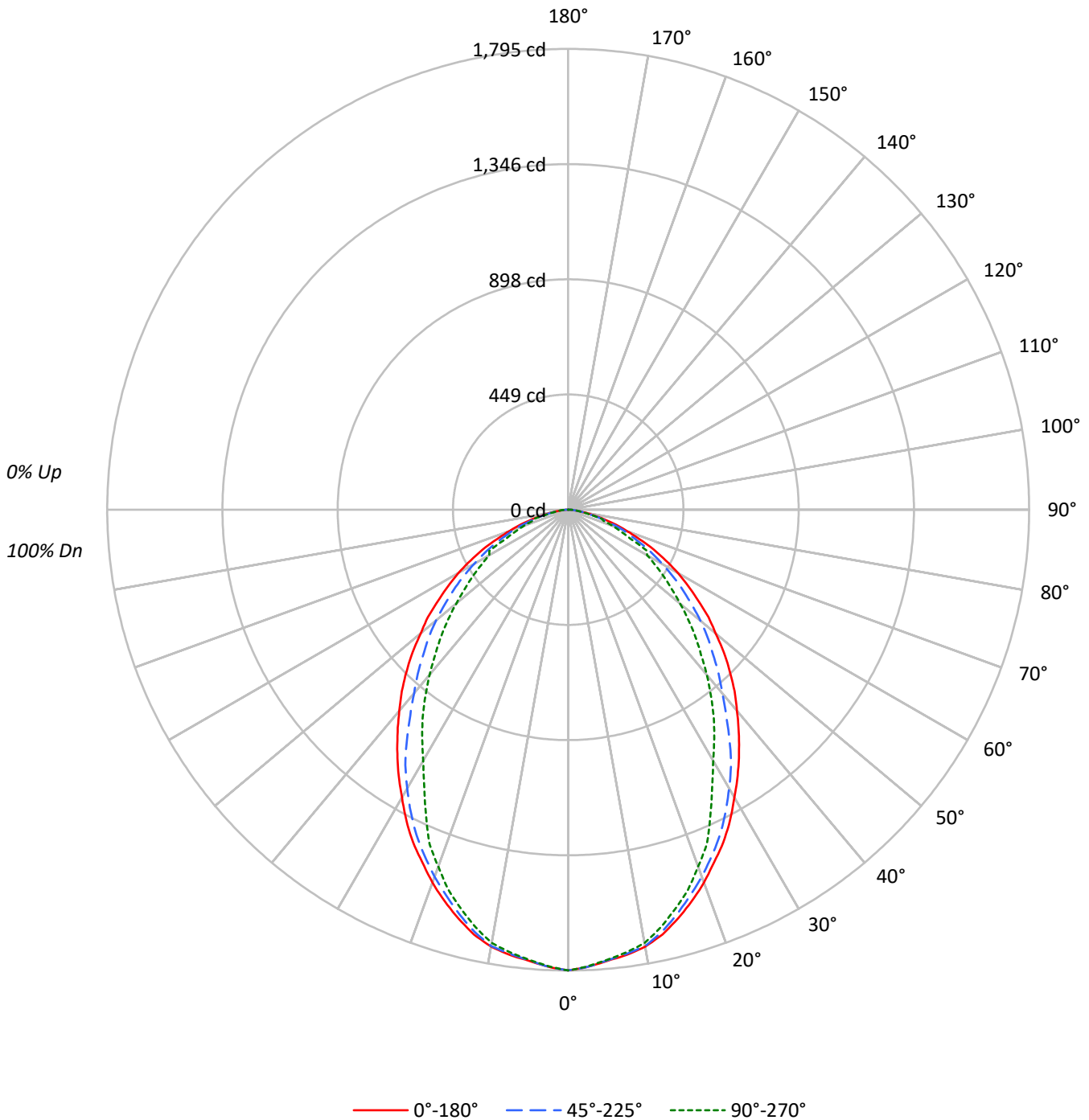
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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					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°	9658	9658	9658
5°	9527	9516	9505
10°	9445	9433	9365
15°	9190	9097	8970
20°	8852	8710	8472
25°	8488	8304	7786
30°	8045	7787	7014
35°	7619	7197	6488
40°	7186	6559	5903
45°	6774	6064	5337
50°	6270	5628	4760
55°	5801	5101	4263
60°	5315	4555	3819
65°	4676	3990	3382
70°	3852	3493	2873
75°	3063	2674	2805
80°	2058	1928	1801
85°	1278	1538	1791

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6774 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	167.1	4.7
10°-20°	458.5	13.0
20°-30°	634.7	18.0
30°-40°	676.8	19.2
40°-50°	617.4	17.5
50°-60°	483.7	13.7
60°-70°	315.3	8.9
70°-80°	139.7	4.0
80°-90°	30.0	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°	1260.2	35.8
0°-40°	1937.0	55.0
0°-60°	3038.1	86.2
0°-90°	3523.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3523.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1795	1795	1795	1795	1795	
5°	1763	1761	1761	1759	1759	167
15°	1649	1649	1633	1616	1610	464
25°	1429	1421	1398	1348	1311	656
35°	1160	1151	1095	1012	988	725
45°	890	871	797	730	701	686
55°	618	600	544	479	454	555
65°	367	346	313	320	266	362
75°	147	137	129	122	135	158
85°	21	23	25	27	29	29
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1794.6	1794.6	1794.6	1794.6	1794.6
2.5°	1782.1	1782.1	1782.1	1780.0	1780.0
5°	1763.4	1761.4	1761.4	1759.3	1759.3
7.5°	1748.9	1746.9	1744.8	1742.7	1738.6
10°	1728.2	1728.2	1726.1	1715.7	1713.7
12.5°	1695.0	1692.9	1684.6	1670.1	1665.9
15°	1649.3	1649.3	1632.7	1616.1	1609.9
17.5°	1599.6	1597.5	1576.7	1560.1	1551.8
20°	1545.6	1541.5	1520.7	1493.7	1479.2
22.5°	1485.4	1485.4	1460.6	1425.3	1410.8
25°	1429.4	1421.1	1398.3	1348.5	1311.2
27.5°	1365.1	1352.7	1327.8	1257.2	1213.7
30°	1294.6	1288.4	1253.1	1161.8	1128.6
32.5°	1228.2	1217.8	1180.5	1085.0	1058.1
35°	1159.7	1151.4	1095.4	1012.4	987.5
37.5°	1091.3	1080.9	1010.4	944.0	912.8
40°	1022.8	1010.4	933.6	873.4	840.2
42.5°	958.5	941.9	867.2	802.9	765.5
45°	890.0	871.4	796.7	730.3	701.2
47.5°	821.6	805.0	736.5	668.0	634.8
50°	748.9	734.4	672.2	603.7	568.5
52.5°	688.8	666.0	605.8	537.3	508.3
55°	618.2	599.6	543.6	479.2	454.3
57.5°	553.9	535.3	483.4	423.2	402.5
60°	493.8	466.8	423.2	371.4	354.8
62.5°	427.4	406.6	369.3	325.7	346.5
65°	367.2	346.5	313.3	319.5	265.6
67.5°	300.8	290.5	261.4	232.4	224.1
70°	244.8	232.4	222.0	190.9	182.6
72.5°	195.0	182.6	168.0	151.4	145.2
75°	147.3	136.9	128.6	122.4	134.9
77.5°	101.7	97.5	91.3	85.1	83.0
80°	66.4	64.3	62.2	60.2	58.1
82.5°	39.4	39.4	39.4	39.4	39.4
85°	20.7	22.8	24.9	27.0	29.0
87.5°	12.4	12.4	14.5	16.6	18.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)