

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: P312190

Luminaire Tested: **14FCZ2-29-UNV-L83050-CA08-W2A-U-3000K**

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: P312190
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-CA08-W2A-U-3000K
Description: 1'X4' TROFFER LED MODULE,RIBBED LENS, 0.08" ACRYLIC SHEET
Light Source: (168) 3000K 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: 2648.0 lumens
Efficiency: N/A
Efficacy: 111.3 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

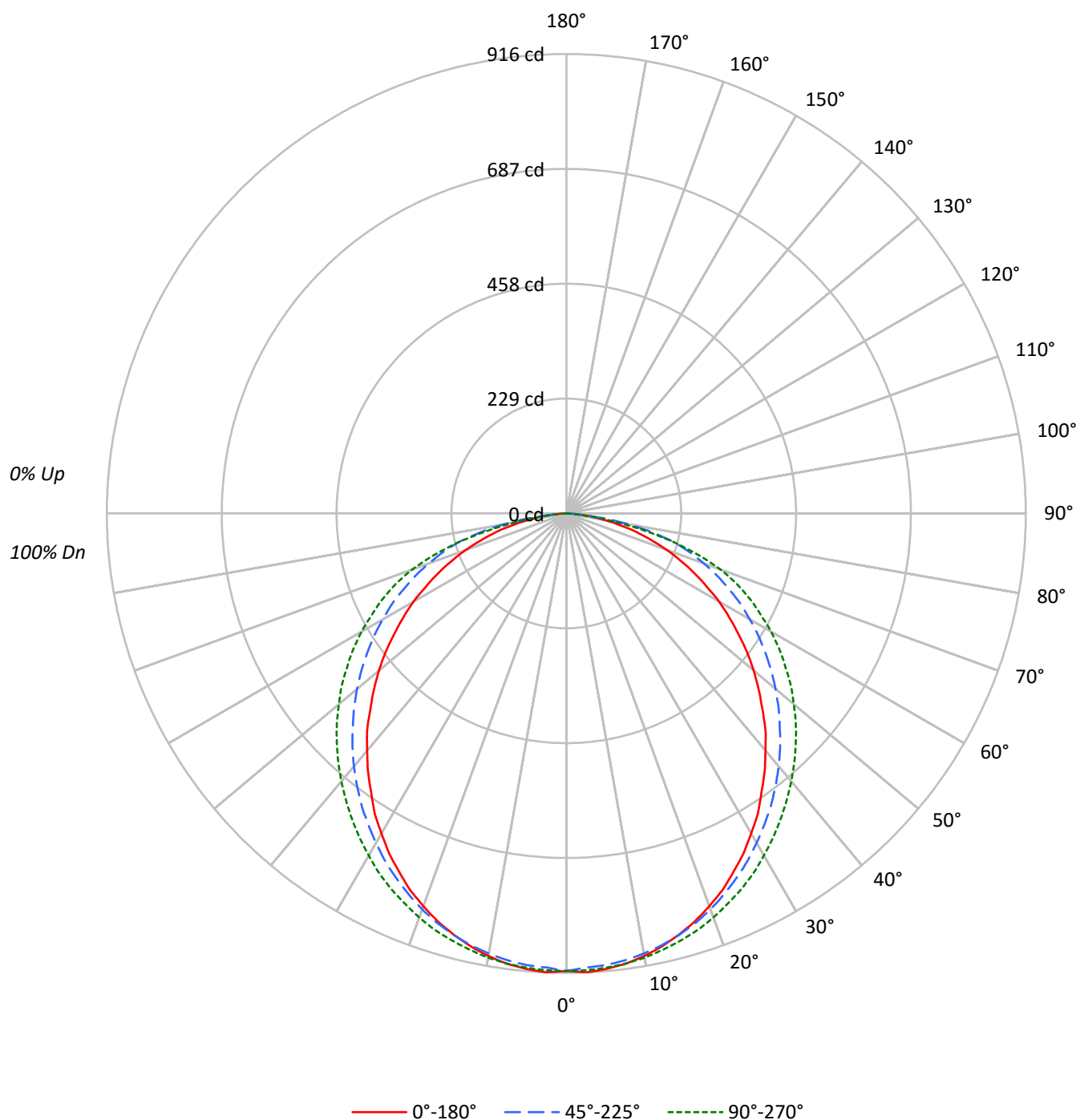
Input Watts (W): 23.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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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	109	104	99	95	106	101	97	94	97	94	91		93	90	88		83
2	98	90	83	77	96	88	82	76	84	79	74		81	77	73		69
3	89	79	70	64	87	77	69	63	74	67	62		71	66	61		58
4	82	70	61	54	79	68	60	53	66	58	53		63	57	52		49
5	75	62	53	46	73	61	52	46	59	51	45		57	50	45		42
6	69	56	47	40	67	55	46	40	53	45	40		51	44	39		37
7	64	51	42	35	63	50	41	35	48	41	35		47	40	35		32
8	60	46	37	32	58	45	37	31	44	37	31		43	36	31		29
9	56	42	34	28	54	42	34	28	41	33	28		39	33	28		26
10	52	39	31	26	51	39	31	26	37	30	26		37	30	25		24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2455	2455	2455
5°	2463	2442	2456
10°	2447	2435	2457
15°	2421	2423	2456
20°	2386	2406	2455
25°	2341	2382	2453
30°	2290	2357	2448
35°	2229	2337	2446
40°	2170	2315	2449
45°	2103	2290	2463
50°	2042	2279	2479
55°	1964	2272	2502
60°	1894	2275	2536
65°	1797	2282	2576
70°	1686	2300	2574
75°	1528	2321	2327
80°	1254	2004	1657
85°	929	948	383



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.3	3.3
10°-20°	246.6	9.3
20°-30°	371.5	14.0
30°-40°	445.8	16.8
40°-50°	464.6	17.5
50°-60°	430.1	16.2
60°-70°	347.5	13.1
70°-80°	211.9	8.0
80°-90°	43.7	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°	704.4	26.6
0°-40°	1150.1	43.4
0°-60°	2044.9	77.2
0°-90°	2648.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2648.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	912	912	912	912	912	
5°	912	909	904	910	909	87
15°	869	870	870	882	882	245
25°	788	793	802	822	826	363
35°	678	689	712	738	745	425
45°	553	569	602	635	647	427
55°	419	440	484	522	533	375
65°	282	310	358	394	404	279
75°	147	180	223	227	224	154
85°	30	45	31	17	12	37
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	912.2	912.2	912.2	912.2	912.2
2.5°	915.8	912.8	906.3	912.8	911.7
5°	911.7	909.3	904.0	910.5	909.3
7.5°	905.7	903.4	898.7	906.3	905.2
10°	895.7	894.5	891.0	899.8	899.3
12.5°	883.9	883.3	881.5	891.6	891.0
15°	869.1	869.7	869.7	881.5	881.5
17.5°	852.6	853.8	856.2	869.1	870.9
20°	833.1	835.5	840.2	855.0	857.3
22.5°	813.0	814.8	821.9	839.6	842.0
25°	788.3	793.0	802.4	822.5	826.0
27.5°	764.6	768.8	781.8	802.4	808.3
30°	736.9	743.4	758.7	781.2	787.7
32.5°	710.3	717.4	735.1	761.1	767.0
35°	678.4	689.1	711.5	737.5	744.6
37.5°	649.5	659.5	684.9	713.3	721.5
40°	617.6	630.0	658.9	689.1	697.3
42.5°	588.1	599.9	631.2	661.9	673.1
45°	552.7	569.2	601.7	635.3	647.1
47.5°	520.2	536.7	573.9	609.9	620.6
50°	487.7	505.4	544.4	581.6	592.2
52.5°	454.1	473.0	514.9	552.1	564.5
55°	418.6	440.5	484.2	522.0	533.2
57.5°	385.0	407.4	454.1	492.4	503.7
60°	351.9	374.9	422.8	459.4	471.2
62.5°	315.3	342.5	392.1	428.1	436.9
65°	282.2	310.0	358.4	394.4	404.5
67.5°	247.4	277.5	325.9	359.0	368.4
70°	214.3	245.6	292.3	323.0	327.1
72.5°	178.9	210.8	258.0	277.5	277.5
75°	147.0	179.5	223.2	226.7	223.8
77.5°	112.2	148.2	176.5	169.5	162.4
80°	80.9	116.3	129.3	116.3	106.9
82.5°	54.3	84.4	77.9	62.0	54.9
85°	30.1	44.9	30.7	17.1	12.4
87.5°	11.2	10.0	3.0	3.0	3.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)