

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: P307910

Luminaire Tested: **14FCZ2-29-UNV-L82765-S-CP187-W2A-U-4000K**

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: P307910
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-L82765-S-CP187-W2A-U-4000K
Description: 1'X4' TROFFER LED MODULE,SMOOTH LENS, 0.187" POLYCARB SHEET
Light Source: (168) 4000K 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: 2645.0 lumens
Efficiency: N/A
Efficacy: 109.7 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.26 / 1.36
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

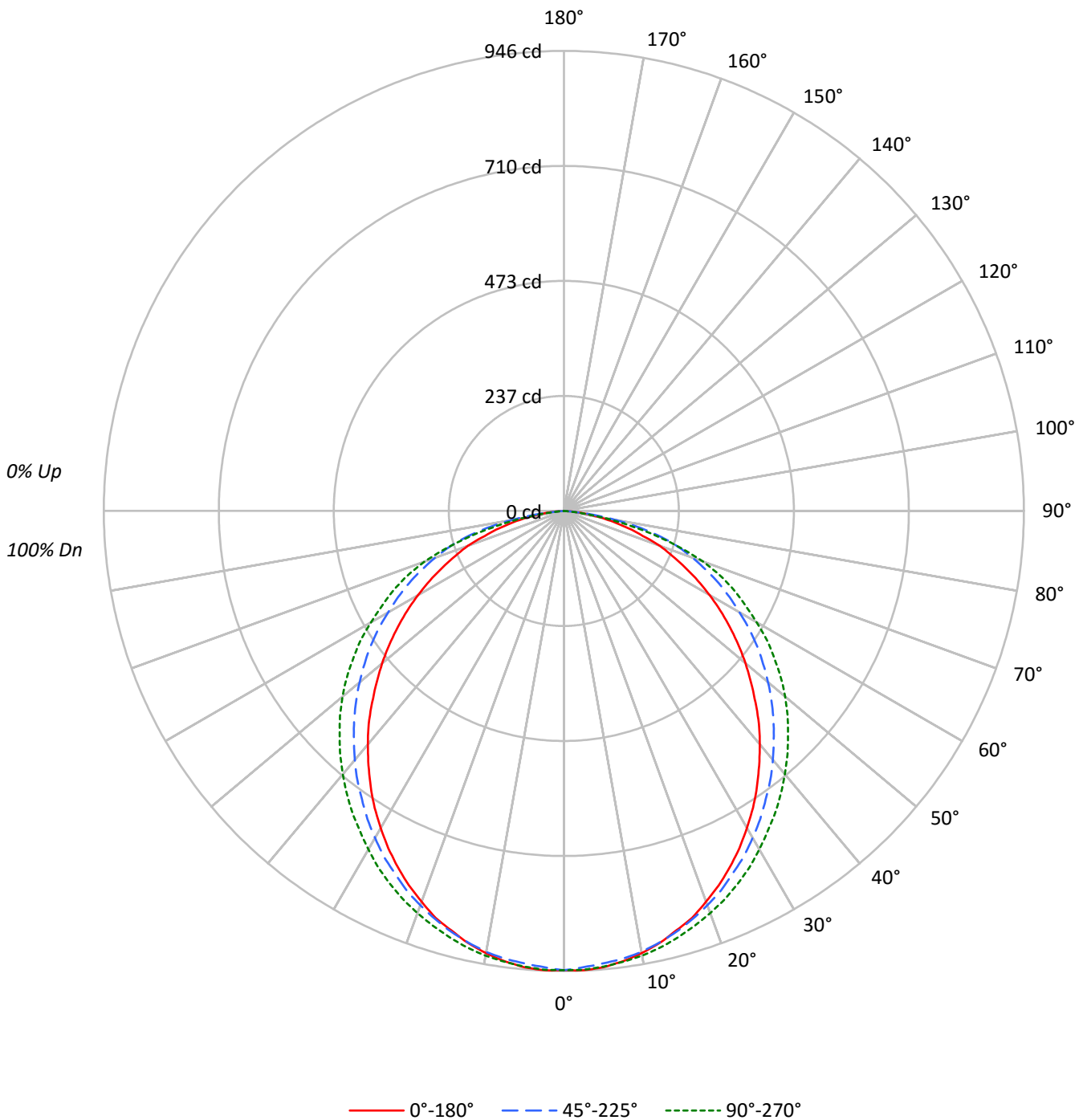
Input Watts (W): 24.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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°	2541	2541	2541
5°	2544	2522	2540
10°	2523	2516	2537
15°	2488	2495	2528
20°	2448	2471	2520
25°	2398	2442	2512
30°	2339	2412	2498
35°	2275	2378	2490
40°	2202	2349	2483
45°	2121	2321	2481
50°	2042	2295	2487
55°	1956	2276	2479
60°	1863	2244	2463
65°	1754	2238	2464
70°	1651	2219	2393
75°	1432	2168	2045
80°	1159	1748	1362
85°	769	608	404



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.2	3.4
10°-20°	253.7	9.6
20°-30°	380.6	14.4
30°-40°	454.0	17.2
40°-50°	469.3	17.7
50°-60°	428.5	16.2
60°-70°	337.2	12.7
70°-80°	196.3	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°	723.5	27.4
0°-40°	1177.5	44.5
0°-60°	2075.3	78.5
0°-90°	2645.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2645.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	944	944	944	944	944	
5°	942	939	934	942	940	89
15°	893	894	896	908	908	252
25°	808	812	822	842	846	372
35°	692	702	724	751	758	433
45°	557	576	610	644	652	430
55°	417	439	485	521	528	373
65°	275	304	352	379	387	273
75°	138	170	208	205	197	146
85°	25	35	20	16	13	32
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	944.2	944.2	944.2	944.2	944.2
2.5°	945.5	942.9	939.0	945.5	944.2
5°	941.6	939.0	933.7	941.6	940.3
7.5°	933.7	931.1	928.5	936.4	935.0
10°	923.2	921.9	920.6	929.8	928.5
12.5°	910.1	910.1	908.8	919.3	919.3
15°	893.1	894.4	895.7	907.5	907.5
17.5°	877.3	876.0	880.0	893.1	894.4
20°	855.0	857.7	862.9	878.7	880.0
22.5°	832.8	835.4	844.6	860.3	864.2
25°	807.8	811.8	822.3	841.9	845.9
27.5°	781.6	786.9	801.3	822.3	826.2
30°	752.8	760.6	776.4	800.0	803.9
32.5°	723.9	731.8	751.4	775.0	780.3
35°	692.4	701.6	723.9	751.4	758.0
37.5°	659.6	671.4	697.7	725.2	733.1
40°	626.9	640.0	668.8	697.7	706.9
42.5°	594.1	607.2	638.7	671.4	680.6
45°	557.4	575.7	609.8	643.9	651.8
47.5°	521.9	541.6	579.6	613.7	624.2
50°	487.8	507.5	548.2	583.6	594.1
52.5°	452.4	473.4	516.7	553.4	562.6
55°	417.0	439.3	485.2	520.6	528.5
57.5°	381.6	405.2	452.4	486.5	495.7
60°	346.2	371.1	417.0	451.1	457.7
62.5°	310.8	337.0	384.2	414.4	421.0
65°	275.4	304.2	351.5	379.0	386.9
67.5°	241.3	270.2	316.1	342.3	348.8
70°	209.8	236.1	282.0	301.6	304.2
72.5°	170.5	203.3	247.9	258.3	251.8
75°	137.7	170.5	208.5	204.6	196.7
77.5°	104.9	137.7	162.6	149.5	139.0
80°	74.8	107.5	112.8	93.1	87.9
82.5°	48.5	74.8	62.9	48.5	39.3
85°	24.9	35.4	19.7	15.7	13.1
87.5°	7.9	5.2	2.6	2.6	1.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)