

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: P312356

Luminaire Tested: **14FCZ2-29-UNV-L83050-S-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: P312356
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-40)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 14FCZ2-29-UNV-L83050-S-CP187-W2A-U-3500K
Description: 1'X4' TROFFER LED MODULE,SMOOTH 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: 2649.0 lumens
Efficiency: N/A
Efficacy: 111.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.27 / 1.36
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

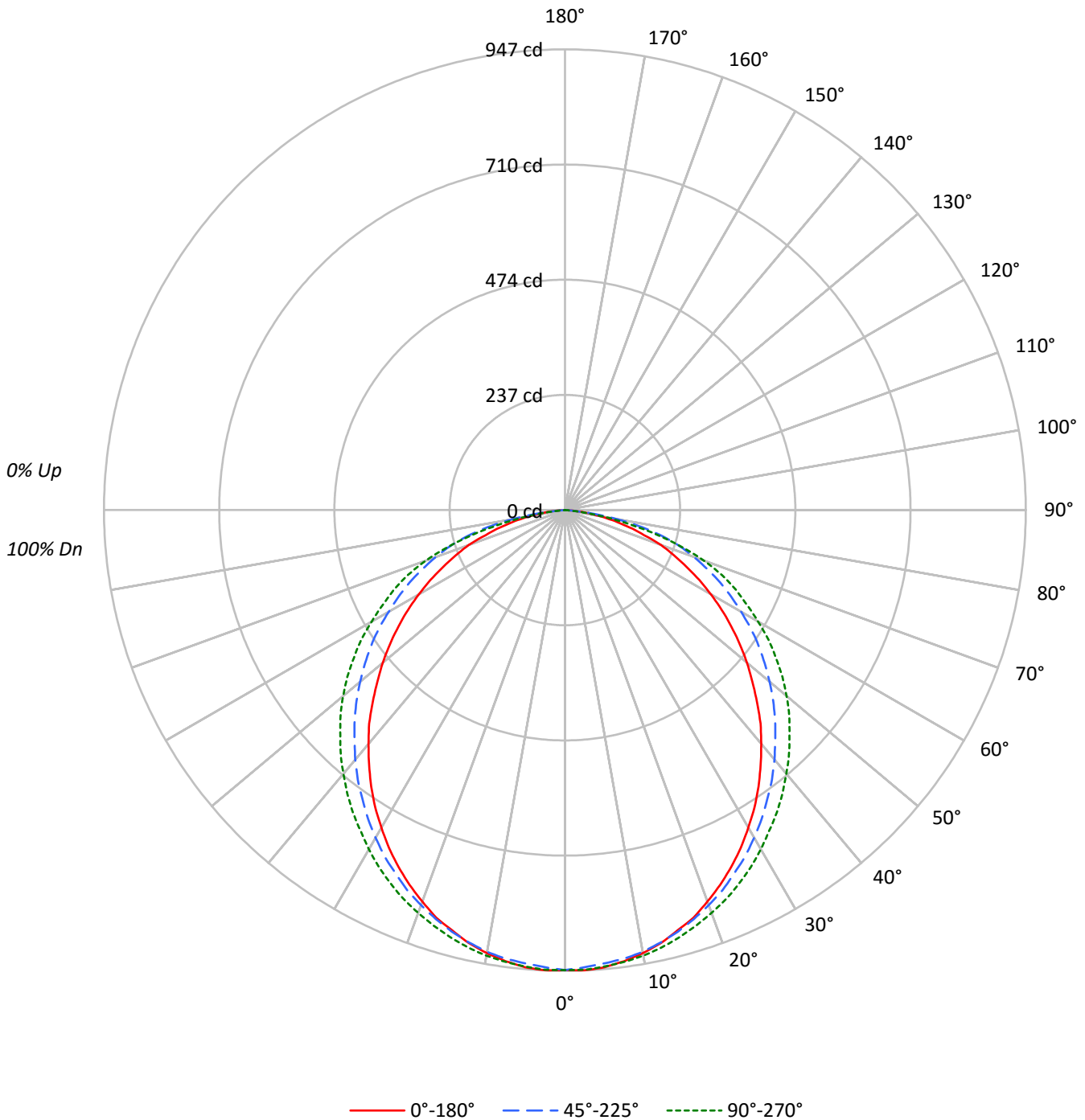
Input Watts (W): 23.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P312356

CATALOG NUMBER: 14FCZ2-29-UNV-L83050-S-CP187-W2A-U-3500K

Luminous Intensity Polar Plot





TEST NUMBER: P312356

CATALOG NUMBER: 14FCZ2-29-UNV-L83050-S-CP187-W2A-U-3500K

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	109	104	100	96	106	102	98	94	97	94	91	94	91	89	90	88	86	84
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	70
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	65	61	58
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	50
5	76	63	54	47	74	62	53	47	59	52	46	57	51	46	56	50	45	43
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	38
7	65	51	42	36	63	50	42	36	49	41	36	47	41	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	32	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	40	32	26	52	39	31	26	38	31	26	37	31	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2545	2545	2545
5°	2547	2526	2544
10°	2526	2519	2541
15°	2492	2499	2532
20°	2452	2475	2524
25°	2402	2445	2515
30°	2343	2416	2502
35°	2278	2382	2494
40°	2205	2353	2487
45°	2124	2324	2484
50°	2045	2298	2491
55°	1960	2280	2483
60°	1866	2248	2467
65°	1756	2241	2467
70°	1653	2222	2397
75°	1434	2171	2048
80°	1161	1751	1364
85°	772	608	404



TEST NUMBER: P312356

CATALOG NUMBER: 14FCZ2-29-UNV-L83050-S-CP187-W2A-U-3500K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.3	3.4
10°-20°	254.1	9.6
20°-30°	381.2	14.4
30°-40°	454.7	17.2
40°-50°	470.1	17.7
50°-60°	429.2	16.2
60°-70°	337.7	12.7
70°-80°	196.6	7.4
80°-90°	36.2	1.4
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°	724.6	27.4
0°-40°	1179.2	44.5
0°-60°	2078.5	78.5
0°-90°	2649.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2649.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	946	946	946	946	946	
5°	943	940	935	943	942	89
15°	894	896	897	909	909	252
25°	809	813	824	843	847	372
35°	694	703	725	753	759	433
45°	558	577	611	645	653	431
55°	418	440	486	521	529	373
65°	276	305	352	380	388	274
75°	138	171	209	205	197	147
85°	25	36	20	16	13	32
90°	0	0	0	0	0	



TEST NUMBER: P312356

CATALOG NUMBER: 14FCZ2-29-UNV-L83050-S-CP187-W2A-U-3500K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	945.6	945.6	945.6	945.6	945.6
2.5°	947.0	944.3	940.4	947.0	945.6
5°	943.0	940.4	935.1	943.0	941.7
7.5°	935.1	932.5	929.9	937.8	936.5
10°	924.6	923.3	922.0	931.2	929.9
12.5°	911.5	911.5	910.2	920.7	920.7
15°	894.4	895.7	897.1	908.9	908.9
17.5°	878.7	877.4	881.3	894.4	895.7
20°	856.3	859.0	864.2	880.0	881.3
22.5°	834.0	836.6	845.8	861.6	865.5
25°	809.1	813.0	823.5	843.2	847.1
27.5°	782.8	788.0	802.5	823.5	827.4
30°	753.9	761.8	777.5	801.2	805.1
32.5°	725.0	732.9	752.6	776.2	781.5
35°	693.5	702.7	725.0	752.6	759.1
37.5°	660.6	672.5	698.7	726.3	734.2
40°	627.8	640.9	669.8	698.7	707.9
42.5°	595.0	608.1	639.6	672.5	681.7
45°	558.2	576.6	610.7	644.9	652.8
47.5°	522.7	542.4	580.5	614.7	625.2
50°	488.6	508.3	549.0	584.5	595.0
52.5°	453.1	474.1	517.5	554.3	563.4
55°	417.7	440.0	486.0	521.4	529.3
57.5°	382.2	405.8	453.1	487.3	496.5
60°	346.7	371.7	417.7	451.8	458.4
62.5°	311.3	337.5	384.8	415.0	421.6
65°	275.8	304.7	352.0	379.6	387.5
67.5°	241.7	270.6	316.5	342.8	349.4
70°	210.1	236.4	282.4	302.1	304.7
72.5°	170.7	203.6	248.2	258.7	252.2
75°	137.9	170.7	208.8	204.9	197.0
77.5°	105.1	137.9	162.9	149.7	139.2
80°	74.9	107.7	113.0	93.3	88.0
82.5°	48.6	74.9	63.0	48.6	39.4
85°	25.0	35.5	19.7	15.8	13.1
87.5°	7.9	5.3	2.6	2.6	1.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)