

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: P562065

Luminaire Tested: FSR-24-4-LD4-1HI-40-UNV-82-84-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562065
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-LD4-1HI-40-UNV-82-84-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4496.0 lumens
Efficiency: N/A
Efficacy: 104.1 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

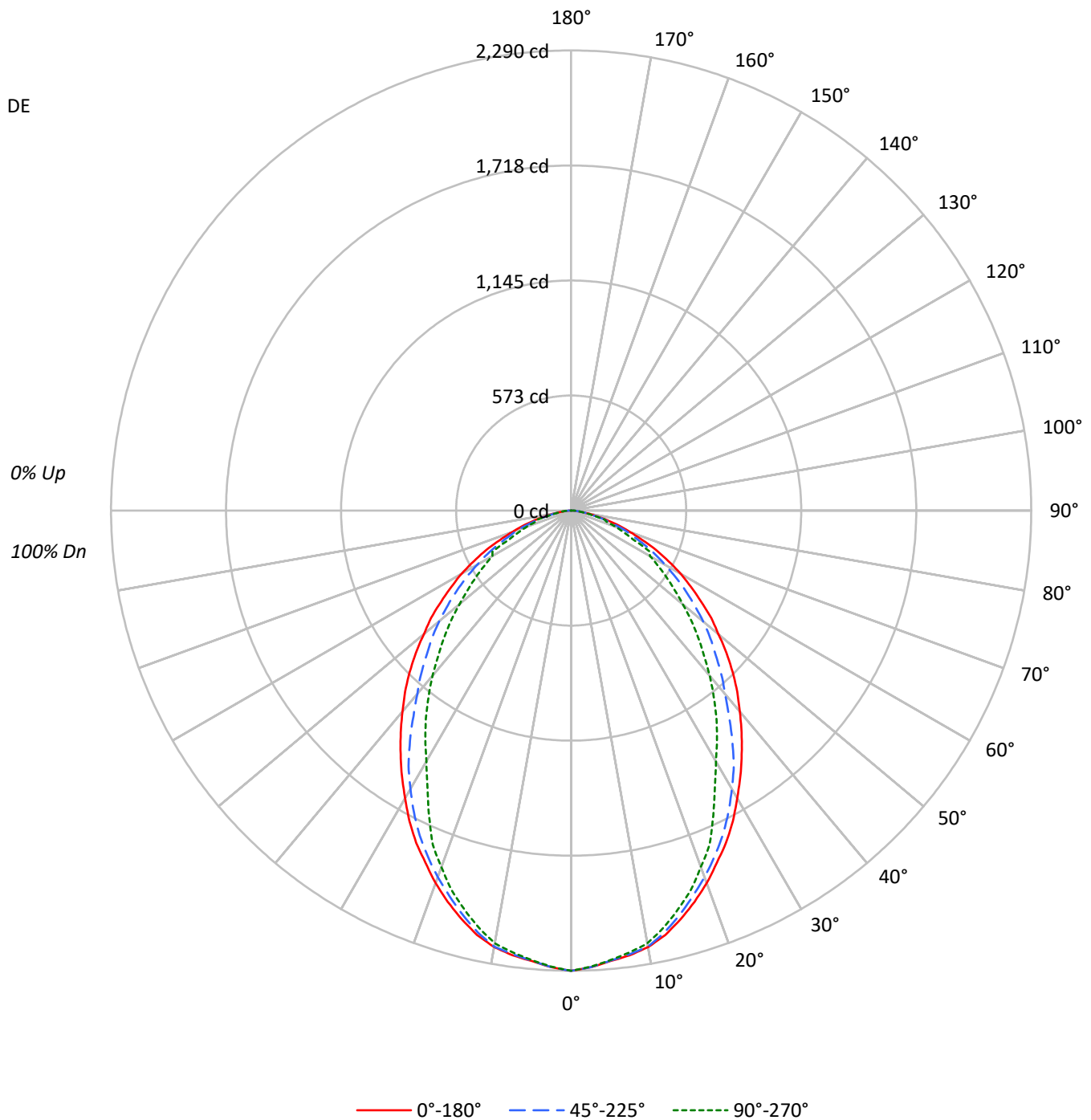
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	3081	3081	3081
5°	3040	3036	3032
10°	3013	3010	2988
15°	2932	2902	2862
20°	2824	2779	2703
25°	2708	2649	2484
30°	2567	2485	2238
35°	2431	2296	2070
40°	2293	2093	1883
45°	2161	1935	1703
50°	2001	1796	1519
55°	1851	1627	1360
60°	1696	1453	1218
65°	1492	1273	1079
70°	1229	1114	917
75°	977	854	895
80°	656	615	574
85°	409	491	573

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2161 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	213.2	4.7
10°-20°	585.1	13.0
20°-30°	810.0	18.0
30°-40°	863.7	19.2
40°-50°	787.9	17.5
50°-60°	617.3	13.7
60°-70°	402.3	8.9
70°-80°	178.2	4.0
80°-90°	38.3	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°	1608.3	35.8
0°-40°	2472.0	55.0
0°-60°	3877.2	86.2
0°-90°	4496.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4496.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2290	2290	2290	2290	2290	
5°	2250	2248	2248	2245	2245	214
15°	2105	2105	2084	2062	2055	592
25°	1824	1814	1784	1721	1673	837
35°	1480	1469	1398	1292	1260	925
45°	1136	1112	1017	932	895	875
55°	789	765	694	612	580	708
65°	469	442	400	408	339	462
75°	188	175	164	156	172	201
85°	26	29	32	34	37	37
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2290.2	2290.2	2290.2	2290.2	2290.2
2.5°	2274.3	2274.3	2274.3	2271.7	2271.7
5°	2250.5	2247.8	2247.8	2245.2	2245.2
7.5°	2232.0	2229.3	2226.7	2224.0	2218.7
10°	2205.5	2205.5	2202.8	2189.6	2186.9
12.5°	2163.1	2160.5	2149.9	2131.3	2126.0
15°	2104.9	2104.9	2083.7	2062.5	2054.6
17.5°	2041.3	2038.7	2012.2	1991.0	1980.4
20°	1972.5	1967.2	1940.7	1906.3	1887.8
22.5°	1895.7	1895.7	1863.9	1818.9	1800.4
25°	1824.2	1813.6	1784.5	1721.0	1673.3
27.5°	1742.1	1726.3	1694.5	1604.5	1548.9
30°	1652.1	1644.2	1599.2	1482.7	1440.3
32.5°	1567.4	1554.2	1506.5	1384.7	1350.3
35°	1480.0	1469.4	1398.0	1292.0	1260.3
37.5°	1392.7	1379.4	1289.4	1204.7	1165.0
40°	1305.3	1289.4	1191.4	1114.7	1072.3
42.5°	1223.2	1202.0	1106.7	1024.6	977.0
45°	1135.8	1112.0	1016.7	932.0	894.9
47.5°	1048.5	1027.3	939.9	852.5	810.2
50°	955.8	937.3	857.8	770.5	725.5
52.5°	879.0	849.9	773.1	685.7	648.7
55°	789.0	765.2	693.7	611.6	579.8
57.5°	706.9	683.1	616.9	540.1	513.6
60°	630.1	595.7	540.1	473.9	452.7
62.5°	545.4	518.9	471.3	415.7	442.2
65°	468.6	442.2	399.8	407.7	338.9
67.5°	383.9	370.7	333.6	296.5	285.9
70°	312.4	296.5	283.3	243.6	233.0
72.5°	248.9	233.0	214.5	193.3	185.3
75°	188.0	174.7	164.2	156.2	172.1
77.5°	129.7	124.4	116.5	108.6	105.9
80°	84.7	82.1	79.4	76.8	74.1
82.5°	50.3	50.3	50.3	50.3	50.3
85°	26.5	29.1	31.8	34.4	37.1
87.5°	15.9	15.9	18.5	21.2	23.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)