

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: P312584

Luminaire Tested: **22FCZ2-44HE-UNV-L83050-HRP-CP187-W2A-U-5000K**

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: P312584
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-5000K
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.187" POLYCARB SHEET
Light Source: (168) 5000K 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: 3178.0 lumens
Efficiency: N/A
Efficacy: 81.5 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

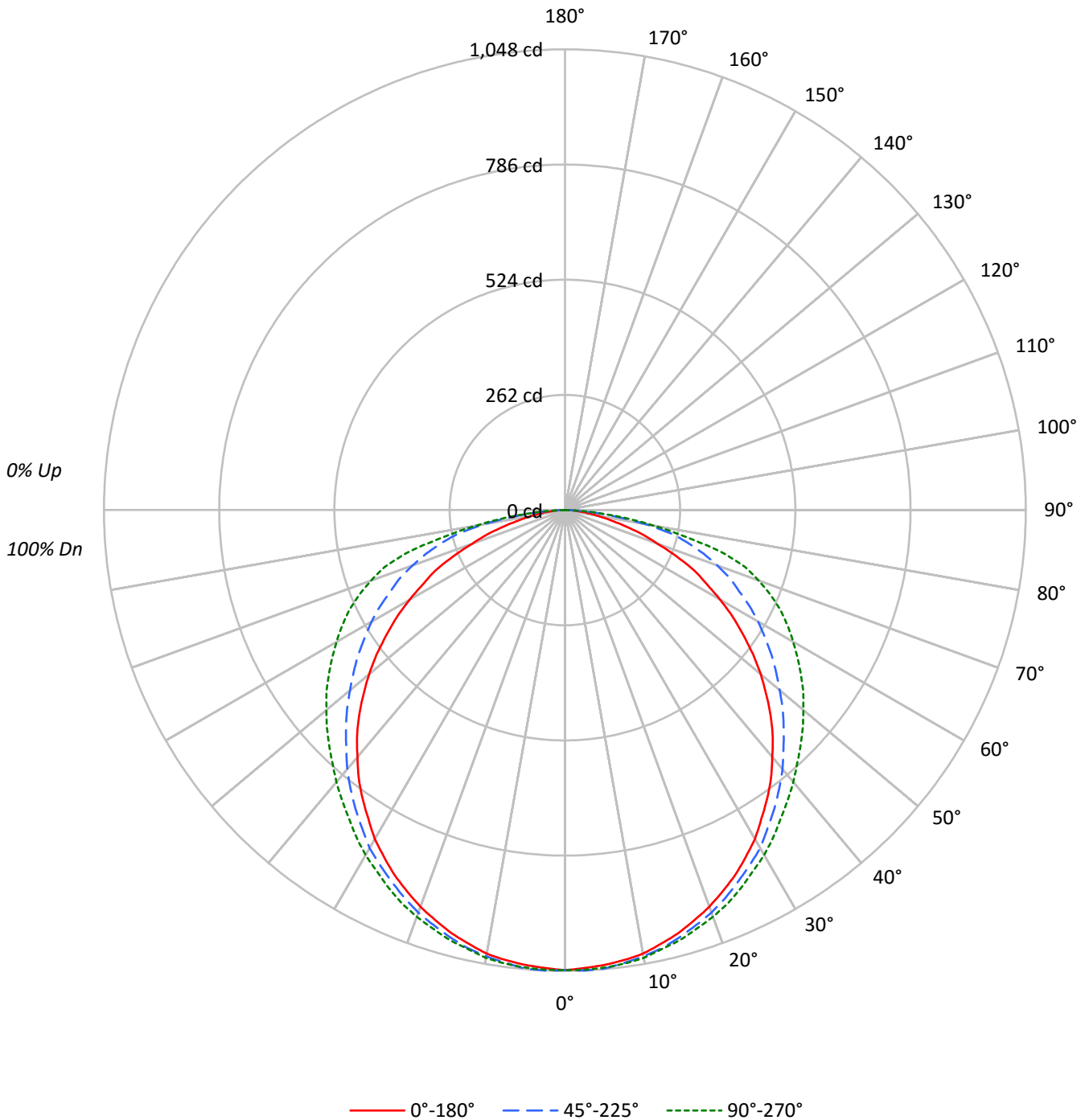
Input Watts (W): 39
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	2816	2816	2816
5°	2805	2827	2821
10°	2799	2816	2827
15°	2776	2804	2820
20°	2750	2790	2819
25°	2720	2768	2815
30°	2685	2760	2816
35°	2634	2727	2812
40°	2577	2704	2838
45°	2518	2678	2884
50°	2434	2669	2963
55°	2323	2690	3076
60°	2190	2730	3226
65°	2068	2783	3447
70°	1766	2902	3691
75°	1480	3022	3836
80°	1212	2920	3200
85°	1053	2167	2353



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	99.2	3.1
10°-20°	283.7	8.9
20°-30°	430.0	13.5
30°-40°	519.2	16.3
40°-50°	545.5	17.2
50°-60°	513.3	16.2
60°-70°	428.0	13.5
70°-80°	283.6	8.9
80°-90°	75.6	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°	812.9	25.6
0°-40°	1332.0	41.9
0°-60°	2390.9	75.2
0°-90°	3178.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3178.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1046	1046	1046	1046	1046	
5°	1038	1040	1046	1046	1044	99
15°	996	1000	1006	1010	1012	281
25°	916	922	932	944	948	422
35°	802	810	830	848	856	501
45°	662	672	704	740	758	510
55°	495	517	573	632	656	443
65°	325	353	437	509	541	316
75°	142	198	291	351	369	154
85°	34	52	70	76	76	40
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1046.5	1046.5	1046.5	1046.5	1046.5
2.5°	1042.5	1044.5	1048.5	1048.5	1046.5
5°	1038.5	1040.5	1046.5	1046.5	1044.5
7.5°	1032.4	1034.5	1038.5	1042.5	1040.5
10°	1024.4	1026.4	1030.4	1034.5	1034.5
12.5°	1010.4	1012.4	1020.4	1022.4	1022.4
15°	996.4	1000.4	1006.4	1010.4	1012.4
17.5°	978.3	982.3	990.3	998.4	998.4
20°	960.3	964.3	974.3	982.3	984.3
22.5°	938.2	944.2	954.3	964.3	968.3
25°	916.2	922.2	932.2	944.2	948.2
27.5°	890.1	896.1	910.2	924.2	926.2
30°	864.0	870.1	888.1	900.1	906.1
32.5°	832.0	840.0	858.0	876.1	882.1
35°	801.9	809.9	830.0	848.0	856.0
37.5°	769.8	777.8	799.9	821.9	832.0
40°	733.7	743.8	769.8	793.9	807.9
42.5°	699.7	709.7	735.7	767.8	781.9
45°	661.6	671.6	703.7	739.8	757.8
47.5°	621.5	633.5	671.6	715.7	733.7
50°	581.4	595.4	637.5	687.6	707.7
52.5°	539.3	557.3	605.4	659.6	683.6
55°	495.2	517.2	573.4	631.5	655.6
57.5°	453.1	473.1	539.3	601.4	627.5
60°	407.0	433.0	507.2	571.4	599.4
62.5°	362.9	390.9	473.1	541.3	571.4
65°	324.8	352.8	437.0	509.2	541.3
67.5°	274.7	312.7	407.0	475.1	507.2
70°	224.5	276.7	368.9	439.0	469.1
72.5°	186.4	236.6	330.8	401.0	429.0
75°	142.3	198.5	290.7	350.8	368.9
77.5°	106.3	164.4	248.6	278.7	280.7
80°	78.2	126.3	188.4	198.5	206.5
82.5°	54.1	88.2	122.3	134.3	138.3
85°	34.1	52.1	70.2	76.2	76.2
87.5°	18.0	20.0	24.1	24.1	24.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)