

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: P310520

Luminaire Tested: **24FCZ2-30HE-UNV-L82765-CP187-W2A-U-4000K**

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: P310520
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-15)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-30HE-UNV-L82765-CP187-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.187" POLYCARB SHEET
Light Source: (336) 4000K 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: 2621.0 lumens
Efficiency: N/A
Efficacy: 123.1 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

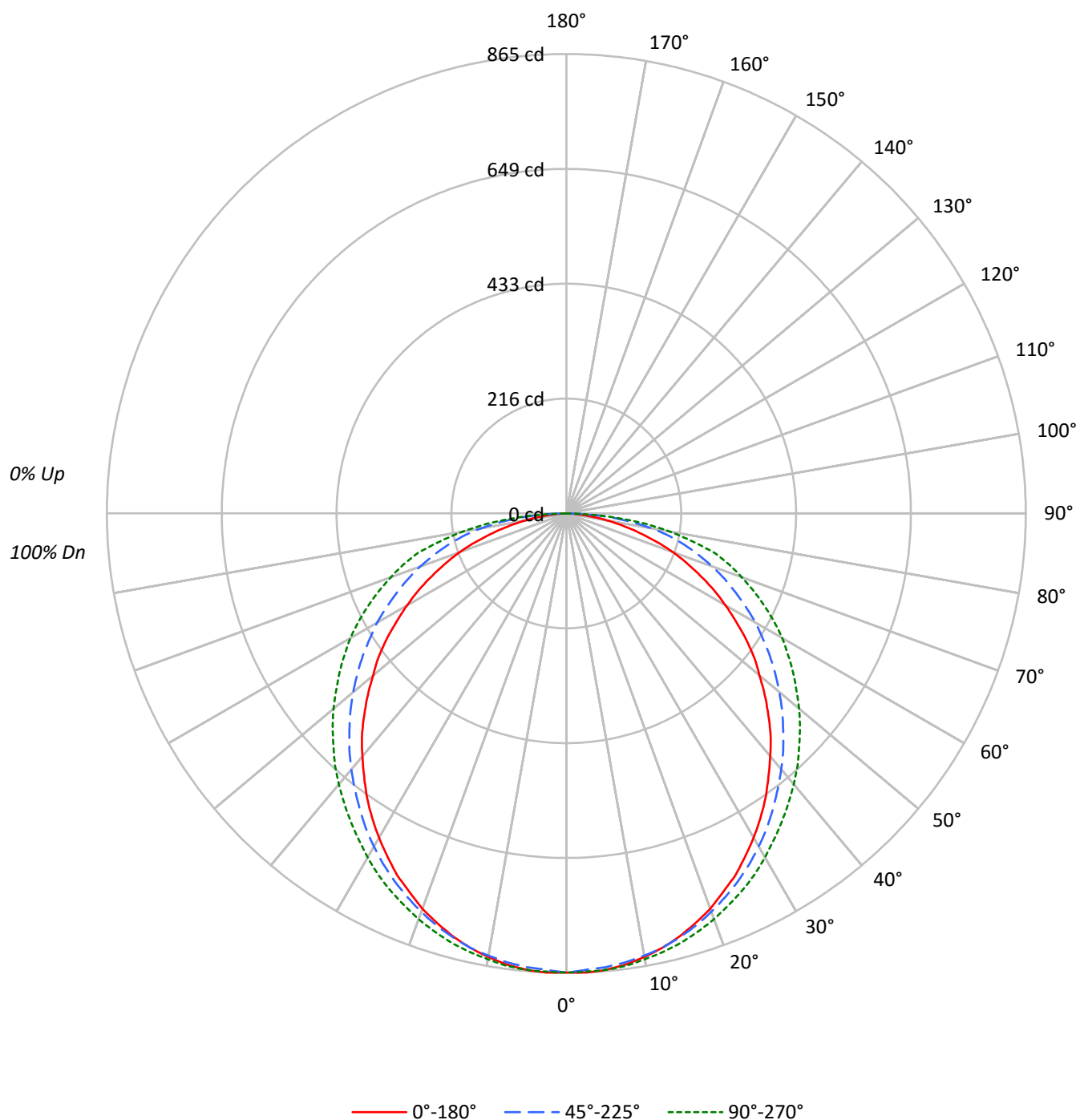
Input Watts (W): 21.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P310520

CATALOG NUMBER: 24FCZ2-30HE-UNV-L82765-CP187-W2A-U-4000K

Luminous Intensity Polar Plot





TEST NUMBER: P310520

CATALOG NUMBER: 24FCZ2-30HE-UNV-L82765-CP187-W2A-U-4000K

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20					20					20					20
RC	80				70					50					30					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
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	92	89	92	89	87	88	86	84	82		
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67		
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56		
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47		
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41		
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36		
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31		
8	59	45	37	31	57	45	36	30	43	36	30	42	35	30	41	34	30	28		
9	55	41	33	27	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°	1163	1163	1163
5°	1165	1158	1165
10°	1158	1155	1164
15°	1148	1151	1165
20°	1134	1143	1164
25°	1117	1135	1163
30°	1096	1125	1162
35°	1074	1114	1163
40°	1049	1106	1170
45°	1024	1099	1180
50°	994	1096	1198
55°	969	1097	1222
60°	931	1107	1264
65°	889	1118	1309
70°	841	1153	1382
75°	751	1202	1510
80°	640	1274	1543
85°	457	1261	1477



TEST NUMBER: P310520

CATALOG NUMBER: 24FCZ2-30HE-UNV-L82765-CP187-W2A-U-4000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.8	3.1
10°-20°	233.9	8.9
20°-30°	353.3	13.5
30°-40°	425.8	16.2
40°-50°	447.0	17.1
50°-60°	418.2	16.0
60°-70°	345.4	13.2
70°-80°	235.3	9.0
80°-90°	80.3	3.1
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°	669.0	25.5
0°-40°	1094.8	41.8
0°-60°	1960.0	74.8
0°-90°	2621.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2621.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	864	864	864	864	864	
5°	863	862	857	863	863	82
15°	824	825	826	835	837	232
25°	752	756	764	779	784	346
35°	654	661	678	701	708	409
45°	538	550	577	609	620	415
55°	413	430	468	506	521	369
65°	279	303	351	396	411	277
75°	144	177	231	275	290	154
85°	30	58	82	92	96	37
90°	0	0	0	0	0	



TEST NUMBER: P310520

CATALOG NUMBER: 24FCZ2-30HE-UNV-L82765-CP187-W2A-U-4000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	864.4	864.4	864.4	864.4	864.4
2.5°	865.3	864.4	860.0	864.4	863.5
5°	862.6	861.8	857.4	862.6	862.6
7.5°	856.6	856.6	852.2	858.3	859.2
10°	847.9	847.9	845.3	852.2	852.2
12.5°	837.4	837.4	837.4	844.4	845.3
15°	824.4	825.3	826.1	834.8	836.6
17.5°	808.7	810.5	813.1	823.5	825.3
20°	792.2	793.9	798.3	810.5	813.1
22.5°	771.3	775.7	781.8	795.7	798.3
25°	752.2	755.7	764.4	779.2	783.5
27.5°	728.7	733.9	745.2	760.9	767.0
30°	705.2	710.5	724.4	742.6	747.9
32.5°	680.0	687.9	702.6	721.8	727.9
35°	653.9	660.9	678.3	700.9	707.9
37.5°	625.2	634.8	653.9	678.3	687.0
40°	597.4	607.9	629.6	655.7	666.1
42.5°	569.6	580.0	604.4	633.9	644.4
45°	538.3	549.6	577.4	608.7	620.0
47.5°	507.0	520.9	551.3	584.4	596.5
50°	474.8	490.5	523.5	558.3	572.2
52.5°	446.1	460.9	495.7	533.1	546.1
55°	413.1	429.6	467.8	506.1	520.9
57.5°	379.1	397.4	438.3	480.0	494.8
60°	346.1	366.1	411.3	453.1	469.6
62.5°	313.9	333.9	380.9	424.4	440.9
65°	279.1	302.6	351.3	395.7	411.3
67.5°	246.1	271.3	322.6	366.1	381.8
70°	213.9	238.3	293.1	335.7	351.3
72.5°	179.1	207.0	261.7	306.1	322.6
75°	144.4	177.4	231.3	274.8	290.4
77.5°	112.2	146.1	200.0	235.7	243.5
80°	82.6	117.4	164.4	189.6	199.1
82.5°	53.0	87.8	125.2	143.5	151.3
85°	29.6	58.3	81.7	92.2	95.7
87.5°	12.2	25.2	33.0	37.4	37.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)