

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: P313047

Luminaire Tested: **24FCZ2-30HE-UNV-L83050-HRP-CA125-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: P313047
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)
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-HRP-CA125-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" ACRYLIC SHEET
Light Source: (336) 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: 2281.0 lumens
Efficiency: N/A
Efficacy: 105.6 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

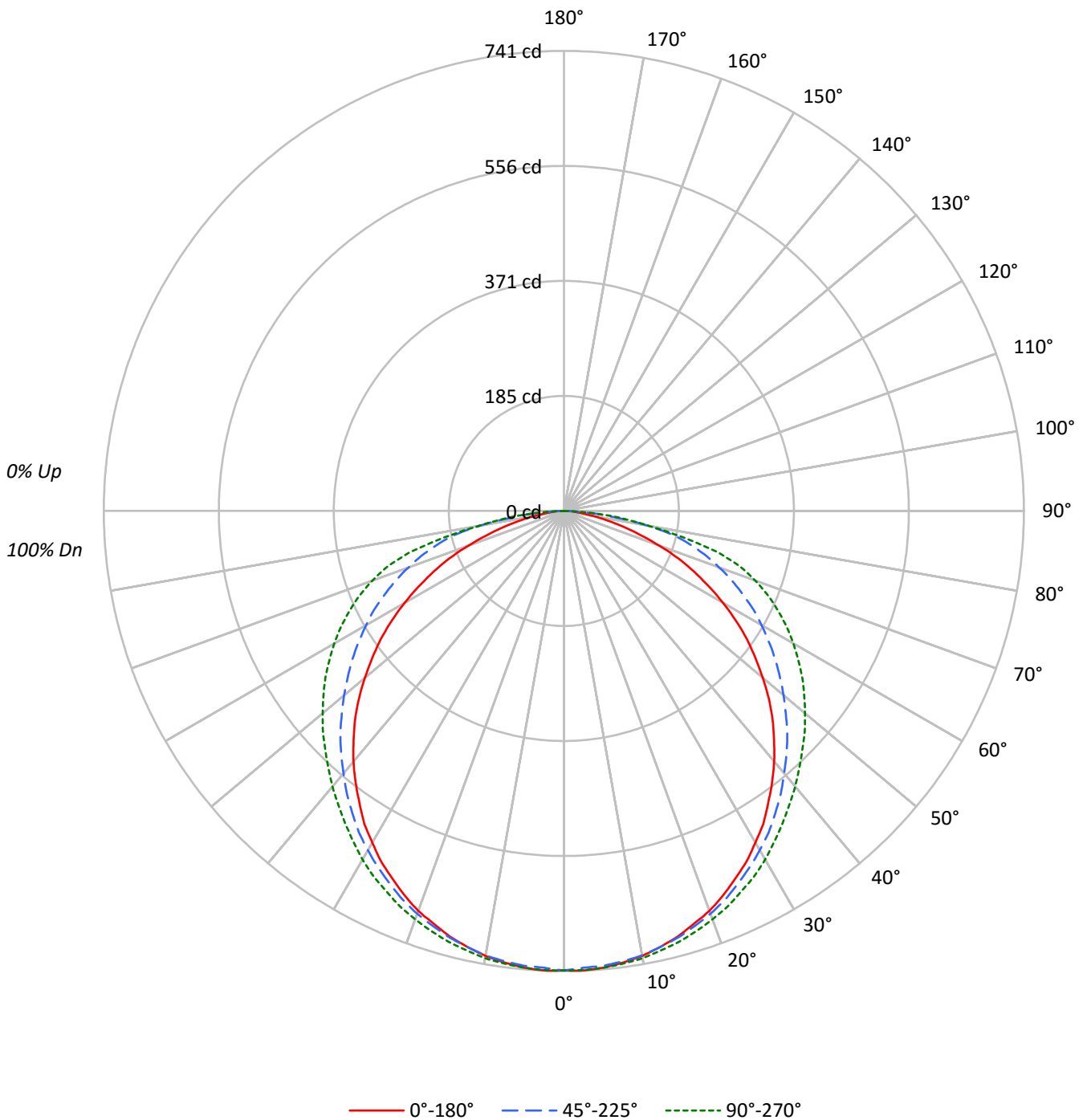
Input Watts (W): 21.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	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	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	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	24	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	996	996	996
5°	997	993	997
10°	994	993	999
15°	988	991	1000
20°	982	989	1002
25°	970	984	1004
30°	958	981	1007
35°	943	976	1009
40°	926	970	1018
45°	905	969	1034
50°	876	967	1061
55°	844	974	1100
60°	797	989	1149
65°	736	1012	1213
70°	642	1048	1292
75°	521	1102	1336
80°	385	1080	1080
85°	295	797	900



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	70.1	3.1
10°-20°	201.3	8.8
20°-30°	306.5	13.4
30°-40°	372.2	16.3
40°-50°	393.2	17.2
50°-60°	371.0	16.3
60°-70°	308.5	13.5
70°-80°	202.9	8.9
80°-90°	55.3	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°	577.9	25.3
0°-40°	950.1	41.7
0°-60°	1714.3	75.2
0°-90°	2281.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2281.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	740	740	740	740	740	
5°	738	738	735	738	738	70
15°	710	710	711	718	718	200
25°	653	657	663	674	676	301
35°	574	581	594	609	614	359
45°	476	485	509	534	543	366
55°	360	375	415	454	469	321
65°	231	258	318	365	381	228
75°	100	146	212	251	257	108
85°	19	42	52	57	58	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	740.1	740.1	740.1	740.1	740.1
2.5°	741.0	740.1	736.3	740.1	740.1
5°	738.2	738.2	735.3	738.2	738.2
7.5°	733.4	733.4	731.5	735.3	735.3
10°	727.7	727.7	726.7	731.5	731.5
12.5°	719.1	720.0	719.1	724.8	724.8
15°	709.5	710.5	711.4	718.1	718.1
17.5°	697.1	699.0	700.9	708.6	709.5
20°	685.6	686.6	690.4	699.0	700.0
22.5°	670.4	673.2	678.0	686.6	689.5
25°	653.2	657.0	662.7	674.2	676.1
27.5°	636.9	639.8	647.4	659.9	663.7
30°	616.9	621.7	631.2	643.6	648.4
32.5°	597.8	602.6	614.0	627.4	631.2
35°	573.9	580.6	594.0	609.2	614.0
37.5°	551.0	557.7	573.9	591.1	596.8
40°	527.1	534.8	552.0	572.0	579.6
42.5°	501.3	511.8	530.9	552.9	561.5
45°	475.6	485.1	509.0	533.8	543.4
47.5°	447.9	459.3	485.1	514.7	526.2
50°	418.3	432.6	462.2	494.7	507.1
52.5°	388.7	404.9	438.3	474.6	488.0
55°	360.0	375.3	415.4	454.5	468.9
57.5°	328.5	347.6	391.5	433.5	447.9
60°	296.0	317.0	367.6	411.6	426.9
62.5°	263.6	287.4	344.7	388.7	404.9
65°	231.1	257.8	318.0	364.8	381.0
67.5°	199.6	229.2	293.2	340.0	356.2
70°	163.3	200.5	266.4	312.3	328.5
72.5°	129.9	172.8	240.6	283.6	297.9
75°	100.3	146.1	212.0	251.1	256.9
77.5°	73.5	119.4	182.4	195.8	196.7
80°	49.7	95.5	139.4	137.5	139.4
82.5°	32.5	71.6	87.9	98.4	99.3
85°	19.1	42.0	51.6	57.3	58.3
87.5°	9.5	14.3	18.1	19.1	21.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)