

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: P312208

Luminaire Tested: **14FCZ2-29-UNV-L83050-CP187-W2A-U-4500K**

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: P312208
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-49)
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-CP187-W2A-U-4500K
Description: 1'X4' TROFFER LED MODULE,RIBBED LENS, 0.187" POLYCARB SHEET
Light Source: (168) 4500K 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: 2779.0 lumens
Efficiency: N/A
Efficacy: 111.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

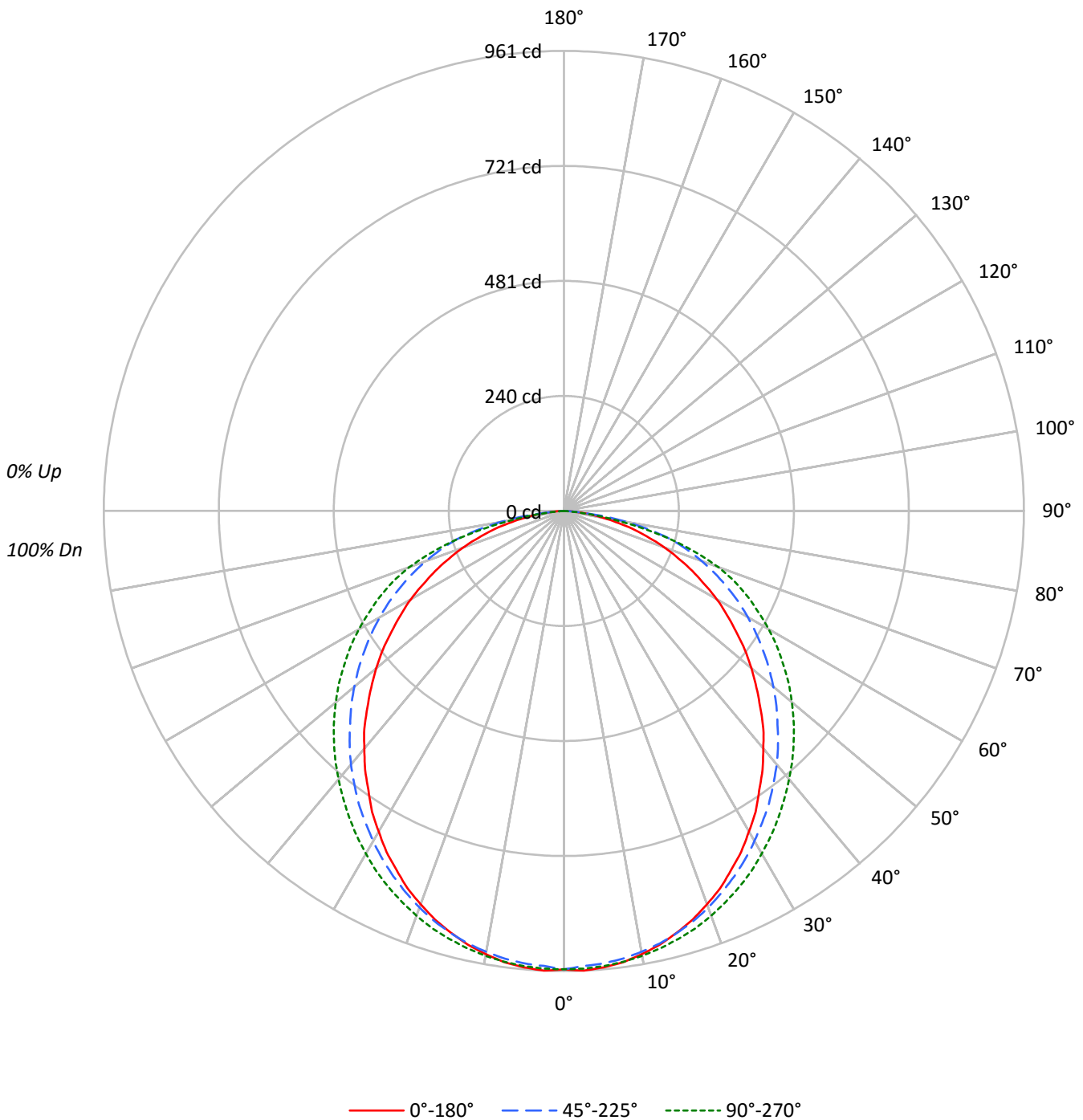
Input Watts (W): 25
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P312208

CATALOG NUMBER: 14FCZ2-29-UNV-L83050-CP187-W2A-U-4500K

Luminous Intensity Polar Plot





TEST NUMBER: P312208

CATALOG NUMBER: 14FCZ2-29-UNV-L83050-CP187-W2A-U-4500K

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	99	95	106	101	97	94	97	94	91	93	90	88	90	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	79	68	60	53	66	58	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42
6	69	56	47	40	67	55	46	40	53	45	40	51	44	39	50	44	39	37
7	64	51	42	35	63	50	41	35	48	41	35	47	40	35	45	39	34	32
8	60	46	37	32	58	45	37	31	44	37	31	43	36	31	42	35	31	29
9	56	42	34	28	54	42	34	28	41	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	39	31	26	37	30	26	37	30	25	36	30	25	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2576	2576	2576
5°	2585	2563	2578
10°	2569	2555	2579
15°	2541	2543	2578
20°	2504	2525	2576
25°	2456	2500	2574
30°	2403	2474	2568
35°	2339	2453	2567
40°	2277	2429	2571
45°	2207	2403	2584
50°	2143	2392	2602
55°	2061	2384	2625
60°	1988	2388	2661
65°	1886	2395	2703
70°	1769	2413	2701
75°	1604	2435	2442
80°	1316	2103	1739
85°	976	994	401



TEST NUMBER: P312208

CATALOG NUMBER: 14FCZ2-29-UNV-L83050-CP187-W2A-U-4500K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.6	3.3
10°-20°	258.8	9.3
20°-30°	389.8	14.0
30°-40°	467.8	16.8
40°-50°	487.6	17.5
50°-60°	451.4	16.2
60°-70°	364.7	13.1
70°-80°	222.4	8.0
80°-90°	45.9	1.7
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°	739.2	26.6
0°-40°	1207.0	43.4
0°-60°	2146.0	77.2
0°-90°	2779.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2779.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	957	957	957	957	957	
5°	957	954	949	956	954	91
15°	912	913	913	925	925	257
25°	827	832	842	863	867	381
35°	712	723	747	774	781	446
45°	580	597	631	667	679	448
55°	439	462	508	548	560	394
65°	296	325	376	414	424	293
75°	154	188	234	238	235	162
85°	32	47	32	18	13	39
90°	0	0	0	0	0	



TEST NUMBER: P312208

CATALOG NUMBER: 14FCZ2-29-UNV-L83050-CP187-W2A-U-4500K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	957.4	957.4	957.4	957.4	957.4
2.5°	961.1	958.0	951.2	958.0	956.8
5°	956.8	954.3	948.7	955.5	954.3
7.5°	950.6	948.1	943.1	951.2	949.9
10°	940.0	938.8	935.1	944.4	943.7
12.5°	927.6	927.0	925.2	935.7	935.1
15°	912.1	912.8	912.8	925.2	925.2
17.5°	894.8	896.0	898.5	912.1	914.0
20°	874.3	876.8	881.8	897.3	899.7
22.5°	853.3	855.1	862.6	881.2	883.6
25°	827.2	832.2	842.1	863.2	866.9
27.5°	802.5	806.8	820.4	842.1	848.3
30°	773.3	780.2	796.3	819.8	826.6
32.5°	745.5	752.9	771.5	798.7	804.9
35°	712.0	723.1	746.7	774.0	781.4
37.5°	681.6	692.2	718.8	748.5	757.2
40°	648.2	661.2	691.5	723.1	731.8
42.5°	617.2	629.6	662.4	694.6	706.4
45°	580.0	597.4	631.4	666.8	679.1
47.5°	545.9	563.3	602.3	640.1	651.3
50°	511.8	530.4	571.3	610.4	621.5
52.5°	476.5	496.3	540.3	579.4	592.4
55°	439.3	462.3	508.1	547.8	559.6
57.5°	404.0	427.6	476.5	516.8	528.6
60°	369.3	393.5	443.7	482.1	494.5
62.5°	330.9	359.4	411.5	449.3	458.5
65°	296.2	325.3	376.1	413.9	424.5
67.5°	259.6	291.2	342.1	376.8	386.7
70°	224.9	257.8	306.7	339.0	343.3
72.5°	187.8	221.2	270.8	291.2	291.2
75°	154.3	188.4	234.2	237.9	234.9
77.5°	117.7	155.5	185.3	177.8	170.4
80°	84.9	122.1	135.7	122.1	112.2
82.5°	57.0	88.6	81.8	65.1	57.6
85°	31.6	47.1	32.2	18.0	13.0
87.5°	11.8	10.5	3.1	3.1	3.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)