

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: P311902

Luminaire Tested: **14FCZ2-29-UNV-L83050-HRP-CP125-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: P311902
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-18)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 14FCZ2-29-UNV-L83050-HRP-CP125-W2A-U-4000K
Description: 1'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" 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: 2180.0 lumens
Efficiency: N/A
Efficacy: 89.7 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.29 / 1.39
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

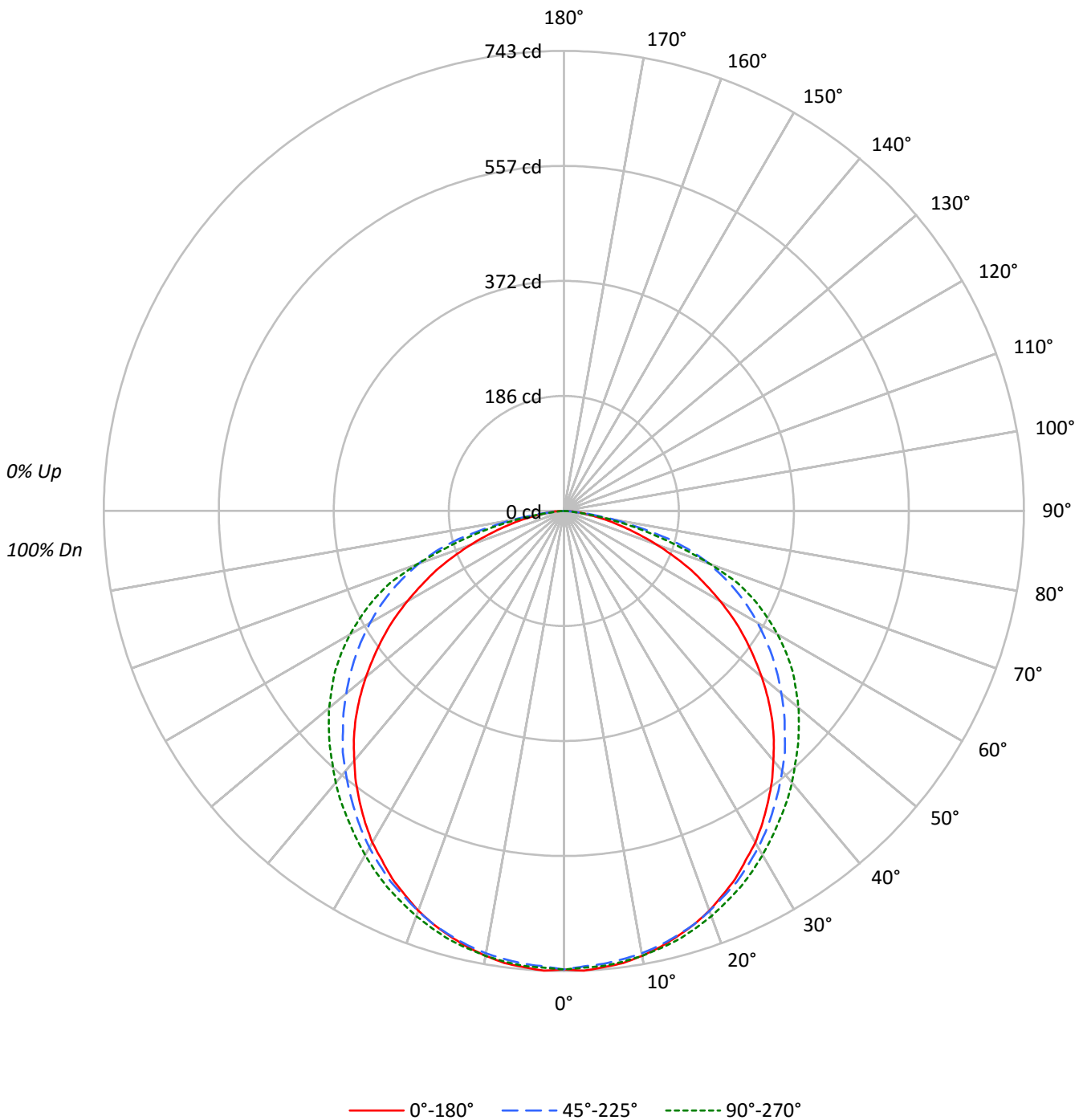
Input Watts (W): 24.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	109	104	100	96	106	102	98	94	97	94	91	93	91	88	90	88	86	84
2	99	90	83	78	96	88	82	77	85	79	75	82	77	73	78	75	71	69
3	90	79	71	64	87	77	70	64	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	64	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	69	56	47	40	68	55	46	40	53	45	40	51	45	39	50	44	39	37
7	64	51	42	36	63	50	41	35	48	41	35	47	40	35	45	39	35	33
8	60	46	38	32	58	45	37	32	44	37	31	43	36	31	42	36	31	29
9	56	42	34	28	54	42	34	28	41	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	38	31	26	37	30	26	37	30	25	36	30	25	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1992	1992	1992
5°	1998	1983	1992
10°	1993	1982	1993
15°	1981	1977	1996
20°	1967	1969	1995
25°	1946	1962	1995
30°	1921	1951	1994
35°	1887	1937	1997
40°	1850	1926	2013
45°	1810	1920	2035
50°	1748	1920	2072
55°	1673	1930	2116
60°	1572	1945	2144
65°	1449	1964	2156
70°	1262	1969	1985
75°	1041	1832	1603
80°	818	1317	1072
85°	636	509	253



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	70.1	3.2
10°-20°	201.1	9.2
20°-30°	305.4	14.0
30°-40°	370.1	17.0
40°-50°	389.9	17.9
50°-60°	364.1	16.7
60°-70°	290.9	13.3
70°-80°	160.1	7.3
80°-90°	28.3	1.3
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°	576.6	26.5
0°-40°	946.7	43.4
0°-60°	1700.7	78.0
0°-90°	2180.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2180.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	740	740	740	740	740	
5°	740	738	734	739	738	70
15°	711	711	710	716	716	201
25°	655	657	661	670	672	302
35°	574	580	590	605	608	359
45°	476	485	504	527	535	366
55°	356	374	411	440	451	318
65°	228	256	308	334	339	224
75°	100	143	176	158	154	108
85°	21	26	16	10	8	25
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	740.3	740.3	740.3	740.3	740.3
2.5°	743.1	741.0	736.2	740.3	738.3
5°	739.7	737.6	734.2	739.0	737.6
7.5°	736.2	733.5	730.1	735.5	734.2
10°	729.4	727.3	725.3	730.1	729.4
12.5°	721.1	720.5	718.4	723.9	723.2
15°	710.9	710.9	709.5	716.3	716.3
17.5°	699.9	699.2	699.9	707.4	706.7
20°	686.9	686.9	687.6	696.5	696.5
22.5°	671.1	671.8	673.8	684.8	684.1
25°	655.3	656.7	660.8	670.4	671.8
27.5°	636.1	639.6	644.4	656.0	657.4
30°	618.3	620.4	627.9	638.9	641.6
32.5°	597.1	601.2	609.4	621.7	625.2
35°	574.4	579.9	589.5	604.6	608.0
37.5°	551.8	556.6	569.6	585.4	591.6
40°	526.5	534.7	548.4	566.2	573.1
42.5°	501.8	510.0	528.5	547.0	553.2
45°	475.7	484.6	504.5	527.1	534.7
47.5°	446.9	457.2	482.6	506.6	514.8
50°	417.5	430.5	458.6	485.3	494.9
52.5°	386.6	403.1	435.3	463.4	472.3
55°	356.5	374.3	411.3	440.1	451.1
57.5°	325.6	344.8	386.6	419.5	425.7
60°	292.0	315.3	361.3	390.0	398.3
62.5°	259.1	285.9	335.2	362.6	369.5
65°	227.6	256.4	308.5	333.8	338.6
67.5°	193.3	227.6	279.0	302.3	303.7
70°	160.4	200.2	250.2	261.2	252.3
72.5°	128.2	170.7	216.6	207.7	200.2
75°	100.1	143.3	176.2	158.4	154.2
77.5°	74.0	117.2	126.1	116.5	109.0
80°	52.8	92.5	85.0	72.7	69.2
82.5°	36.3	58.3	46.6	36.3	31.5
85°	20.6	26.0	16.5	10.3	8.2
87.5°	8.9	6.2	3.4	2.7	2.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)