

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: P312480

Luminaire Tested: **22FCZ2-24HE-UNV-L83050-HRP-CP187-W2A-U-3000K**

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: P312480
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-L83050-HRP-CP187-W2A-U-3000K
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: 1563.0 lumens
Efficiency: N/A
Efficacy: 82.7 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

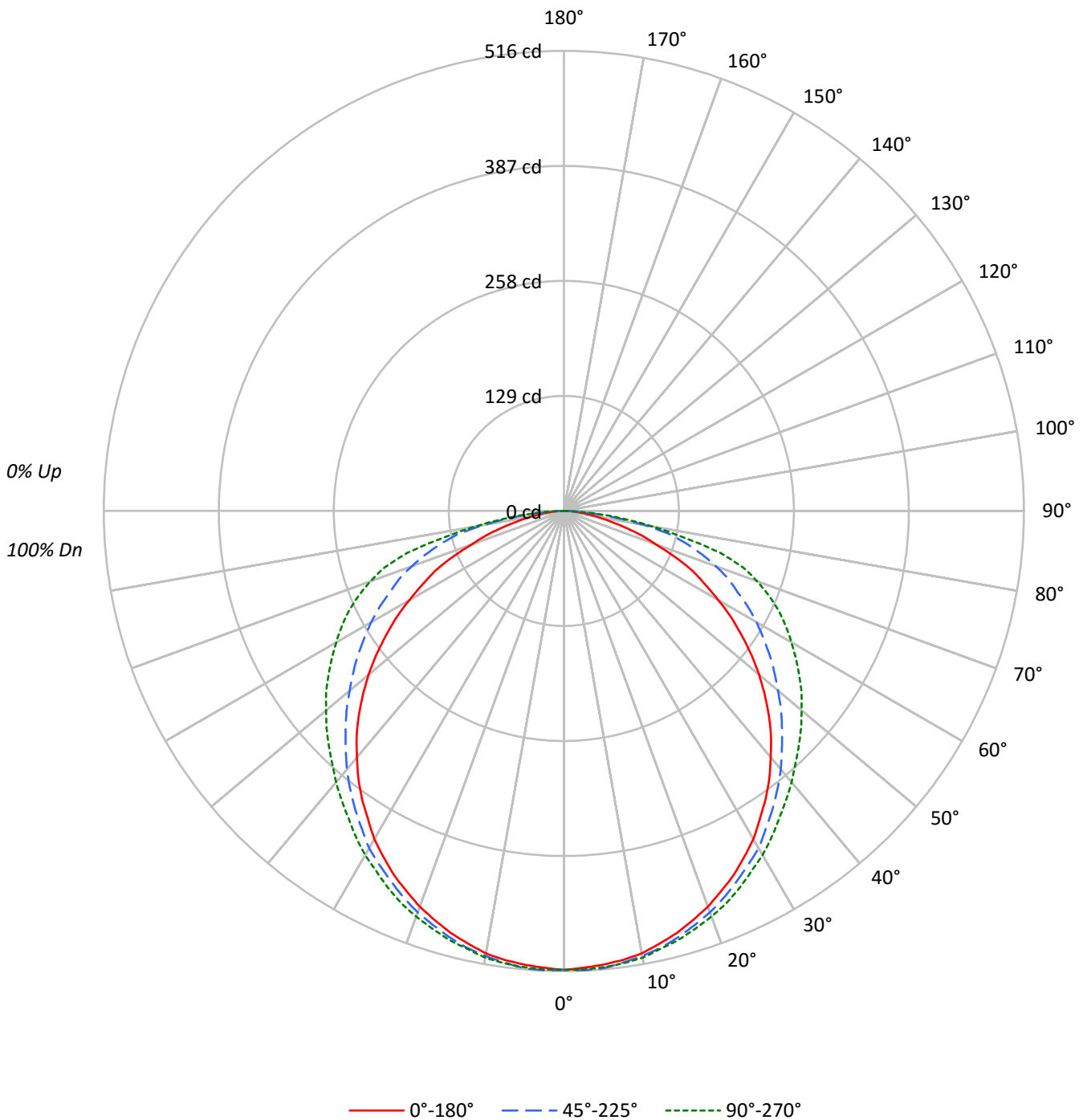
Input Watts (W): 18.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P312480

CATALOG NUMBER: 22FCZ2-24HE-UNV-L83050-HRP-CP187-W2A-U-3000K

Luminous Intensity Polar Plot





TEST NUMBER: P312480

CATALOG NUMBER: 22FCZ2-24HE-UNV-L83050-HRP-CP187-W2A-U-3000K

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°	1385	1385	1385
5°	1380	1390	1388
10°	1377	1385	1390
15°	1365	1379	1387
20°	1353	1372	1386
25°	1338	1361	1385
30°	1321	1357	1385
35°	1296	1341	1383
40°	1268	1330	1396
45°	1238	1317	1418
50°	1197	1312	1457
55°	1142	1323	1513
60°	1077	1343	1587
65°	1017	1368	1695
70°	869	1427	1815
75°	728	1487	1886
80°	597	1437	1574
85°	519	1065	1158



TEST NUMBER: P312480

CATALOG NUMBER: 22FCZ2-24HE-UNV-L83050-HRP-CP187-W2A-U-3000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	48.8	3.1
10°-20°	139.5	8.9
20°-30°	211.5	13.5
30°-40°	255.3	16.3
40°-50°	268.3	17.2
50°-60°	252.4	16.2
60°-70°	210.5	13.5
70°-80°	139.5	8.9
80°-90°	37.2	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°	399.8	25.6
0°-40°	655.1	41.9
0°-60°	1175.9	75.2
0°-90°	1563.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1563.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	515	515	515	515	515	
5°	511	512	515	515	514	49
15°	490	492	495	497	498	138
25°	451	454	458	464	466	207
35°	394	398	408	417	421	247
45°	325	330	346	364	373	251
55°	244	254	282	311	322	218
65°	160	174	215	250	266	155
75°	70	98	143	172	181	76
85°	17	26	34	38	38	19
90°	0	0	0	0	0	



TEST NUMBER: P312480

CATALOG NUMBER: 22FC22-24HE-UNV-L83050-HRP-CP187-W2A-U-3000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	514.7	514.7	514.7	514.7	514.7
2.5°	512.7	513.7	515.7	515.7	514.7
5°	510.7	511.7	514.7	514.7	513.7
7.5°	507.8	508.8	510.7	512.7	511.7
10°	503.8	504.8	506.8	508.8	508.8
12.5°	496.9	497.9	501.9	502.8	502.8
15°	490.0	492.0	495.0	496.9	497.9
17.5°	481.2	483.1	487.1	491.0	491.0
20°	472.3	474.3	479.2	483.1	484.1
22.5°	461.4	464.4	469.3	474.3	476.2
25°	450.6	453.5	458.5	464.4	466.4
27.5°	437.8	440.7	447.6	454.5	455.5
30°	425.0	427.9	436.8	442.7	445.7
32.5°	409.2	413.1	422.0	430.9	433.8
35°	394.4	398.3	408.2	417.1	421.0
37.5°	378.6	382.6	393.4	404.2	409.2
40°	360.9	365.8	378.6	390.4	397.3
42.5°	344.1	349.0	361.9	377.6	384.5
45°	325.4	330.3	346.1	363.8	372.7
47.5°	305.7	311.6	330.3	352.0	360.9
50°	285.9	292.8	313.5	338.2	348.0
52.5°	265.2	274.1	297.8	324.4	336.2
55°	243.5	254.4	282.0	310.6	322.4
57.5°	222.8	232.7	265.2	295.8	308.6
60°	200.2	213.0	249.5	281.0	294.8
62.5°	178.5	192.3	232.7	266.2	281.0
65°	159.7	173.5	214.9	250.4	266.2
67.5°	135.1	153.8	200.2	233.7	249.5
70°	110.4	136.1	181.4	215.9	230.7
72.5°	91.7	116.3	162.7	197.2	211.0
75°	70.0	97.6	143.0	172.5	181.4
77.5°	52.3	80.8	122.3	137.1	138.0
80°	38.5	62.1	92.7	97.6	101.6
82.5°	26.6	43.4	60.1	66.1	68.0
85°	16.8	25.6	34.5	37.5	37.5
87.5°	8.9	9.9	11.8	11.8	11.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)