

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: P308770

Luminaire Tested: **22FCZ2-34HE-UNV-L82765-CP187-W2A-U-6500K**

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: P308770
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-33)
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-CP187-W2A-U-6500K
Description: 2'X2' TROFFER LED MODULE, RIBBED 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: 3027.0 lumens
Efficiency: N/A
Efficacy: 105.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

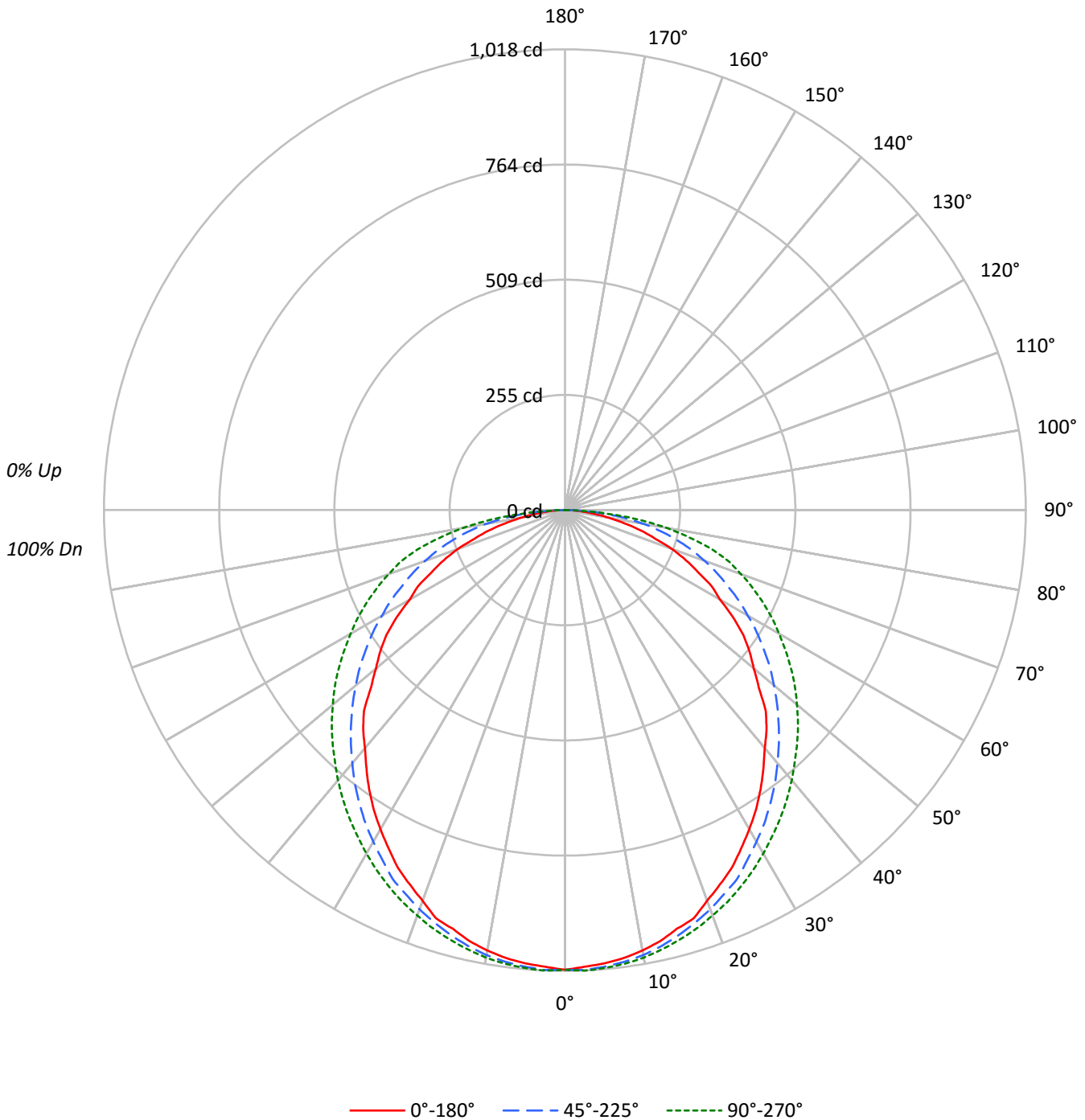
Input Watts (W): 28.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	98	94	105	100	96	92	96	93	90	92	89	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	60	53	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	51	44	38	49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2733	2733	2733
5°	2716	2736	2743
10°	2700	2728	2743
15°	2668	2708	2737
20°	2630	2688	2730
25°	2590	2671	2727
30°	2530	2629	2724
35°	2475	2598	2727
40°	2412	2565	2738
45°	2387	2542	2762
50°	2280	2523	2802
55°	2257	2515	2861
60°	2129	2511	2940
65°	2066	2528	3072
70°	1983	2588	3260
75°	1808	2666	3510
80°	1550	2762	3547
85°	1254	2640	3041



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	96.1	3.2
10°-20°	274.1	9.1
20°-30°	412.6	13.6
30°-40°	495.2	16.4
40°-50°	517.6	17.1
50°-60°	482.3	15.9
60°-70°	395.6	13.1
70°-80°	266.6	8.8
80°-90°	86.8	2.9
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°	782.8	25.9
0°-40°	1278.1	42.2
0°-60°	2278.0	75.3
0°-90°	3027.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3027.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1016	1016	1016	1016	1016	
5°	1005	1008	1013	1014	1016	95
15°	958	963	972	981	982	271
25°	872	878	900	913	918	401
35°	753	764	791	819	830	471
45°	627	632	668	708	726	479
55°	481	490	536	587	610	426
65°	324	339	397	455	482	323
75°	174	193	256	314	338	183
85°	41	58	86	100	98	48
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1015.6	1015.6	1015.6	1015.6	1015.6
2.5°	1009.8	1012.7	1017.0	1018.5	1018.5
5°	1005.4	1008.3	1012.7	1014.1	1015.6
7.5°	998.2	1001.1	1006.9	1009.8	1011.2
10°	988.1	991.0	998.2	1002.5	1004.0
12.5°	975.0	977.9	986.6	992.4	993.9
15°	957.6	963.4	972.1	980.8	982.3
17.5°	946.0	944.6	956.2	966.3	969.2
20°	918.5	925.8	938.8	950.4	953.3
22.5°	895.3	901.1	918.5	931.6	937.4
25°	872.2	878.0	899.7	912.7	918.5
27.5°	843.2	851.9	872.2	891.0	898.2
30°	814.2	822.9	846.1	867.8	876.5
32.5°	785.2	795.4	820.0	843.2	853.3
35°	753.4	763.5	791.0	818.6	830.1
37.5°	720.0	733.1	762.1	792.5	805.5
40°	686.7	699.8	730.2	764.9	779.4
42.5°	659.2	665.0	699.8	737.4	751.9
45°	627.3	631.7	667.9	708.4	725.8
47.5°	581.0	596.9	636.0	680.9	698.3
50°	544.7	562.1	602.7	650.5	669.3
52.5°	514.3	525.9	570.8	618.6	640.4
55°	481.0	489.7	536.0	586.7	609.9
57.5°	440.4	456.4	502.7	554.9	578.1
60°	395.5	415.8	466.5	523.0	546.2
62.5°	366.5	378.1	433.2	489.7	515.8
65°	324.5	339.0	397.0	454.9	482.4
67.5°	289.8	304.2	363.6	421.6	449.1
70°	252.1	266.6	328.9	386.8	414.3
72.5°	208.6	228.9	294.1	352.0	381.0
75°	173.9	192.7	256.4	314.4	337.6
77.5°	134.7	159.4	218.8	266.6	284.0
80°	100.0	124.6	178.2	213.0	228.9
82.5°	68.1	92.7	133.3	159.4	168.1
85°	40.6	58.0	85.5	100.0	98.5
87.5°	18.8	24.6	34.8	34.8	33.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)