

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: P310564

Luminaire Tested: **24FCZ2-30-UNV-L82765-CP187-W2A-U-3500K**

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: P310564
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-3500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.187" POLYCARB SHEET
Light Source: (168) 3500K 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: 2534.0 lumens
Efficiency: N/A
Efficacy: 107.8 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

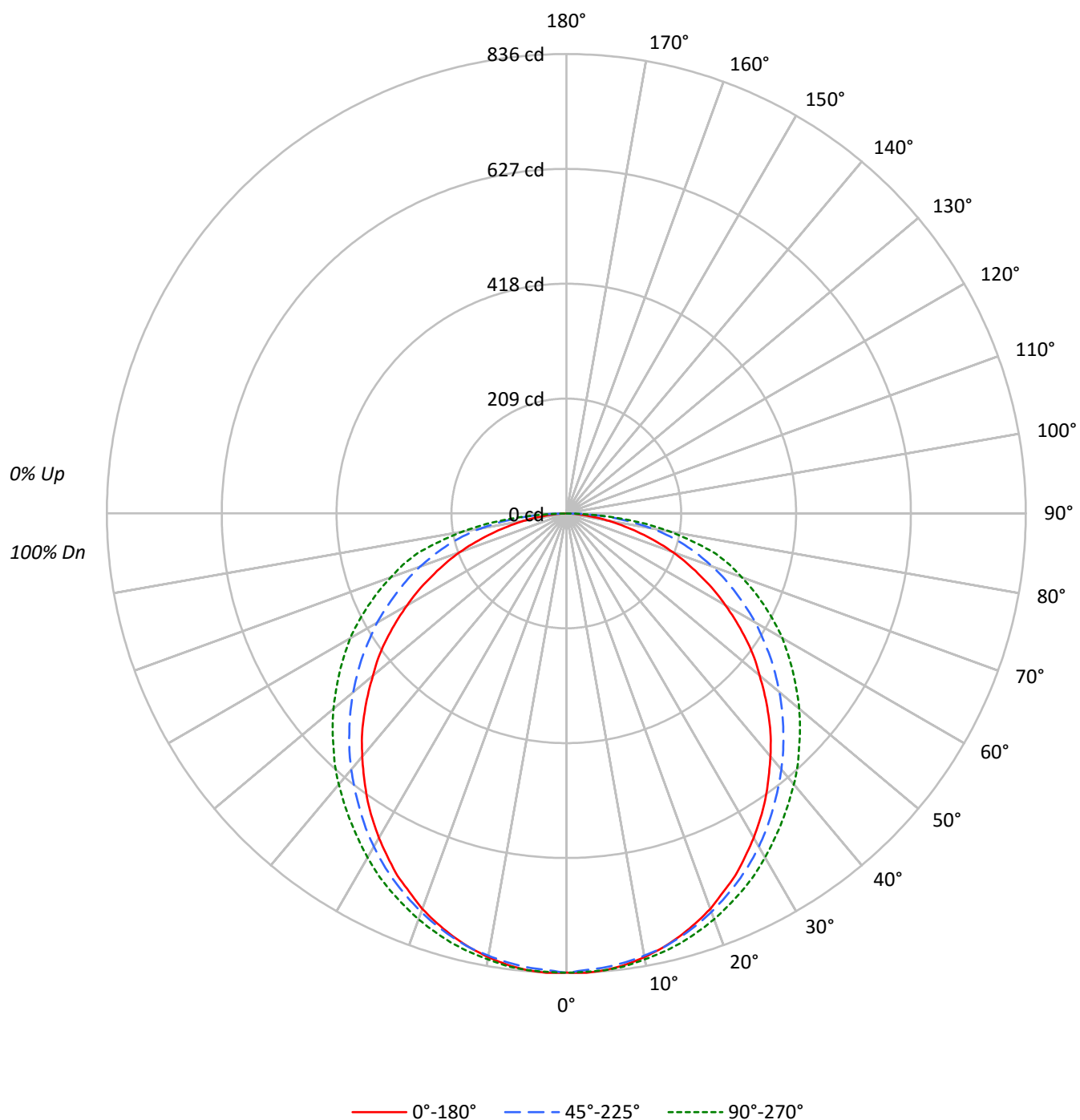
Input Watts (W): 23.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P310564

CATALOG NUMBER: 24FCZ2-30-UNV-L82765-CP187-W2A-U-3500K

Luminous Intensity Polar Plot





TEST NUMBER: P310564

CATALOG NUMBER: 24FCZ2-30-UNV-L82765-CP187-W2A-U-3500K

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°	1124	1124	1124
5°	1126	1120	1126
10°	1120	1116	1126
15°	1110	1113	1127
20°	1097	1105	1126
25°	1080	1097	1125
30°	1059	1088	1123
35°	1038	1077	1124
40°	1015	1069	1131
45°	990	1062	1141
50°	961	1059	1158
55°	937	1061	1181
60°	900	1070	1222
65°	859	1082	1266
70°	814	1114	1336
75°	726	1162	1460
80°	619	1231	1492
85°	442	1220	1428



TEST NUMBER: P310564

CATALOG NUMBER: 24FCZ2-30-UNV-L82765-CP187-W2A-U-3500K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	79.1	3.1
10°-20°	226.1	8.9
20°-30°	341.6	13.5
30°-40°	411.7	16.2
40°-50°	432.2	17.1
50°-60°	404.3	16.0
60°-70°	333.9	13.2
70°-80°	227.5	9.0
80°-90°	77.6	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°	646.8	25.5
0°-40°	1058.5	41.8
0°-60°	1895.0	74.8
0°-90°	2534.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2534.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	836	836	836	836	836	
5°	834	833	829	834	834	79
15°	797	798	799	807	809	225
25°	727	731	739	753	758	335
35°	632	639	656	678	684	395
45°	520	531	558	588	599	401
55°	399	415	452	489	504	356
65°	270	293	340	382	398	268
75°	140	172	224	266	281	149
85°	29	56	79	89	92	36
90°	0	0	0	0	0	



TEST NUMBER: P310564

CATALOG NUMBER: 24FCZ2-30-UNV-L82765-CP187-W2A-U-3500K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	835.7	835.7	835.7	835.7	835.7
2.5°	836.5	835.7	831.5	835.7	834.9
5°	834.0	833.2	829.0	834.0	834.0
7.5°	828.1	828.1	823.9	829.8	830.6
10°	819.7	819.7	817.2	823.9	823.9
12.5°	809.6	809.6	809.6	816.4	817.2
15°	797.0	797.9	798.7	807.1	808.8
17.5°	781.9	783.6	786.1	796.2	797.9
20°	765.9	767.6	771.8	783.6	786.1
22.5°	745.7	749.9	755.8	769.3	771.8
25°	727.2	730.6	739.0	753.3	757.5
27.5°	704.5	709.6	720.5	735.6	741.5
30°	681.8	686.9	700.3	718.0	723.0
32.5°	657.5	665.0	679.3	697.8	703.7
35°	632.2	639.0	655.8	677.6	684.4
37.5°	604.5	613.7	632.2	655.8	664.2
40°	577.6	587.7	608.7	633.9	644.0
42.5°	550.7	560.8	584.3	612.9	623.0
45°	520.4	531.3	558.2	588.5	599.4
47.5°	490.1	503.6	533.0	565.0	576.7
50°	459.0	474.2	506.1	539.8	553.2
52.5°	431.3	445.6	479.2	515.4	528.0
55°	399.3	415.3	452.3	489.3	503.6
57.5°	366.6	384.2	423.7	464.1	478.4
60°	334.6	353.9	397.7	438.0	454.0
62.5°	303.5	322.8	368.2	410.3	426.3
65°	269.9	292.6	339.7	382.5	397.7
67.5°	237.9	262.3	311.9	353.9	369.1
70°	206.8	230.4	283.3	324.5	339.7
72.5°	173.2	200.1	253.1	295.9	311.9
75°	139.6	171.5	223.6	265.7	280.8
77.5°	108.5	141.2	193.4	227.8	235.4
80°	79.9	113.5	158.9	183.3	192.5
82.5°	51.3	84.9	121.1	138.7	146.3
85°	28.6	56.3	79.0	89.1	92.5
87.5°	11.8	24.4	31.9	36.2	36.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)