

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: P312752

Luminaire Tested: **22FCZ2-20HE-UNV-L83050-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: P312752
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-33)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 22FCZ2-20HE-UNV-L83050-CP125-W2A-U-4000K
Description: 2'X2' TROFFER LED MODULE, RIBBED 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: 1996.0 lumens
Efficiency: N/A
Efficacy: 116.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

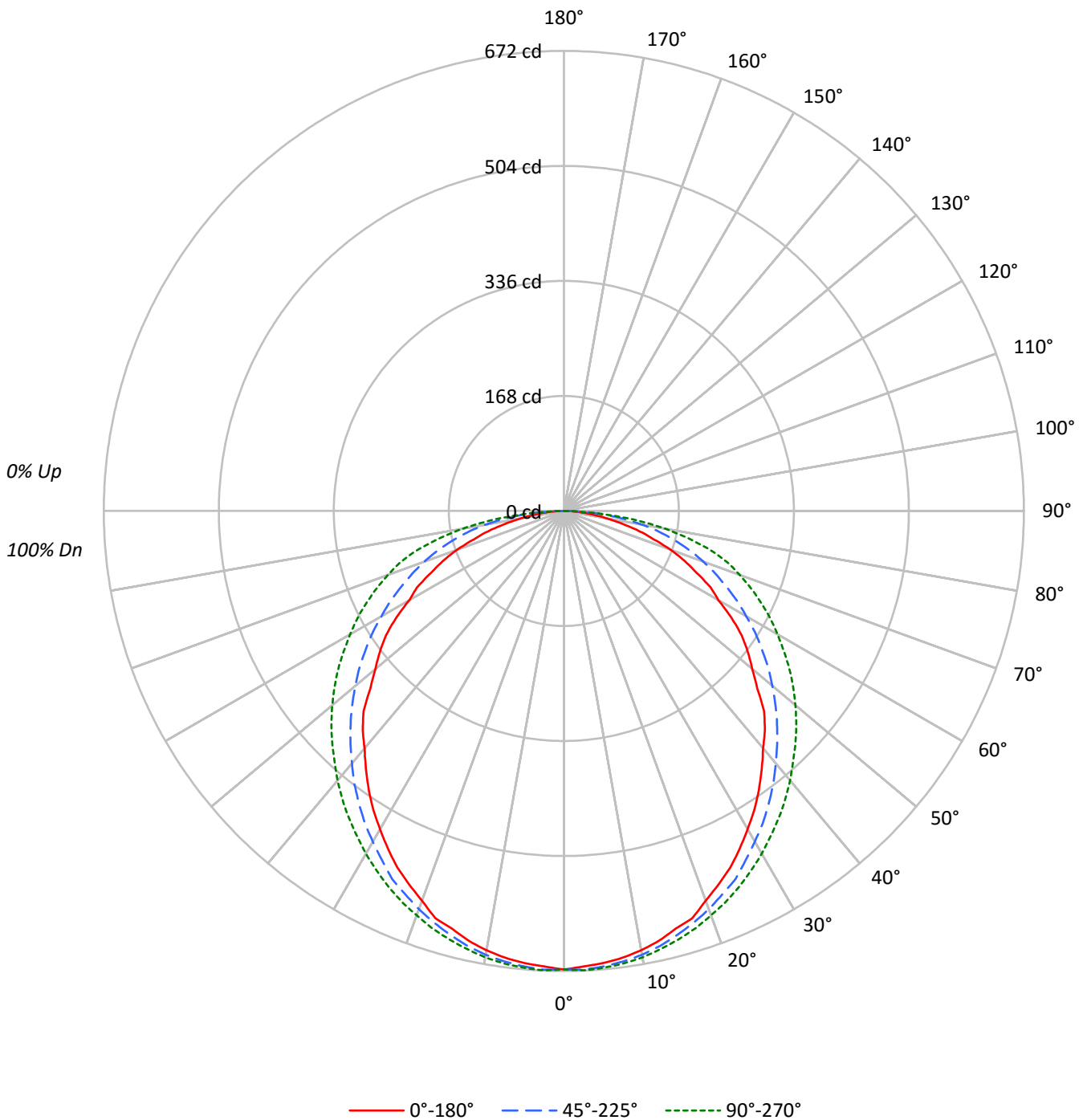
Input Watts (W): 17.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	108	103	98	94	105	100	96	92	96	93	90	92	89	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	60	68	63	59	56
4	81	69	60	53	79	67	59	52	65	57	51	62	56	51	60	55	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	39	51	44	38	49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1802	1802	1802
5°	1791	1804	1809
10°	1780	1799	1809
15°	1759	1786	1804
20°	1735	1773	1800
25°	1708	1761	1798
30°	1668	1734	1796
35°	1632	1713	1798
40°	1591	1691	1806
45°	1574	1676	1821
50°	1504	1664	1848
55°	1488	1658	1887
60°	1404	1655	1939
65°	1363	1667	2025
70°	1308	1707	2150
75°	1192	1758	2314
80°	1021	1821	2338
85°	824	1741	2007



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	63.4	3.2
10°-20°	180.8	9.1
20°-30°	272.1	13.6
30°-40°	326.5	16.4
40°-50°	341.3	17.1
50°-60°	318.1	15.9
60°-70°	260.9	13.1
70°-80°	175.8	8.8
80°-90°	57.2	2.9
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°	516.2	25.9
0°-40°	842.7	42.2
0°-60°	1502.1	75.3
0°-90°	1996.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1996.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	670	670	670	670	670	
5°	663	665	668	669	670	63
15°	632	635	641	647	648	178
25°	575	579	593	602	606	264
35°	497	504	522	540	547	311
45°	414	416	440	467	479	316
55°	317	323	354	387	402	281
65°	214	224	262	300	318	213
75°	115	127	169	207	223	120
85°	27	38	56	66	65	32
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	669.7	669.7	669.7	669.7	669.7
2.5°	665.9	667.8	670.6	671.6	671.6
5°	663.0	664.9	667.8	668.7	669.7
7.5°	658.2	660.1	663.9	665.9	666.8
10°	651.5	653.4	658.2	661.1	662.0
12.5°	642.9	644.8	650.6	654.4	655.3
15°	631.5	635.3	641.0	646.7	647.7
17.5°	623.8	622.9	630.5	637.2	639.1
20°	605.7	610.4	619.0	626.7	628.6
22.5°	590.4	594.2	605.7	614.3	618.1
25°	575.1	578.9	593.2	601.8	605.7
27.5°	556.0	561.7	575.1	587.5	592.3
30°	536.9	542.6	557.9	572.2	578.0
32.5°	517.8	524.5	540.7	556.0	562.7
35°	496.8	503.5	521.6	539.8	547.4
37.5°	474.8	483.4	502.5	522.6	531.2
40°	452.8	461.4	481.5	504.4	514.0
42.5°	434.7	438.5	461.4	486.3	495.8
45°	413.7	416.5	440.4	467.1	478.6
47.5°	383.1	393.6	419.4	449.0	460.5
50°	359.2	370.7	397.4	428.9	441.4
52.5°	339.1	346.8	376.4	407.9	422.2
55°	317.2	322.9	353.5	386.9	402.2
57.5°	290.4	300.9	331.5	365.9	381.2
60°	260.8	274.2	307.6	344.9	360.2
62.5°	241.7	249.3	285.6	322.9	340.1
65°	214.0	223.5	261.8	300.0	318.1
67.5°	191.1	200.6	239.8	278.0	296.1
70°	166.2	175.8	216.9	255.1	273.2
72.5°	137.6	150.9	193.9	232.1	251.2
75°	114.6	127.1	169.1	207.3	222.6
77.5°	88.8	105.1	144.3	175.8	187.2
80°	65.9	82.2	117.5	140.4	150.9
82.5°	44.9	61.1	87.9	105.1	110.8
85°	26.7	38.2	56.4	65.9	65.0
87.5°	12.4	16.2	22.9	22.9	22.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)