

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: P312762

Luminaire Tested: **22FCZ2-20HE-UNV-L83050-CP250-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: P312762
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-CP250-W2A-U-4000K
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS, 0.250" 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: 1896.0 lumens
Efficiency: N/A
Efficacy: 110.9 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

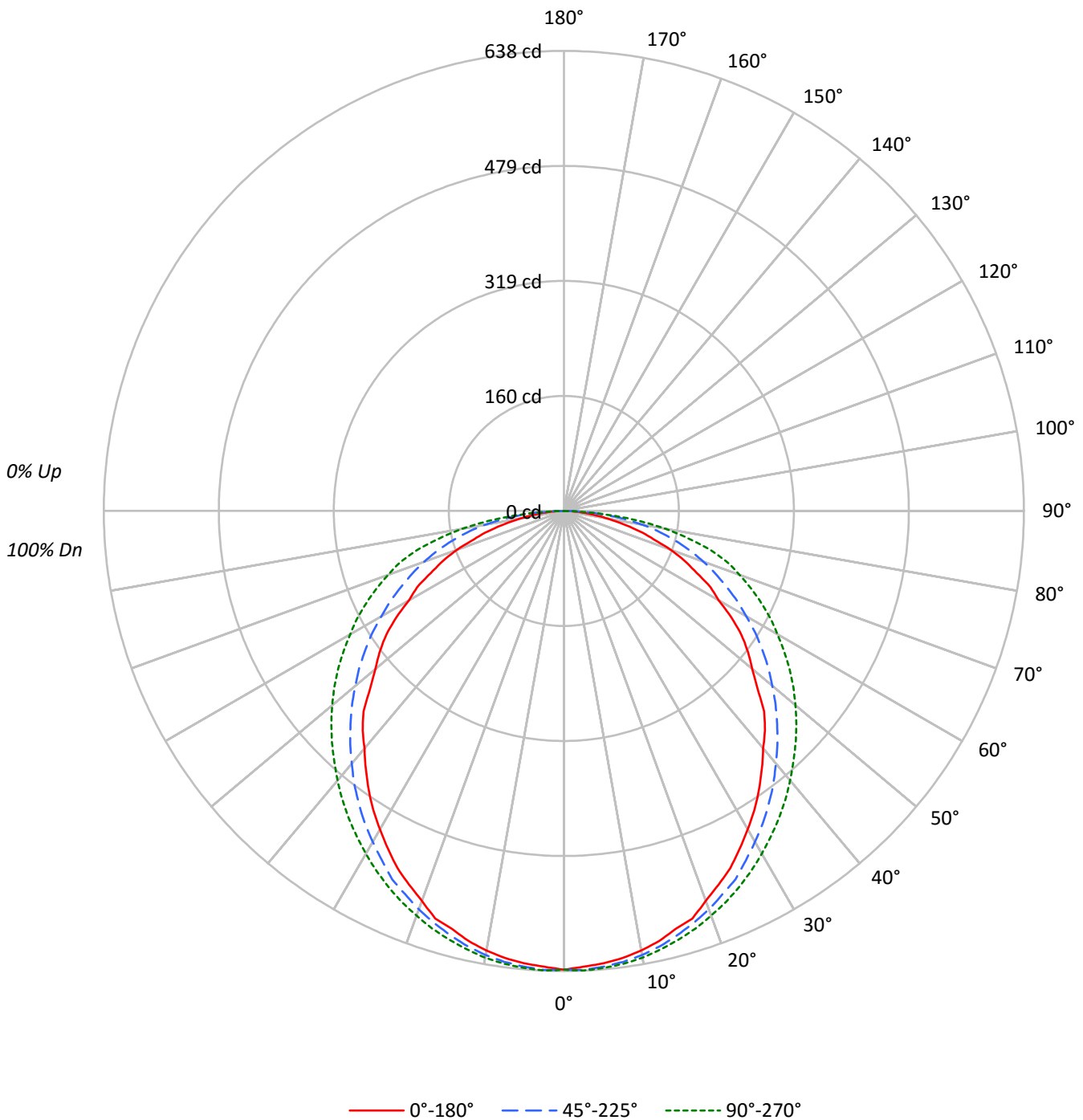
Input Watts (W): 17.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1712	1712	1712
5°	1701	1713	1718
10°	1691	1708	1718
15°	1671	1696	1714
20°	1647	1684	1710
25°	1622	1673	1708
30°	1585	1647	1706
35°	1550	1628	1708
40°	1511	1607	1715
45°	1495	1592	1730
50°	1428	1580	1755
55°	1414	1575	1792
60°	1333	1573	1841
65°	1294	1583	1924
70°	1242	1621	2042
75°	1132	1670	2198
80°	970	1729	2222
85°	784	1652	1905



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	60.2	3.2
10°-20°	171.7	9.1
20°-30°	258.4	13.6
30°-40°	310.2	16.4
40°-50°	324.2	17.1
50°-60°	302.1	15.9
60°-70°	247.8	13.1
70°-80°	167.0	8.8
80°-90°	54.4	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°	490.3	25.9
0°-40°	800.5	42.2
0°-60°	1426.8	75.3
0°-90°	1896.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1896.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	636	636	636	636	636	
5°	630	632	634	635	636	60
15°	600	604	609	614	615	170
25°	546	550	564	572	575	251
35°	472	478	496	513	520	295
45°	393	396	418	444	455	300
55°	301	307	336	368	382	267
65°	203	212	249	285	302	202
75°	109	121	161	197	211	114
85°	25	36	54	63	62	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	636.1	636.1	636.1	636.1	636.1
2.5°	632.5	634.3	637.0	637.9	637.9
5°	629.8	631.6	634.3	635.2	636.1
7.5°	625.2	627.0	630.7	632.5	633.4
10°	618.9	620.7	625.2	628.0	628.9
12.5°	610.7	612.5	618.0	621.6	622.5
15°	599.8	603.5	608.9	614.3	615.3
17.5°	592.6	591.7	598.9	605.3	607.1
20°	575.3	579.9	588.0	595.3	597.1
22.5°	560.8	564.4	575.3	583.5	587.1
25°	546.3	549.9	563.5	571.7	575.3
27.5°	528.1	533.6	546.3	558.1	562.6
30°	510.0	515.4	530.0	543.6	549.0
32.5°	491.8	498.2	513.6	528.1	534.5
35°	471.9	478.2	495.5	512.7	520.0
37.5°	451.0	459.2	477.3	496.4	504.5
40°	430.1	438.3	457.4	479.1	488.2
42.5°	412.9	416.5	438.3	461.9	471.0
45°	392.9	395.6	418.3	443.7	454.6
47.5°	363.9	373.9	398.4	426.5	437.4
50°	341.2	352.1	377.5	407.4	419.2
52.5°	322.1	329.4	357.5	387.5	401.1
55°	301.3	306.7	335.8	367.5	382.0
57.5°	275.9	285.8	314.9	347.6	362.1
60°	247.7	260.4	292.2	327.6	342.1
62.5°	229.6	236.8	271.3	306.7	323.1
65°	203.3	212.3	248.6	284.9	302.2
67.5°	181.5	190.6	227.8	264.1	281.3
70°	157.9	167.0	206.0	242.3	259.5
72.5°	130.7	143.4	184.2	220.5	238.7
75°	108.9	120.7	160.6	196.9	211.4
77.5°	84.4	99.8	137.0	167.0	177.9
80°	62.6	78.0	111.6	133.4	143.4
82.5°	42.7	58.1	83.5	99.8	105.3
85°	25.4	36.3	53.5	62.6	61.7
87.5°	11.8	15.4	21.8	21.8	20.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)