

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: P313419

Luminaire Tested: **24FCZ2-30HE-UNV-L83050-RDP-CA08-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: P313419
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-30HE-UNV-L83050-RDP-CA08-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC SHEET
Light Source: (336) 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: 2001.0 lumens
Efficiency: N/A
Efficacy: 90.5 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

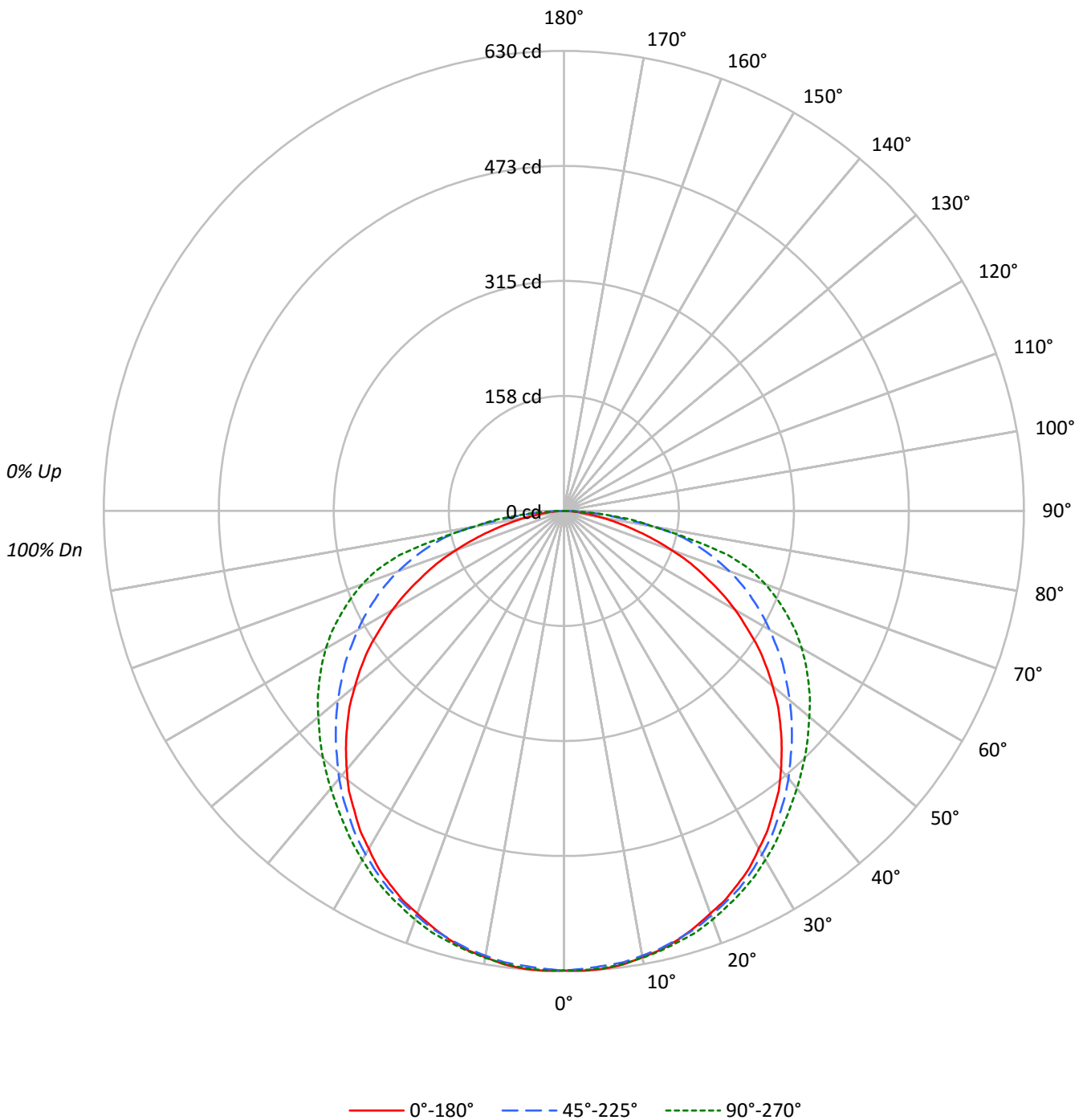
Input Watts (W): 22.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	100	96	92	96	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	847	847	847
5°	850	845	849
10°	847	845	849
15°	846	845	850
20°	840	844	853
25°	837	846	855
30°	830	843	857
35°	822	841	861
40°	812	840	872
45°	799	840	891
50°	781	846	918
55°	761	859	959
60°	729	876	1012
65°	683	907	1074
70°	621	949	1156
75°	526	1001	1207
80°	415	1007	976
85°	307	766	858



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	59.7	3.0
10°-20°	171.8	8.6
20°-30°	262.7	13.1
30°-40°	321.2	16.0
40°-50°	342.3	17.1
50°-60°	327.3	16.4
60°-70°	277.2	13.9
70°-80°	186.3	9.3
80°-90°	52.6	2.6
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°	494.2	24.7
0°-40°	815.3	40.7
0°-60°	1484.9	74.2
0°-90°	2001.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2001.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	629	629	629	629	629	
5°	629	628	625	628	628	60
15°	607	607	606	611	610	171
25°	564	566	570	575	576	260
35°	500	504	512	522	524	313
45°	420	427	442	460	468	324
55°	325	336	366	395	409	289
65°	214	236	285	323	338	213
75°	101	138	192	225	232	108
85°	20	41	50	54	56	25
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	629.3	629.3	629.3	629.3	629.3
2.5°	630.2	630.2	627.3	629.3	629.3
5°	629.3	628.3	625.3	628.3	628.3
7.5°	626.3	625.3	623.3	626.3	625.3
10°	620.3	620.3	618.3	621.3	621.3
12.5°	615.4	614.4	613.4	617.3	616.4
15°	607.4	607.4	606.4	611.4	610.4
17.5°	597.5	598.5	599.5	603.5	604.4
20°	586.6	588.6	589.6	595.5	595.5
22.5°	576.7	577.6	579.6	585.6	585.6
25°	563.8	565.7	569.7	574.7	575.7
27.5°	550.8	551.8	556.8	563.8	564.7
30°	534.0	537.0	542.9	550.8	551.8
32.5°	519.1	522.1	529.0	537.0	538.9
35°	500.2	504.2	512.1	522.1	524.1
37.5°	483.4	486.3	496.3	507.2	510.2
40°	462.5	468.5	478.4	491.3	496.3
42.5°	441.7	447.6	459.5	476.4	482.4
45°	419.8	426.8	441.7	460.5	468.5
47.5°	398.0	405.9	422.8	444.6	453.6
50°	373.2	383.1	404.0	428.8	438.7
52.5°	349.4	361.3	384.1	411.9	424.8
55°	324.6	336.5	366.2	395.0	408.9
57.5°	296.8	312.6	345.4	378.1	393.0
60°	271.0	285.8	325.5	361.3	376.2
62.5°	243.2	263.0	305.7	343.4	358.3
65°	214.4	236.2	284.9	322.6	337.5
67.5°	188.6	212.4	264.0	301.7	316.6
70°	157.8	187.6	241.2	278.9	293.8
72.5°	129.0	161.8	217.4	254.1	268.0
75°	101.2	138.0	192.5	225.3	232.2
77.5°	75.4	114.1	166.7	180.6	175.7
80°	53.6	91.3	130.0	123.1	126.0
82.5°	34.7	69.5	80.4	91.3	94.3
85°	19.9	40.7	49.6	53.6	55.6
87.5°	8.9	14.9	19.9	19.9	18.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)