

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: P312303

Luminaire Tested: **14FCZ2-20-UNV-L83050-S-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: P312303
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-40)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 14FCZ2-20-UNV-L83050-S-CP125-W2A-U-4500K
Description: 1'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB SHEET
Light Source: (168) 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: 2102.0 lumens
Efficiency: N/A
Efficacy: 121.5 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.26 / 1.36
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

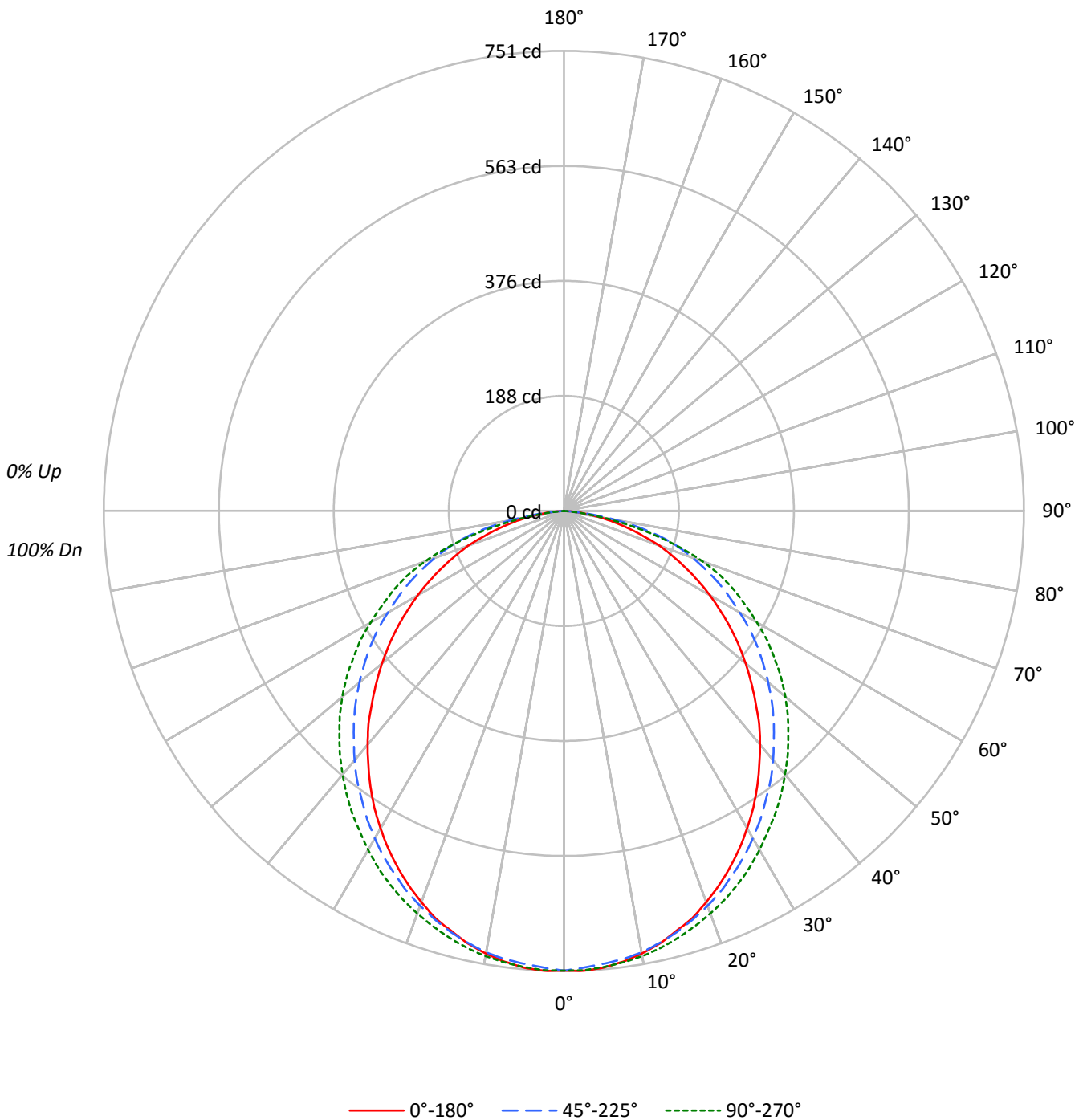
Input Watts (W): 17.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	94	91	89	90	88	86	84
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	70
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	65	61	58
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	50
5	76	63	54	47	74	62	53	47	59	52	46	57	51	46	56	50	45	43
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	38
7	65	51	42	36	63	50	42	36	49	41	36	47	41	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	32	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	40	32	26	52	39	31	26	38	31	26	37	31	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2019	2019	2019
5°	2021	2004	2019
10°	2005	1999	2016
15°	1977	1983	2009
20°	1946	1964	2003
25°	1906	1940	1996
30°	1859	1917	1985
35°	1808	1890	1979
40°	1750	1867	1973
45°	1686	1844	1971
50°	1623	1824	1976
55°	1555	1809	1970
60°	1481	1784	1957
65°	1394	1778	1957
70°	1312	1763	1902
75°	1137	1723	1625
80°	921	1389	1082
85°	611	482	321



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	70.9	3.4
10°-20°	201.6	9.6
20°-30°	302.5	14.4
30°-40°	360.8	17.2
40°-50°	373.0	17.7
50°-60°	340.5	16.2
60°-70°	268.0	12.7
70°-80°	156.0	7.4
80°-90°	28.7	1.4
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°	574.9	27.4
0°-40°	935.7	44.5
0°-60°	1649.2	78.5
0°-90°	2102.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2102.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	750	750	750	750	750	
5°	748	746	742	748	747	71
15°	710	711	712	721	721	200
25°	642	645	654	669	672	296
35°	550	558	575	597	602	344
45°	443	458	485	512	518	342
55°	331	349	386	414	420	296
65°	219	242	279	301	307	217
75°	109	136	166	163	156	116
85°	20	28	16	12	10	26
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	750.4	750.4	750.4	750.4	750.4
2.5°	751.4	749.3	746.2	751.4	750.4
5°	748.3	746.2	742.0	748.3	747.3
7.5°	742.0	740.0	737.9	744.1	743.1
10°	733.7	732.7	731.6	738.9	737.9
12.5°	723.3	723.3	722.2	730.6	730.6
15°	709.7	710.8	711.8	721.2	721.2
17.5°	697.2	696.2	699.3	709.7	710.8
20°	679.5	681.6	685.8	698.3	699.3
22.5°	661.8	663.9	671.2	683.7	686.8
25°	642.0	645.1	653.5	669.1	672.2
27.5°	621.1	625.3	636.8	653.5	656.6
30°	598.2	604.5	617.0	635.7	638.9
32.5°	575.3	581.5	597.2	615.9	620.1
35°	550.3	557.6	575.3	597.2	602.4
37.5°	524.2	533.6	554.4	576.3	582.6
40°	498.2	508.6	531.5	554.4	561.7
42.5°	472.1	482.5	507.5	533.6	540.9
45°	442.9	457.5	484.6	511.7	518.0
47.5°	414.8	430.4	460.6	487.7	496.1
50°	387.7	403.3	435.6	463.8	472.1
52.5°	359.6	376.2	410.6	439.8	447.1
55°	331.4	349.1	385.6	413.8	420.0
57.5°	303.3	322.0	359.6	386.7	393.9
60°	275.1	294.9	331.4	358.5	363.7
62.5°	247.0	267.8	305.4	329.3	334.5
65°	218.9	241.8	279.3	301.2	307.4
67.5°	191.8	214.7	251.2	272.0	277.2
70°	166.8	187.6	224.1	239.7	241.8
72.5°	135.5	161.5	197.0	205.3	200.1
75°	109.4	135.5	165.7	162.6	156.3
77.5°	83.4	109.4	129.2	118.8	110.5
80°	59.4	85.5	89.6	74.0	69.8
82.5°	38.6	59.4	50.0	38.6	31.3
85°	19.8	28.1	15.6	12.5	10.4
87.5°	6.3	4.2	2.1	2.1	1.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)