

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: P312582

Luminaire Tested: **22FCZ2-44HE-UNV-L83050-HRP-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: P312582
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-22)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 22FCZ2-44HE-UNV-L83050-HRP-CP187-W2A-U-4000K
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. 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: 3148.0 lumens
Efficiency: N/A
Efficacy: 82.6 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

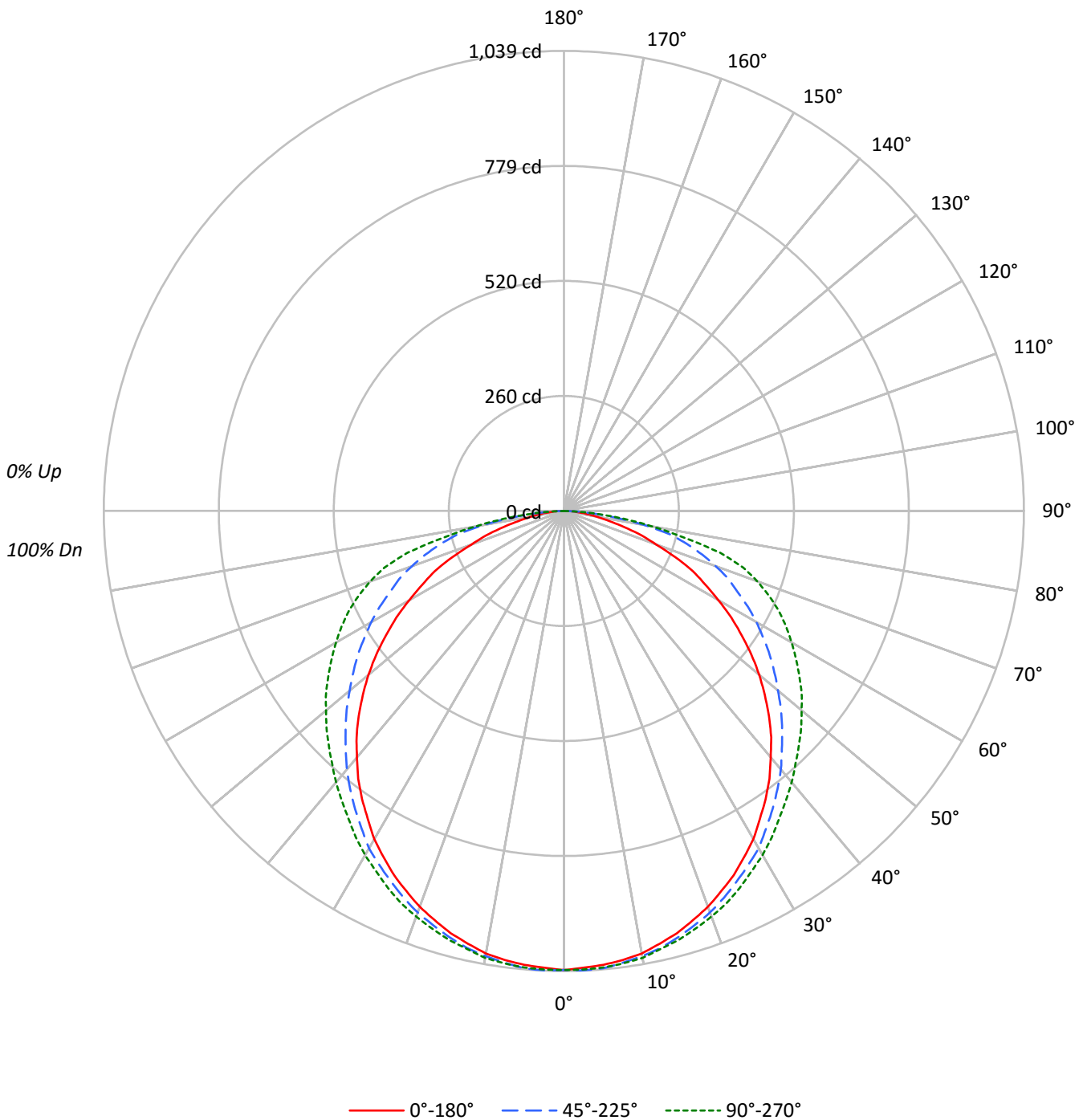
Input Watts (W): 38.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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	101	96	93	96	93	90	92	90	87	89	87	84	82
2	98	89	82	76	95	87	80	75	84	78	73	80	75	71	77	73	70	68
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	59	52	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	50	43	38	49	43	38	36
7	64	50	41	34	62	49	40	34	47	40	34	46	39	34	44	38	33	31
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	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2789	2789	2789
5°	2779	2800	2795
10°	2773	2789	2800
15°	2750	2777	2794
20°	2724	2764	2792
25°	2695	2742	2789
30°	2660	2733	2789
35°	2609	2701	2785
40°	2553	2679	2811
45°	2494	2653	2856
50°	2411	2644	2935
55°	2301	2664	3047
60°	2169	2704	3196
65°	2048	2756	3414
70°	1750	2875	3656
75°	1466	2993	3799
80°	1199	2893	3169
85°	1044	2146	2331



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	98.2	3.1
10°-20°	281.0	8.9
20°-30°	425.9	13.5
30°-40°	514.3	16.3
40°-50°	540.4	17.2
50°-60°	508.4	16.2
60°-70°	423.9	13.5
70°-80°	280.9	8.9
80°-90°	74.9	2.4
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°	805.2	25.6
0°-40°	1319.5	41.9
0°-60°	2368.3	75.2
0°-90°	3148.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3148.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1037	1037	1037	1037	1037	
5°	1029	1031	1037	1037	1035	98
15°	987	991	997	1001	1003	278
25°	908	914	923	935	939	418
35°	794	802	822	840	848	497
45°	655	665	697	733	751	505
55°	490	512	568	626	649	439
65°	322	350	433	504	536	313
75°	141	197	288	348	365	153
85°	34	52	70	76	76	39
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1036.6	1036.6	1036.6	1036.6	1036.6
2.5°	1032.6	1034.6	1038.6	1038.6	1036.6
5°	1028.7	1030.6	1036.6	1036.6	1034.6
7.5°	1022.7	1024.7	1028.7	1032.6	1030.6
10°	1014.8	1016.7	1020.7	1024.7	1024.7
12.5°	1000.9	1002.8	1010.8	1012.8	1012.8
15°	987.0	990.9	996.9	1000.9	1002.8
17.5°	969.1	973.1	981.0	988.9	988.9
20°	951.2	955.2	965.1	973.1	975.0
22.5°	929.4	935.3	945.3	955.2	959.2
25°	907.5	913.5	923.4	935.3	939.3
27.5°	881.7	887.7	901.6	915.5	917.5
30°	855.9	861.8	879.7	891.6	897.6
32.5°	824.1	832.1	849.9	867.8	873.8
35°	794.3	802.3	822.1	840.0	847.9
37.5°	762.6	770.5	792.3	814.2	824.1
40°	726.8	736.7	762.6	786.4	800.3
42.5°	693.1	703.0	728.8	760.6	774.5
45°	655.3	665.3	697.0	732.8	750.6
47.5°	615.6	627.5	665.3	708.9	726.8
50°	575.9	589.8	631.5	681.1	701.0
52.5°	534.2	552.1	599.7	653.3	677.2
55°	490.5	512.3	567.9	625.5	649.4
57.5°	448.8	468.7	534.2	595.7	621.6
60°	403.1	428.9	502.4	566.0	593.8
62.5°	359.4	387.2	468.7	536.2	566.0
65°	321.7	349.5	432.9	504.4	536.2
67.5°	272.1	309.8	403.1	470.6	502.4
70°	222.4	274.0	365.4	434.9	464.7
72.5°	184.7	234.3	327.7	397.2	425.0
75°	141.0	196.6	287.9	347.5	365.4
77.5°	105.2	162.8	246.2	276.0	278.0
80°	77.4	125.1	186.7	196.6	204.5
82.5°	53.6	87.4	121.1	133.1	137.0
85°	33.8	51.6	69.5	75.5	75.5
87.5°	17.9	19.9	23.8	23.8	23.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)