

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: P589860

Luminaire Tested: FSR-24-2-LD4-1HI-35-UNV-81-97-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P589860
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-LD4-1HI-35-UNV-81-97-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2173.0 lumens
Efficiency: N/A
Efficacy: 100.6 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

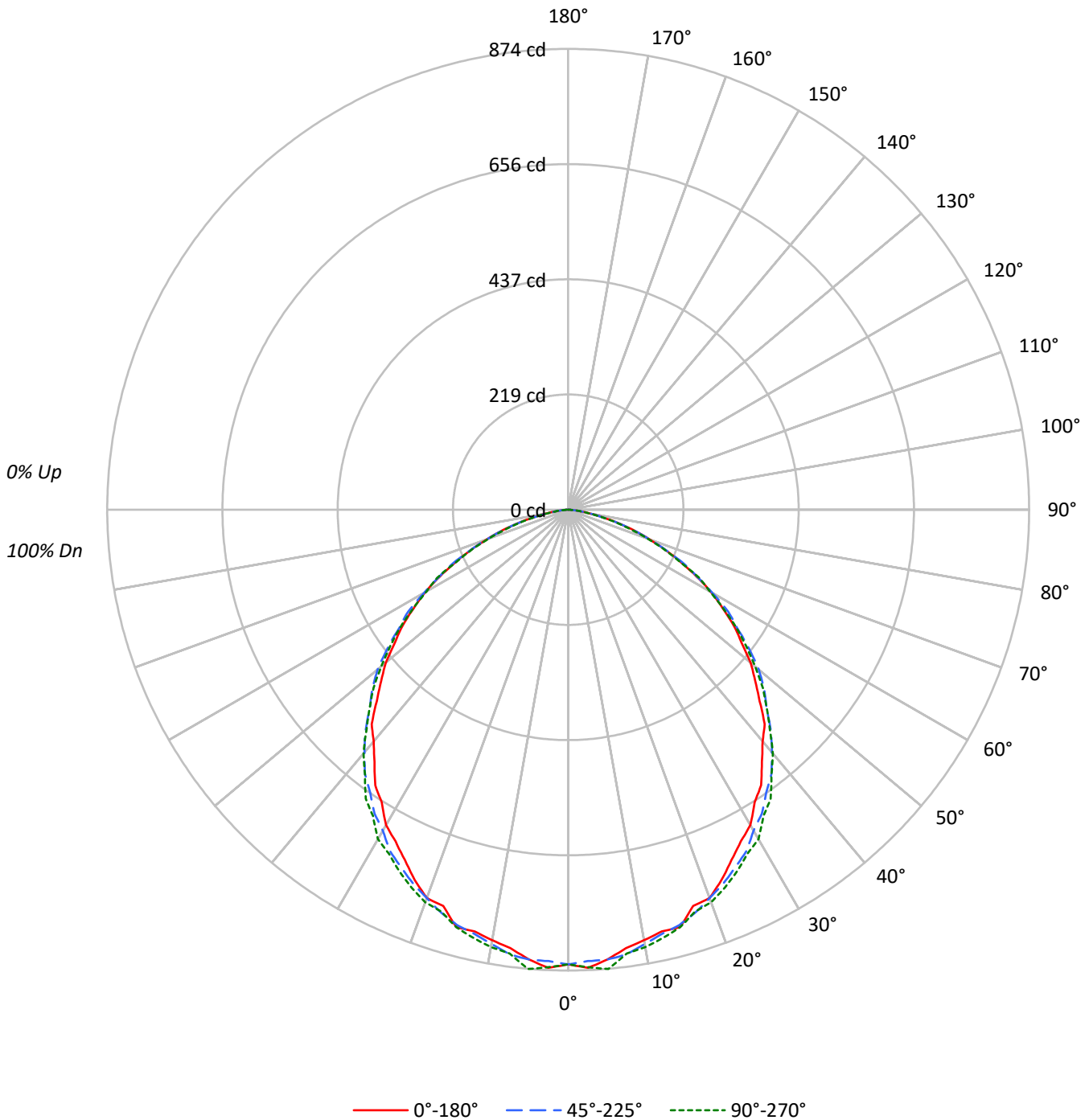
Input Watts (W): 21.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2320	2320	2320
5°	2313	2313	2362
10°	2266	2285	2302
15°	2284	2271	2284
20°	2245	2245	2269
25°	2176	2224	2248
30°	2146	2184	2242
35°	2096	2150	2199
40°	2014	2111	2120
45°	1953	2023	2025
50°	1889	1974	1936
55°	1800	1835	1822
60°	1683	1700	1669
65°	1501	1539	1490
70°	1287	1292	1256
75°	1020	1018	978
80°	683	665	638
85°	371	367	343

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 2074 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.1	3.7
10°-20°	229.9	10.6
20°-30°	344.4	15.8
30°-40°	408.1	18.8
40°-50°	408.9	18.8
50°-60°	347.1	16.0
60°-70°	234.0	10.8
70°-80°	102.8	4.7
80°-90°	16.7	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°	655.3	30.2
0°-40°	1063.5	48.9
0°-60°	1819.5	83.7
0°-90°	2173.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2173.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	862	862	862	862	862	
5°	856	854	856	854	874	81
15°	820	810	815	819	820	228
25°	733	737	749	759	757	339
35°	638	640	655	670	669	396
45°	513	523	532	545	532	397
55°	384	381	391	388	388	341
65°	236	233	242	232	234	234
75°	98	96	98	91	94	105
85°	12	12	12	12	11	17
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	862.2	862.2	862.2	862.2	862.2
2.5°	869.7	863.1	857.0	864.1	868.4
5°	856.1	854.1	856.4	853.8	874.4
7.5°	838.5	846.2	850.6	847.8	849.1
10°	829.1	826.5	836.4	843.3	842.3
12.5°	819.1	823.1	823.7	831.1	831.8
15°	819.7	810.2	815.2	819.4	819.8
17.5°	787.8	798.1	801.5	811.2	799.2
20°	783.9	776.5	783.9	793.8	792.3
22.5°	760.0	751.6	767.7	776.5	775.9
25°	732.8	736.8	748.9	758.7	757.1
27.5°	709.0	713.7	730.8	744.3	735.6
30°	690.6	688.3	702.8	714.8	721.5
32.5°	657.8	666.3	683.2	695.1	688.8
35°	637.9	639.8	654.6	669.7	669.3
37.5°	603.0	611.8	632.6	636.9	633.0
40°	573.3	582.1	600.9	605.5	603.6
42.5°	551.4	552.9	569.1	574.3	566.0
45°	513.2	522.8	531.5	545.1	532.2
47.5°	480.7	485.1	503.8	507.5	500.7
50°	451.2	452.7	471.6	467.0	462.5
52.5°	414.1	420.7	431.3	430.4	425.1
55°	383.6	381.1	391.1	388.4	388.3
57.5°	347.0	351.4	359.7	355.5	348.7
60°	312.7	312.8	315.8	311.0	310.1
62.5°	274.5	275.9	276.5	270.6	280.2
65°	235.7	232.6	241.7	232.4	234.0
67.5°	199.9	201.5	200.6	194.8	197.0
70°	163.6	165.6	164.2	157.6	159.6
72.5°	130.5	128.0	129.6	121.3	125.1
75°	98.1	96.1	97.9	91.0	94.1
77.5°	66.8	68.4	67.2	63.6	65.7
80°	44.1	42.9	42.9	40.7	41.2
82.5°	25.7	24.5	24.2	23.5	24.5
85°	12.0	11.7	11.9	11.6	11.1
87.5°	4.3	4.5	4.5	4.2	4.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)