

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: P310568

Luminaire Tested: **24FCZ2-30-UNV-L82765-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: P310568
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: 24FCZ2-30-UNV-L82765-CP187-W2A-U-5500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.187" POLYCARB SHEET
Light Source: (168) 5500K 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: 2698.0 lumens
Efficiency: N/A
Efficacy: 112.0 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

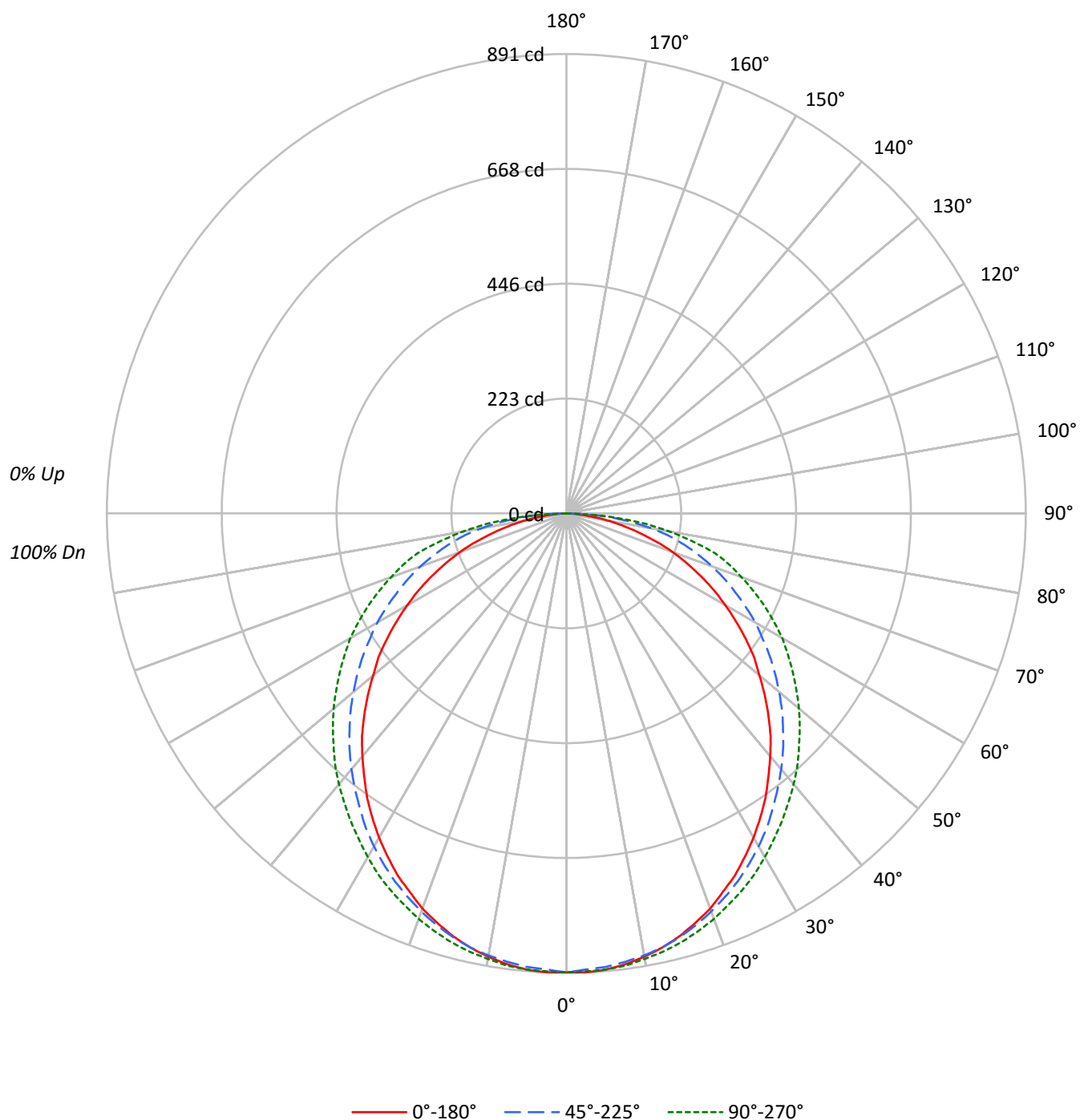
Input Watts (W): 24.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P310568

CATALOG NUMBER: 24FCZ2-30-UNV-L82765-CP187-W2A-U-5500K

Luminous Intensity Polar Plot





TEST NUMBER: P310568

CATALOG NUMBER: 24FCZ2-30-UNV-L82765-CP187-W2A-U-5500K

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		0
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		100
1	108	103	98	94	105	100	96	92	96	92	89		92	89	87		82
2	98	89	81	75	95	87	80	74	83	78	73		80	75	71		67
3	89	77	69	62	86	76	68	61	73	66	60		70	64	59		56
4	81	68	59	52	79	67	58	52	64	57	51		62	56	50		47
5	74	61	52	45	72	60	51	44	58	50	44		56	49	43		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	64	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	37	31	57	45	36	30	43	36	30		42	35	30		28
9	55	41	33	27	54	41	33	27	40	32	27		39	32	27		25
10	52	38	30	25	50	38	30	25	37	30	25		36	29	25		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1197	1197	1197
5°	1199	1192	1199
10°	1192	1189	1198
15°	1182	1185	1199
20°	1168	1177	1198
25°	1150	1168	1197
30°	1128	1159	1196
35°	1106	1147	1197
40°	1080	1138	1204
45°	1054	1131	1214
50°	1023	1128	1233
55°	997	1130	1258
60°	959	1139	1301
65°	915	1151	1348
70°	866	1187	1423
75°	773	1238	1554
80°	659	1311	1588
85°	469	1298	1521



TEST NUMBER: P310568

CATALOG NUMBER: 24FCZ2-30-UNV-L82765-CP187-W2A-U-5500K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	84.2	3.1
10°-20°	240.8	8.9
20°-30°	363.7	13.5
30°-40°	438.3	16.2
40°-50°	460.1	17.1
50°-60°	430.5	16.0
60°-70°	355.5	13.2
70°-80°	242.2	9.0
80°-90°	82.6	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°	688.7	25.5
0°-40°	1127.0	41.8
0°-60°	2017.6	74.8
0°-90°	2698.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2698.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	890	890	890	890	890	
5°	888	887	883	888	888	84
15°	849	850	850	859	861	239
25°	774	778	787	802	806	356
35°	673	680	698	722	729	421
45°	554	566	594	627	638	427
55°	425	442	482	521	536	380
65°	287	312	362	407	423	285
75°	149	183	238	283	299	158
85°	30	60	84	95	98	38
90°	0	0	0	0	0	



TEST NUMBER: P310568

CATALOG NUMBER: 24FCZ2-30-UNV-L82765-CP187-W2A-U-5500K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	889.8	889.8	889.8	889.8	889.8
2.5°	890.7	889.8	885.3	889.8	888.9
5°	888.0	887.1	882.6	888.0	888.0
7.5°	881.7	881.7	877.2	883.5	884.4
10°	872.8	872.8	870.1	877.2	877.2
12.5°	862.0	862.0	862.0	869.2	870.1
15°	848.6	849.5	850.4	859.3	861.1
17.5°	832.5	834.3	837.0	847.7	849.5
20°	815.5	817.3	821.7	834.3	837.0
22.5°	794.0	798.5	804.7	819.1	821.7
25°	774.3	777.9	786.8	802.1	806.5
27.5°	750.1	755.5	767.1	783.3	789.5
30°	726.0	731.3	745.7	764.5	769.8
32.5°	700.0	708.1	723.3	743.0	749.2
35°	673.2	680.3	698.2	721.5	728.7
37.5°	643.6	653.5	673.2	698.2	707.2
40°	615.0	625.7	648.1	674.9	685.7
42.5°	586.3	597.1	622.1	652.6	663.3
45°	554.1	565.7	594.4	626.6	638.2
47.5°	521.9	536.2	567.5	601.5	614.1
50°	488.8	504.9	538.9	574.7	589.0
52.5°	459.2	474.4	510.2	548.7	562.2
55°	425.2	442.2	481.6	521.0	536.2
57.5°	390.3	409.1	451.2	494.1	509.3
60°	356.3	376.9	423.4	466.4	483.4
62.5°	323.1	343.7	392.1	436.8	453.8
65°	287.3	311.5	361.6	407.3	423.4
67.5°	253.3	279.3	332.1	376.9	393.0
70°	220.2	245.3	301.7	345.5	361.6
72.5°	184.4	213.0	269.4	315.1	332.1
75°	148.6	182.6	238.1	282.9	299.0
77.5°	115.5	150.4	205.9	242.6	250.6
80°	85.0	120.8	169.2	195.1	205.0
82.5°	54.6	90.4	128.9	147.7	155.8
85°	30.4	60.0	84.1	94.9	98.5
87.5°	12.5	26.0	34.0	38.5	38.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)