

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: P562736

Luminaire Tested: FSR-24-4-LD4-2LO-40-UNV-80-84-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562736
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-LD4-2LO-40-UNV-80-84-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRON
SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4946.0 lumens
Efficiency: N/A
Efficacy: 105.7 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

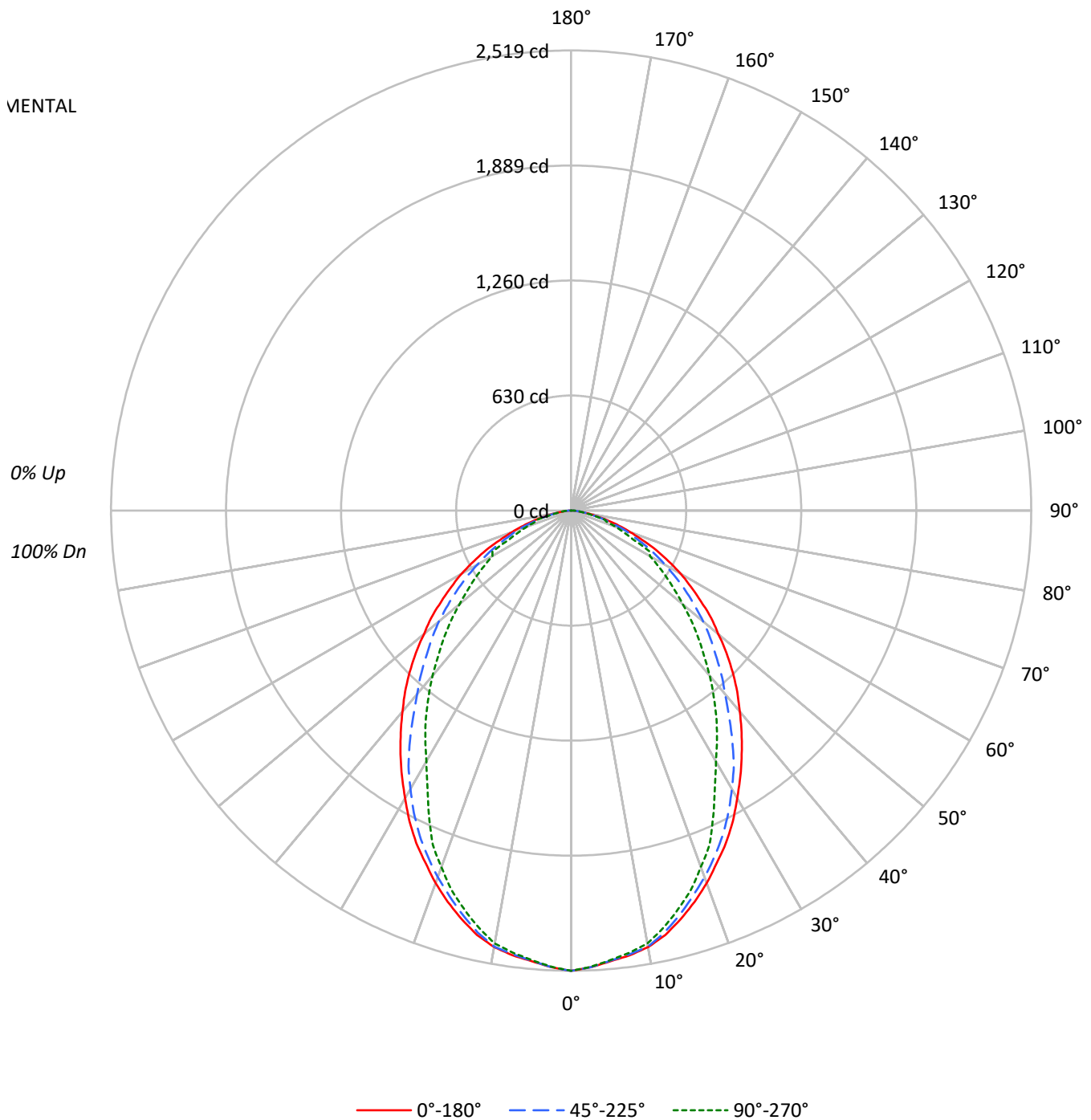
Input Watts (W): 46.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	3390	3390	3390
5°	3344	3340	3336
10°	3315	3311	3287
15°	3225	3193	3148
20°	3107	3057	2974
25°	2979	2914	2733
30°	2824	2733	2462
35°	2674	2526	2277
40°	2522	2302	2072
45°	2378	2128	1873
50°	2201	1975	1671
55°	2036	1790	1496
60°	1865	1599	1340
65°	1641	1400	1187
70°	1352	1226	1008
75°	1075	939	984
80°	722	677	632
85°	449	540	630

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2378 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	234.5	4.7
10°-20°	643.6	13.0
20°-30°	891.1	18.0
30°-40°	950.1	19.2
40°-50°	866.8	17.5
50°-60°	679.1	13.7
60°-70°	442.6	8.9
70°-80°	196.1	4.0
80°-90°	42.1	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°	1769.2	35.8
0°-40°	2719.4	55.0
0°-60°	4265.3	86.2
0°-90°	4946.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4946.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2519	2519	2519	2519	2519	
5°	2476	2473	2473	2470	2470	235
15°	2316	2316	2292	2269	2260	651
25°	2007	1995	1963	1893	1841	921
35°	1628	1616	1538	1421	1386	1018
45°	1250	1223	1118	1025	984	962
55°	868	842	763	673	638	779
65°	516	486	440	448	373	508
75°	207	192	181	172	189	222
85°	29	32	35	38	41	40
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2519.4	2519.4	2519.4	2519.4	2519.4
2.5°	2502.0	2502.0	2502.0	2499.0	2499.0
5°	2475.7	2472.8	2472.8	2469.9	2469.9
7.5°	2455.3	2452.4	2449.5	2446.6	2440.8
10°	2426.2	2426.2	2423.3	2408.7	2405.8
12.5°	2379.6	2376.7	2365.1	2344.7	2338.8
15°	2315.5	2315.5	2292.2	2268.9	2260.2
17.5°	2245.6	2242.7	2213.6	2190.3	2178.6
20°	2169.9	2164.1	2135.0	2097.1	2076.7
22.5°	2085.4	2085.4	2050.5	2001.0	1980.6
25°	2006.8	1995.2	1963.1	1893.2	1840.8
27.5°	1916.5	1899.0	1864.1	1765.1	1703.9
30°	1817.5	1808.7	1759.2	1631.1	1584.5
32.5°	1724.3	1709.7	1657.3	1523.3	1485.4
35°	1628.2	1616.5	1537.9	1421.4	1386.4
37.5°	1532.0	1517.5	1418.5	1325.2	1281.6
40°	1435.9	1418.5	1310.7	1226.2	1179.6
42.5°	1345.6	1322.3	1217.5	1127.2	1074.8
45°	1249.5	1223.3	1118.5	1025.2	984.5
47.5°	1153.4	1130.1	1034.0	937.9	891.3
50°	1051.5	1031.1	943.7	847.6	798.1
52.5°	967.0	935.0	850.5	754.4	713.6
55°	868.0	841.8	763.1	672.8	637.9
57.5°	777.7	751.5	678.6	594.2	565.1
60°	693.2	655.3	594.2	521.4	498.1
62.5°	600.0	570.9	518.4	457.3	486.4
65°	515.5	486.4	439.8	448.5	372.8
67.5°	422.3	407.8	367.0	326.2	314.6
70°	343.7	326.2	311.7	268.0	256.3
72.5°	273.8	256.3	235.9	212.6	203.9
75°	206.8	192.2	180.6	171.8	189.3
77.5°	142.7	136.9	128.2	119.4	116.5
80°	93.2	90.3	87.4	84.5	81.6
82.5°	55.3	55.3	55.3	55.3	55.3
85°	29.1	32.0	35.0	37.9	40.8
87.5°	17.5	17.5	20.4	23.3	26.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)