

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: P309212

Luminaire Tested: **24FCZ2-30-UNV-L82765-HRP-CP187-W2A-U-2700K**

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: P309212
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)
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-HRP-CP187-W2A-U-2700K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.187"
POLYCARB SHEET
Light Source: (168) 2700K 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: 1806.0 lumens
Efficiency: N/A
Efficacy: 77.2 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

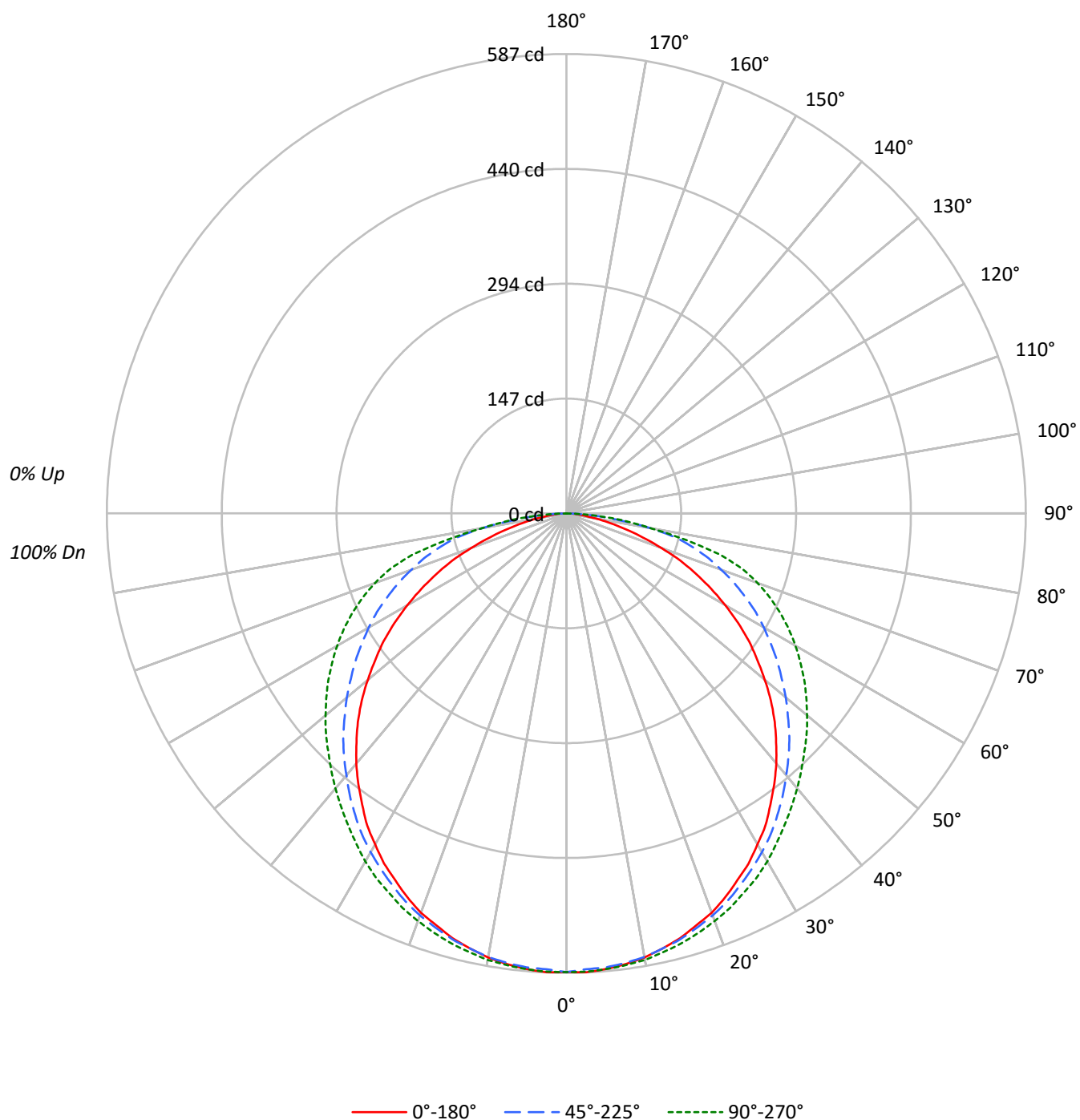
Input Watts (W): 23.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P309212

CATALOG NUMBER: 24FCZ2-30-UNV-L82765-HRP-CP187-W2A-U-2700K

Luminous Intensity Polar Plot





TEST NUMBER: P309212

CATALOG NUMBER: 24FCZ2-30-UNV-L82765-HRP-CP187-W2A-U-2700K

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	101	96	93	96	93	90		92	90	87		82
2	98	89	82	76	95	87	80	75	83	78	73		80	75	71		67
3	89	78	69	62	86	76	68	62	73	66	61		70	64	59		56
4	81	68	59	52	79	67	59	52	65	57	51		62	56	50		48
5	74	61	52	45	72	60	51	45	58	50	44		56	49	44		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	63	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	36	30	57	44	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	24		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	788	788	788
5°	789	786	789
10°	787	786	791
15°	783	785	792
20°	777	783	794
25°	768	779	795
30°	759	777	798
35°	746	772	799
40°	733	768	806
45°	716	767	819
50°	693	766	840
55°	669	772	871
60°	631	783	910
65°	583	802	961
70°	509	830	1023
75°	413	872	1057
80°	305	855	855
85°	233	630	712



TEST NUMBER: P309212

CATALOG NUMBER: 24FCZ2-30-UNV-L82765-HRP-CP187-W2A-U-2700K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	55.5	3.1
10°-20°	159.4	8.8
20°-30°	242.7	13.4
30°-40°	294.7	16.3
40°-50°	311.3	17.2
50°-60°	293.7	16.3
60°-70°	244.2	13.5
70°-80°	160.7	8.9
80°-90°	43.8	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°	457.6	25.3
0°-40°	752.2	41.7
0°-60°	1357.3	75.2
0°-90°	1806.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1806.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	586	586	586	586	586	
5°	584	584	582	584	584	56
15°	562	562	563	569	569	158
25°	517	520	525	534	535	239
35°	454	460	470	482	486	284
45°	376	384	403	423	430	290
55°	285	297	329	360	371	254
65°	183	204	252	289	302	181
75°	79	116	168	199	203	86
85°	15	33	41	45	46	19
90°	0	0	0	0	0	



TEST NUMBER: P309212

CATALOG NUMBER: 24FCZ2-30-UNV-L82765-HRP-CP187-W2A-U-2700K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	586.0	586.0	586.0	586.0	586.0
2.5°	586.7	586.0	582.9	586.0	586.0
5°	584.4	584.4	582.2	584.4	584.4
7.5°	580.7	580.7	579.2	582.2	582.2
10°	576.1	576.1	575.4	579.2	579.2
12.5°	569.3	570.1	569.3	573.9	573.9
15°	561.8	562.5	563.3	568.6	568.6
17.5°	551.9	553.4	555.0	561.0	561.8
20°	542.9	543.6	546.6	553.4	554.2
22.5°	530.8	533.0	536.8	543.6	545.9
25°	517.2	520.2	524.7	533.8	535.3
27.5°	504.3	506.6	512.6	522.4	525.5
30°	488.4	492.2	499.8	509.6	513.4
32.5°	473.3	477.1	486.2	496.7	499.8
35°	454.4	459.7	470.3	482.4	486.2
37.5°	436.3	441.5	454.4	468.0	472.5
40°	417.4	423.4	437.0	452.9	458.9
42.5°	396.9	405.3	420.4	437.8	444.6
45°	376.5	384.1	403.0	422.6	430.2
47.5°	354.6	363.7	384.1	407.5	416.6
50°	331.2	342.5	365.9	391.6	401.5
52.5°	307.7	320.6	347.0	375.8	386.4
55°	285.0	297.1	328.9	359.9	371.2
57.5°	260.1	275.2	310.0	343.3	354.6
60°	234.4	251.0	291.1	325.9	338.0
62.5°	208.7	227.6	272.9	307.7	320.6
65°	183.0	204.1	251.8	288.8	301.7
67.5°	158.0	181.5	232.1	269.2	282.0
70°	129.3	158.8	210.9	247.2	260.1
72.5°	102.8	136.8	190.5	224.6	235.9
75°	79.4	115.7	167.8	198.8	203.4
77.5°	58.2	94.5	144.4	155.0	155.8
80°	39.3	75.6	110.4	108.9	110.4
82.5°	25.7	56.7	69.6	77.9	78.6
85°	15.1	33.3	40.8	45.4	46.1
87.5°	7.6	11.3	14.4	15.1	16.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)