

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P308138

Luminaire Tested: **22FCZ2-24HE-UNV-L82765-HRP-CP187-W2A-U-5500K**

Issue Date: 3/3/2020

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.

Test Information

Test Method: LM-79-08
Report Number: P308138
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-22)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 22FCZ2-24HE-UNV-L82765-HRP-CP187-W2A-U-5500K
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.187"
POLYCARB SHEET
Light Source: (168) 3000K TUNABLE CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment:

<u>Sample No.</u>	<u>Condition</u>	<u>Description</u>
AS-5443-1	Good	WHITE TWIN R-EVOLVE FLOOD
AS-5443-2	Good	REFLECTOR
AS-5443-3	Good	DRIVER
AS-5443-4	Good	UPPER MODULE
AS-5443-5	Good	LENS
AS-5443-6	Good	DRIVER 2
AS-5443-7	Good	TRIM RING

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1659.0 lumens
Efficiency: N/A
Efficacy: 85.5 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

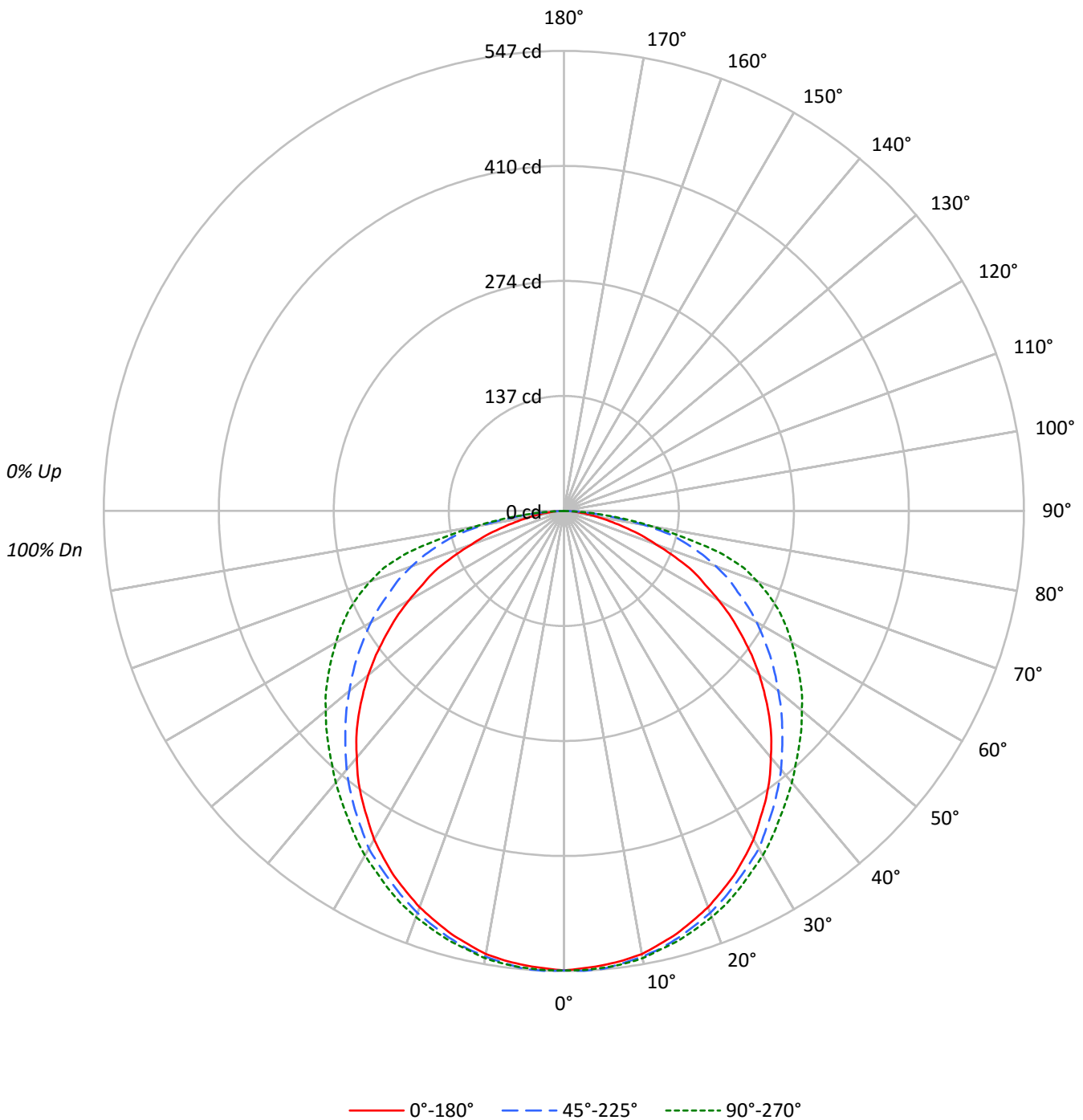
Input Watts (W): 19.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P308138

CATALOG NUMBER: 22FCZ2-24HE-UNV-L82765-HRP-CP187-W2A-U-5500K

Luminous Intensity Polar Plot





TEST NUMBER: P308138

CATALOG NUMBER: 22FCZ2-24HE-UNV-L82765-HRP-CP187-W2A-U-5500K

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	108	103	98	94	105	101	96	93	96	93	90	92	90	87	89	87	84	82
2	98	89	82	76	95	87	80	75	84	78	73	80	75	71	77	73	70	68
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	59	52	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	50	43	38	49	43	38	36
7	64	50	41	34	62	49	40	34	47	40	34	46	39	34	44	38	33	31
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1470	1470	1470
5°	1464	1476	1473
10°	1461	1470	1476
15°	1449	1464	1472
20°	1436	1456	1471
25°	1420	1445	1470
30°	1402	1441	1470
35°	1375	1423	1468
40°	1345	1412	1482
45°	1314	1398	1506
50°	1271	1393	1546
55°	1213	1404	1605
60°	1143	1425	1684
65°	1079	1452	1799
70°	922	1515	1927
75°	773	1577	2002
80°	632	1525	1671
85°	550	1130	1229



TEST NUMBER: P308138

CATALOG NUMBER: 22FCZ2-24HE-UNV-L82765-HRP-CP187-W2A-U-5500K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	51.8	3.1
10°-20°	148.1	8.9
20°-30°	224.5	13.5
30°-40°	271.0	16.3
40°-50°	284.8	17.2
50°-60°	268.0	16.2
60°-70°	223.4	13.5
70°-80°	148.0	8.9
80°-90°	39.5	2.4
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°	424.3	25.6
0°-40°	695.4	41.9
0°-60°	1248.1	75.2
0°-90°	1659.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1659.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	546	546	546	546	546	
5°	542	543	546	546	545	52
15°	520	522	525	528	528	147
25°	478	481	487	493	495	220
35°	419	423	433	443	447	262
45°	345	351	367	386	396	266
55°	258	270	299	330	342	231
65°	170	184	228	266	283	165
75°	74	104	152	183	193	81
85°	18	27	37	40	40	21
90°	0	0	0	0	0	



TEST NUMBER: P308138

CATALOG NUMBER: 22FC22-24HE-UNV-L82765-HRP-CP187-W2A-U-5500K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	546.3	546.3	546.3	546.3	546.3
2.5°	544.2	545.2	547.3	547.3	546.3
5°	542.1	543.2	546.3	546.3	545.2
7.5°	539.0	540.0	542.1	544.2	543.2
10°	534.8	535.8	537.9	540.0	540.0
12.5°	527.5	528.5	532.7	533.7	533.7
15°	520.1	522.2	525.4	527.5	528.5
17.5°	510.7	512.8	517.0	521.2	521.2
20°	501.3	503.4	508.6	512.8	513.8
22.5°	489.8	492.9	498.1	503.4	505.5
25°	478.3	481.4	486.6	492.9	495.0
27.5°	464.7	467.8	475.1	482.5	483.5
30°	451.1	454.2	463.6	469.9	473.0
32.5°	434.3	438.5	447.9	457.3	460.5
35°	418.6	422.8	433.3	442.7	446.9
37.5°	401.9	406.1	417.6	429.1	434.3
40°	383.0	388.3	401.9	414.4	421.8
42.5°	365.2	370.5	384.1	400.8	408.1
45°	345.4	350.6	367.3	386.2	395.6
47.5°	324.4	330.7	350.6	373.6	383.0
50°	303.5	310.8	332.8	359.0	369.4
52.5°	281.5	290.9	316.1	344.3	356.9
55°	258.5	270.0	299.3	329.7	342.2
57.5°	236.5	247.0	281.5	314.0	327.6
60°	212.4	226.1	264.8	298.3	312.9
62.5°	189.4	204.1	247.0	282.6	298.3
65°	169.5	184.2	228.1	265.8	282.6
67.5°	143.4	163.3	212.4	248.0	264.8
70°	117.2	144.4	192.6	229.2	244.9
72.5°	97.3	123.5	172.7	209.3	224.0
75°	74.3	103.6	151.7	183.1	192.6
77.5°	55.5	85.8	129.8	145.5	146.5
80°	40.8	65.9	98.4	103.6	107.8
82.5°	28.3	46.0	63.8	70.1	72.2
85°	17.8	27.2	36.6	39.8	39.8
87.5°	9.4	10.5	12.6	12.6	12.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)