

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: P313053

Luminaire Tested: **24FCZ2-30HE-UNV-L83050-HRP-CP125-W2A-U-4500K**

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: P313053
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-CP125-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" POLYCARB SHEET
Light Source: (336) 4500K 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: 2258.0 lumens
Efficiency: N/A
Efficacy: 102.2 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

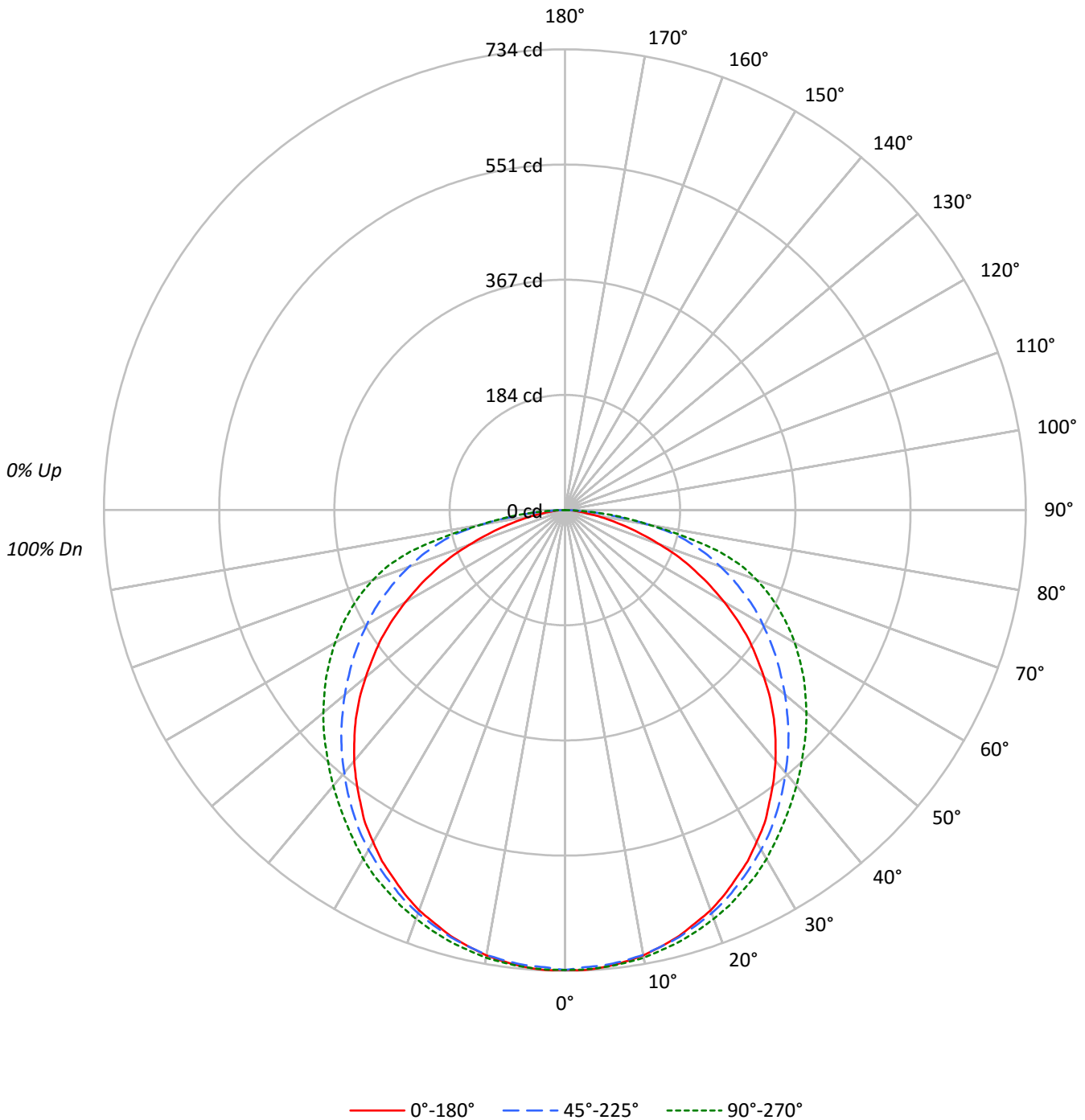
Input Watts (W): 22.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	986	986	986
5°	987	983	987
10°	984	983	989
15°	978	981	990
20°	972	979	992
25°	960	974	994
30°	949	971	997
35°	933	966	998
40°	916	960	1008
45°	896	959	1024
50°	867	958	1051
55°	836	965	1089
60°	788	979	1137
65°	728	1002	1201
70°	636	1037	1279
75°	516	1091	1322
80°	381	1069	1069
85°	292	787	891



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	69.4	3.1
10°-20°	199.3	8.8
20°-30°	303.4	13.4
30°-40°	368.4	16.3
40°-50°	389.2	17.2
50°-60°	367.3	16.3
60°-70°	305.4	13.5
70°-80°	200.9	8.9
80°-90°	54.8	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°	572.1	25.3
0°-40°	940.5	41.7
0°-60°	1697.0	75.2
0°-90°	2258.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2258.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	733	733	733	733	733	
5°	731	731	728	731	731	69
15°	702	703	704	711	711	198
25°	647	650	656	667	669	298
35°	568	575	588	603	608	356
45°	471	480	504	528	538	363
55°	356	372	411	450	464	317
65°	229	255	315	361	377	226
75°	99	145	210	249	254	107
85°	19	42	51	57	58	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	732.6	732.6	732.6	732.6	732.6
2.5°	733.6	732.6	728.8	732.6	732.6
5°	730.7	730.7	727.9	730.7	730.7
7.5°	726.0	726.0	724.1	727.9	727.9
10°	720.3	720.3	719.4	724.1	724.1
12.5°	711.8	712.8	711.8	717.5	717.5
15°	702.4	703.3	704.3	710.9	710.9
17.5°	690.1	692.0	693.9	701.4	702.4
20°	678.7	679.7	683.5	692.0	692.9
22.5°	663.6	666.4	671.2	679.7	682.5
25°	646.6	650.4	656.0	667.4	669.3
27.5°	630.5	633.4	640.9	653.2	657.0
30°	610.7	615.4	624.8	637.1	641.9
32.5°	591.8	596.5	607.8	621.1	624.8
35°	568.1	574.7	588.0	603.1	607.8
37.5°	545.4	552.1	568.1	585.1	590.8
40°	521.8	529.4	546.4	566.2	573.8
42.5°	496.3	506.7	525.6	547.3	555.8
45°	470.8	480.2	503.8	528.4	537.9
47.5°	443.3	454.7	480.2	509.5	520.9
50°	414.0	428.2	457.5	489.7	502.0
52.5°	384.7	400.8	433.9	469.8	483.0
55°	356.4	371.5	411.2	450.0	464.1
57.5°	325.2	344.1	387.6	429.2	443.3
60°	293.0	313.8	363.9	407.4	422.6
62.5°	260.9	284.5	341.3	384.7	400.8
65°	228.8	255.2	314.8	361.1	377.2
67.5°	197.6	226.9	290.2	336.5	352.6
70°	161.6	198.5	263.7	309.1	325.2
72.5°	128.6	171.1	238.2	280.8	294.9
75°	99.3	144.6	209.9	248.6	254.3
77.5°	72.8	118.2	180.6	193.8	194.7
80°	49.2	94.5	138.0	136.1	138.0
82.5°	32.1	70.9	87.0	97.4	98.3
85°	18.9	41.6	51.0	56.7	57.7
87.5°	9.5	14.2	18.0	18.9	20.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)