

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: P309032

Luminaire Tested: **22FCZ2-34HE-UNV-L82765-S-CP187-W2A-U-2700K**

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: P309032
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-23)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 22FCZ2-34HE-UNV-L82765-S-CP187-W2A-U-2700K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.187" POLYCARB 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: 2803.0 lumens
Efficiency: N/A
Efficacy: 101.6 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

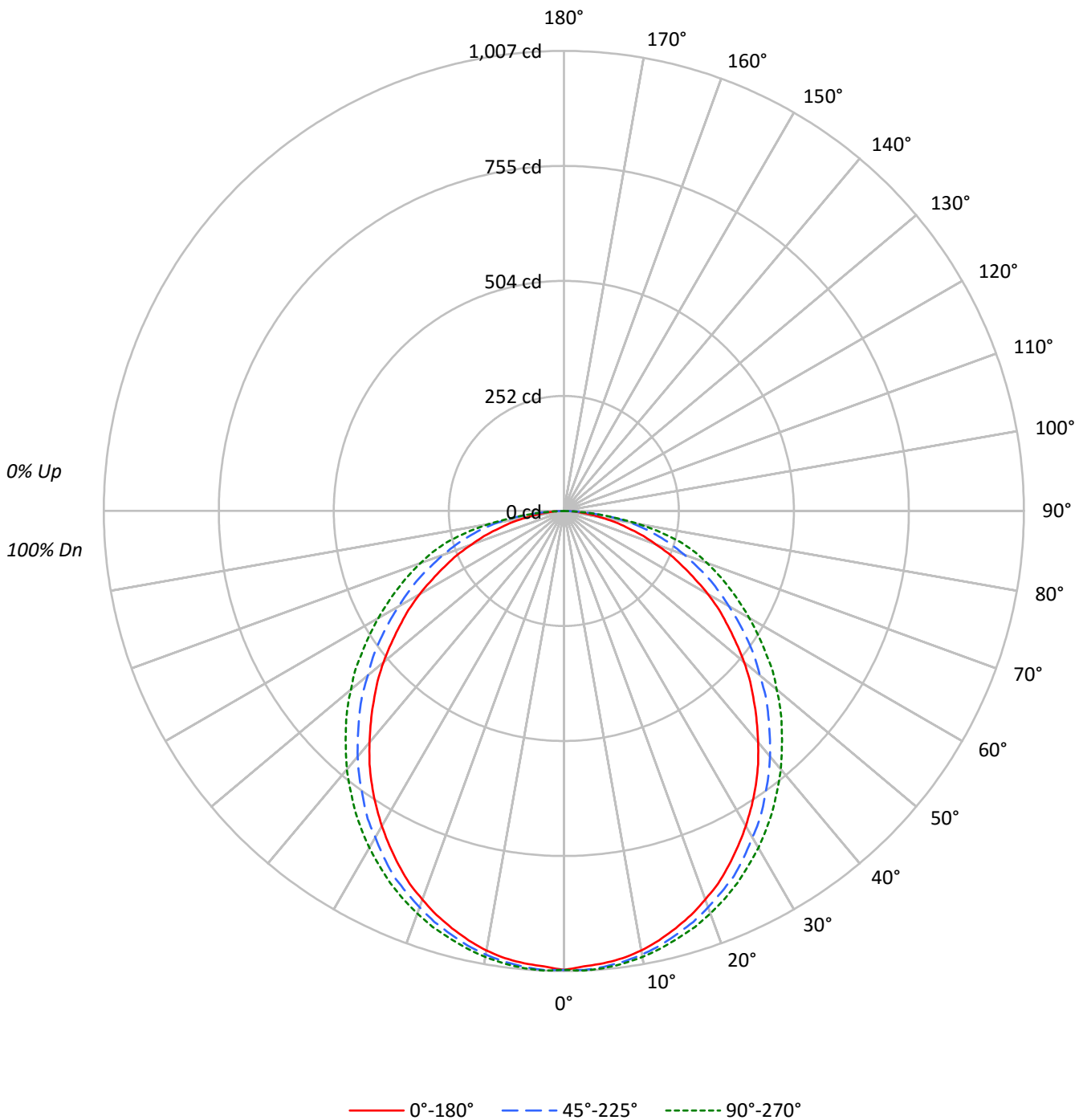
Input Watts (W): 27.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	108	103	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	61	56	52	49
5	75	62	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	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	51	39	31	26	38	31	26	37	31	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2703	2703	2703
5°	2685	2706	2713
10°	2669	2695	2709
15°	2634	2671	2696
20°	2592	2644	2685
25°	2540	2617	2668
30°	2475	2564	2646
35°	2406	2518	2621
40°	2325	2467	2596
45°	2240	2409	2568
50°	2157	2343	2546
55°	2055	2301	2528
60°	1964	2245	2520
65°	1832	2232	2548
70°	1688	2212	2624
75°	1523	2244	2760
80°	1317	2311	2594
85°	1090	1939	1939



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	95.0	3.4
10°-20°	270.3	9.6
20°-30°	404.5	14.4
30°-40°	479.0	17.1
40°-50°	488.1	17.4
50°-60°	437.5	15.6
60°-70°	342.5	12.2
70°-80°	220.9	7.9
80°-90°	65.2	2.3
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°	769.7	27.5
0°-40°	1248.7	44.5
0°-60°	2174.3	77.6
0°-90°	2803.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2803.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1004	1004	1004	1004	1004	
5°	994	997	1002	1003	1004	94
15°	946	951	959	966	968	267
25°	855	863	882	893	898	394
35°	732	742	766	790	798	458
45°	588	602	633	666	675	454
55°	438	452	490	524	539	393
65°	288	305	350	384	400	286
75°	146	169	216	252	266	157
85°	35	48	63	63	63	41
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1004.4	1004.4	1004.4	1004.4	1004.4
2.5°	997.9	1000.5	1005.7	1007.0	1007.0
5°	993.9	996.6	1001.8	1003.1	1004.4
7.5°	987.4	988.7	995.2	997.9	999.2
10°	976.9	979.6	986.1	990.0	991.3
12.5°	962.6	966.5	974.3	979.6	980.9
15°	945.6	950.8	958.6	966.5	967.8
17.5°	927.2	932.5	942.9	952.1	954.7
20°	905.0	911.5	923.3	933.8	937.7
22.5°	882.8	888.0	902.4	915.5	919.4
25°	855.3	863.2	881.5	893.2	898.5
27.5°	826.5	835.7	854.0	869.7	874.9
30°	796.5	805.6	825.2	844.8	851.4
32.5°	765.1	775.5	799.1	818.7	825.2
35°	732.4	741.5	766.4	789.9	797.8
37.5°	698.4	706.2	735.0	759.8	767.7
40°	661.8	672.2	702.3	731.1	738.9
42.5°	625.1	636.9	667.0	698.4	706.2
45°	588.5	601.6	633.0	665.7	674.8
47.5°	553.2	563.7	599.0	630.4	643.4
50°	515.3	525.7	559.7	595.1	608.1
52.5°	476.0	490.4	527.0	561.1	576.7
55°	438.1	452.5	490.4	524.4	538.8
57.5°	402.8	414.6	453.8	489.1	503.5
60°	364.9	375.3	417.2	455.1	468.2
62.5°	324.3	340.0	383.2	418.5	434.2
65°	287.7	304.7	350.5	384.5	400.2
67.5°	253.7	269.4	313.9	350.5	367.5
70°	214.5	235.4	281.2	317.8	333.5
72.5°	183.1	201.4	248.5	285.1	302.1
75°	146.5	168.7	215.8	252.4	265.5
77.5°	116.4	138.6	183.1	211.9	218.4
80°	85.0	107.2	149.1	163.5	167.4
82.5°	57.5	78.5	107.2	111.2	112.5
85°	35.3	48.4	62.8	62.8	62.8
87.5°	17.0	19.6	22.2	20.9	20.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)