

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: P310203

Luminaire Tested: **24FCZ2-50HE-UNV-L82765-RDP-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: P310203
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-50HE-UNV-L82765-RDP-CP187-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" POLYCARB SHEET
Light Source: (336) 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: 2730.0 lumens
Efficiency: N/A
Efficacy: 71.7 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

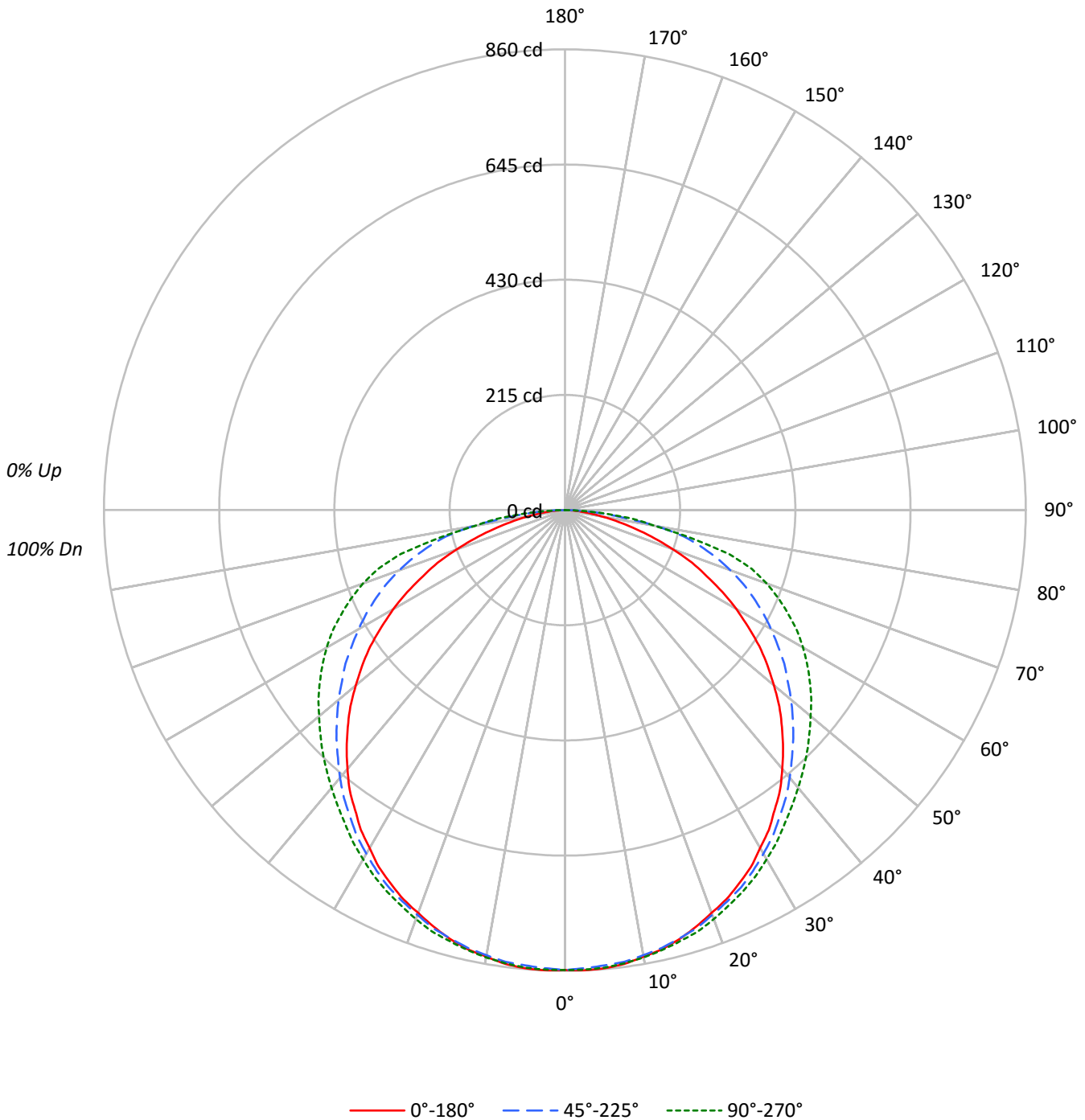
Input Watts (W): 38.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P310203

CATALOG NUMBER: 24FCZ2-50HE-UNV-L82765-RDP-CP187-W2A-U-3000K

Luminous Intensity Polar Plot





TEST NUMBER: P310203

CATALOG NUMBER: 24FCZ2-50HE-UNV-L82765-RDP-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	100	96	92	96	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1155	1155	1155
5°	1160	1152	1158
10°	1156	1153	1158
15°	1154	1153	1160
20°	1146	1152	1163
25°	1142	1154	1166
30°	1132	1151	1170
35°	1121	1148	1174
40°	1108	1146	1189
45°	1090	1147	1216
50°	1066	1154	1253
55°	1039	1172	1309
60°	995	1195	1381
65°	931	1237	1466
70°	847	1294	1577
75°	718	1366	1647
80°	566	1375	1333
85°	418	1045	1170



TEST NUMBER: P310203

CATALOG NUMBER: 24FCZ2-50HE-UNV-L82765-RDP-CP187-W2A-U-3000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.4	3.0
10°-20°	234.4	8.6
20°-30°	358.4	13.1
30°-40°	438.2	16.0
40°-50°	467.0	17.1
50°-60°	446.5	16.4
60°-70°	378.2	13.9
70°-80°	254.2	9.3
80°-90°	71.7	2.6
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°	674.2	24.7
0°-40°	1112.4	40.7
0°-60°	2025.9	74.2
0°-90°	2730.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2730.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	858	858	858	858	858	
5°	858	857	853	857	857	82
15°	829	829	827	834	833	234
25°	769	772	777	784	785	354
35°	682	688	699	712	715	428
45°	573	582	603	628	639	442
55°	443	459	500	539	558	394
65°	292	322	389	440	460	290
75°	138	188	263	307	317	148
85°	27	56	68	73	76	34
90°	0	0	0	0	0	



TEST NUMBER: P310203

CATALOG NUMBER: 24FCZ2-50HE-UNV-L82765-RDP-CP187-W2A-U-3000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	858.5	858.5	858.5	858.5	858.5
2.5°	859.9	859.9	855.8	858.5	858.5
5°	858.5	857.2	853.1	857.2	857.2
7.5°	854.4	853.1	850.4	854.4	853.1
10°	846.3	846.3	843.6	847.7	847.7
12.5°	839.5	838.2	836.8	842.3	840.9
15°	828.7	828.7	827.4	834.1	832.8
17.5°	815.2	816.5	817.9	823.3	824.7
20°	800.3	803.0	804.3	812.5	812.5
22.5°	786.7	788.1	790.8	798.9	798.9
25°	769.1	771.8	777.3	784.0	785.4
27.5°	751.5	752.9	759.7	769.1	770.5
30°	728.5	732.6	740.7	751.5	752.9
32.5°	708.2	712.3	721.7	732.6	735.3
35°	682.5	687.9	698.7	712.3	715.0
37.5°	659.5	663.5	677.1	692.0	696.0
40°	631.0	639.1	652.7	670.3	677.1
42.5°	602.6	610.7	627.0	650.0	658.1
45°	572.8	582.3	602.6	628.3	639.1
47.5°	543.0	553.8	576.9	606.6	618.8
50°	509.1	522.7	551.1	585.0	598.5
52.5°	476.6	492.9	524.0	562.0	579.6
55°	442.8	459.0	499.7	538.9	557.9
57.5°	404.9	426.5	471.2	515.9	536.2
60°	369.7	390.0	444.1	492.9	513.2
62.5°	331.8	358.8	417.1	468.5	488.8
65°	292.5	322.3	388.6	440.1	460.4
67.5°	257.3	289.8	360.2	411.7	432.0
70°	215.3	255.9	329.0	380.5	400.8
72.5°	176.0	220.7	296.6	346.7	365.6
75°	138.1	188.2	262.7	307.4	316.9
77.5°	102.9	155.7	227.5	246.4	239.7
80°	73.1	124.6	177.4	167.9	172.0
82.5°	47.4	94.8	109.7	124.6	128.6
85°	27.1	55.5	67.7	73.1	75.8
87.5°	12.2	20.3	27.1	27.1	25.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)