

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: P307909

Luminaire Tested: **14FCZ2-29-UNV-L82765-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: P307909
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-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: 2587.0 lumens
Efficiency: N/A
Efficacy: 108.2 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

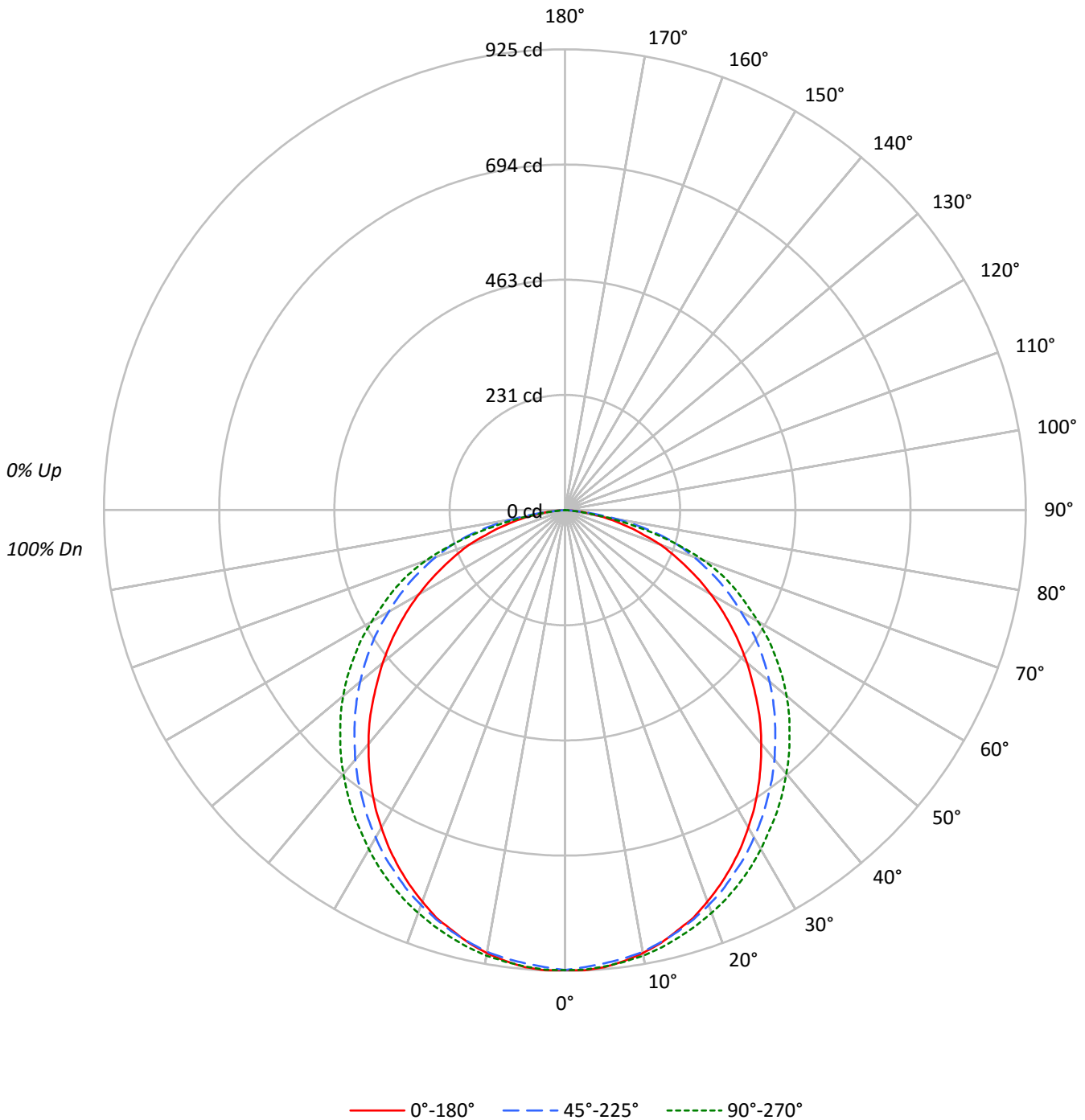
Input Watts (W): 23.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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	100	100	100	100	100		
	1	109	104	100	96	106	102	98	94	97	94	91	94	91	89	90	88	86	84	84	84	84	84	84		
	2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	70	70	70	70	70	70		
	3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	65	61	58	58	58	58	58	58		
	4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	50	50	50	50	50	50		
	5	76	63	54	47	74	62	53	47	59	52	46	57	51	46	56	50	45	43	43	43	43	43	43		
	6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	38	38	38	38	38	38		
	7	65	51	42	36	63	50	42	36	49	41	36	47	41	35	46	40	35	33	33	33	33	33	33		
	8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	32	30	30	30	30	30	30		
	9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27	27	27	27	27	27		
	10	53	40	32	26	52	39	31	26	38	31	26	37	31	26	36	30	26	24	24	24	24	24	24		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2485	2485	2485
5°	2488	2467	2484
10°	2467	2460	2481
15°	2433	2441	2473
20°	2395	2417	2465
25°	2346	2388	2456
30°	2288	2359	2443
35°	2225	2326	2436
40°	2154	2298	2429
45°	2074	2270	2426
50°	1997	2245	2432
55°	1914	2227	2425
60°	1822	2195	2409
65°	1715	2189	2409
70°	1614	2170	2341
75°	1400	2120	2000
80°	1133	1709	1331
85°	753	593	395



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	87.2	3.4
10°-20°	248.2	9.6
20°-30°	372.2	14.4
30°-40°	444.0	17.2
40°-50°	459.0	17.7
50°-60°	419.1	16.2
60°-70°	329.8	12.7
70°-80°	192.0	7.4
80°-90°	35.4	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°	707.6	27.4
0°-40°	1151.6	44.5
0°-60°	2029.8	78.5
0°-90°	2587.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2587.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	924	924	924	924	924	
5°	921	918	913	921	920	87
15°	874	875	876	888	888	246
25°	790	794	804	824	827	364
35°	677	686	708	735	741	423
45°	545	563	596	630	638	421
55°	408	430	475	509	517	365
65°	269	298	344	371	378	267
75°	135	167	204	200	192	143
85°	24	35	19	15	13	32
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	923.5	923.5	923.5	923.5	923.5
2.5°	924.8	922.2	918.4	924.8	923.5
5°	921.0	918.4	913.3	921.0	919.7
7.5°	913.3	910.7	908.1	915.8	914.5
10°	903.0	901.7	900.4	909.4	908.1
12.5°	890.2	890.2	888.9	899.1	899.1
15°	873.5	874.8	876.1	887.6	887.6
17.5°	858.1	856.8	860.7	873.5	874.8
20°	836.3	838.9	844.0	859.4	860.7
22.5°	814.5	817.1	826.0	841.4	845.3
25°	790.1	794.0	804.2	823.5	827.3
27.5°	764.5	769.6	783.7	804.2	808.1
30°	736.2	743.9	759.3	782.4	786.3
32.5°	708.0	715.7	735.0	758.1	763.2
35°	677.2	686.2	708.0	735.0	741.4
37.5°	645.2	656.7	682.4	709.3	717.0
40°	613.1	625.9	654.2	682.4	691.4
42.5°	581.0	593.9	624.7	656.7	665.7
45°	545.1	563.1	596.4	629.8	637.5
47.5°	510.5	529.7	566.9	600.3	610.5
50°	477.1	496.4	536.2	570.8	581.0
52.5°	442.5	463.0	505.4	541.3	550.3
55°	407.9	429.7	474.6	509.2	516.9
57.5°	373.3	396.3	442.5	475.9	484.8
60°	338.6	363.0	407.9	441.2	447.6
62.5°	304.0	329.6	375.8	405.3	411.7
65°	269.4	297.6	343.8	370.7	378.4
67.5°	236.0	264.2	309.1	334.8	341.2
70°	205.2	230.9	275.8	295.0	297.6
72.5°	166.7	198.8	242.4	252.7	246.3
75°	134.7	166.7	203.9	200.1	192.4
77.5°	102.6	134.7	159.0	146.2	136.0
80°	73.1	105.2	110.3	91.1	85.9
82.5°	47.5	73.1	61.6	47.5	38.5
85°	24.4	34.6	19.2	15.4	12.8
87.5°	7.7	5.1	2.6	2.6	1.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)