

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: P312764

Luminaire Tested: **22FCZ2-20HE-UNV-L83050-CP250-W2A-U-5000K**

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: P312764  
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-5000K  
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS, 0.250" POLYCARB SHEET  
Light Source: (168) 5000K 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**

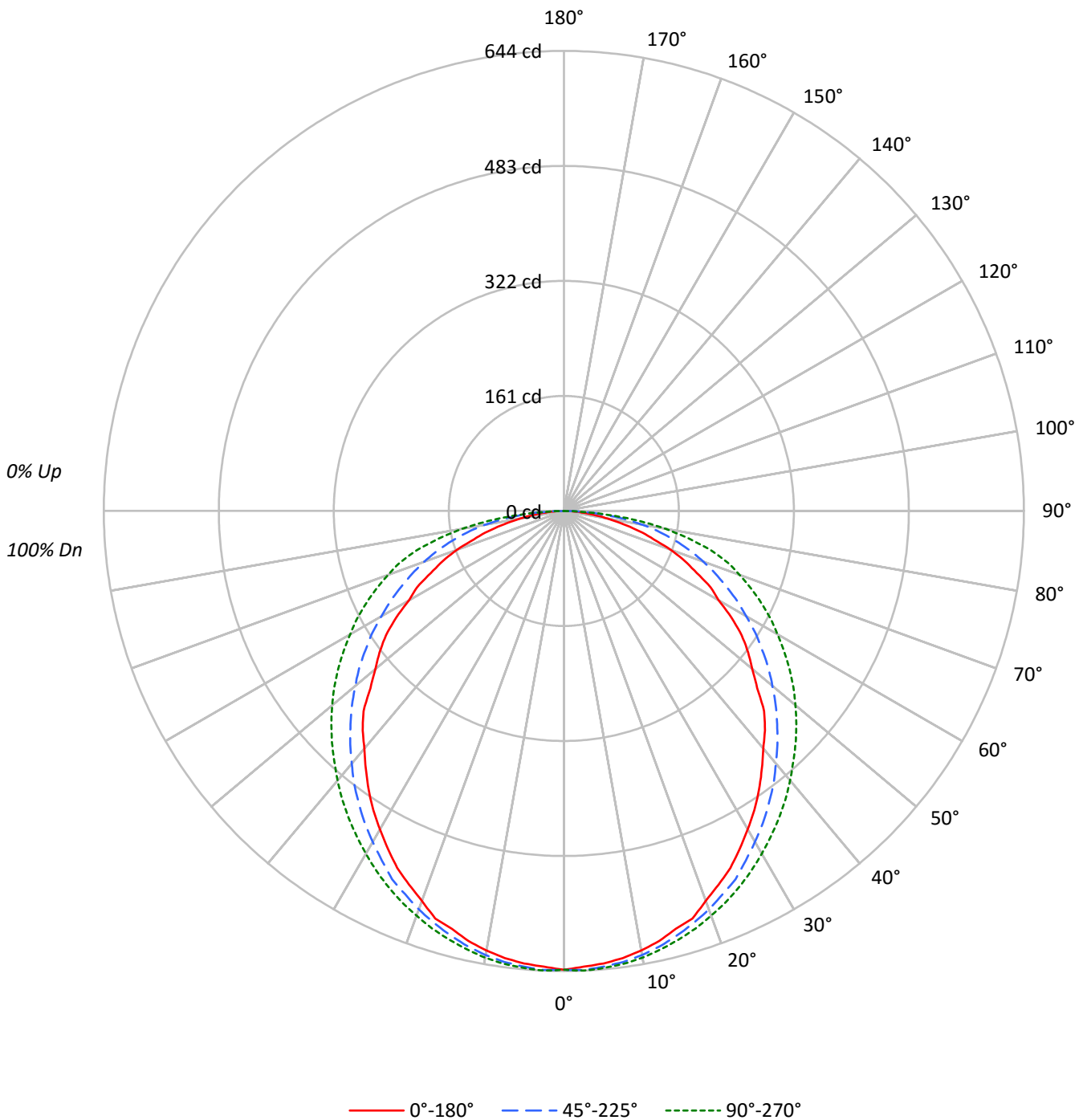
Lumens per Lamp: N/A  
Luminaire Lumens: 1914.0 lumens  
Efficiency: N/A  
Efficacy: 109.4 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 17.5  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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°	1728	1728	1728
5°	1717	1730	1735
10°	1707	1725	1735
15°	1687	1712	1730
20°	1663	1700	1726
25°	1637	1689	1724
30°	1600	1662	1722
35°	1565	1643	1724
40°	1525	1622	1731
45°	1510	1607	1746
50°	1442	1595	1772
55°	1427	1590	1810
60°	1346	1588	1859
65°	1307	1598	1943
70°	1254	1636	2061
75°	1143	1685	2219
80°	979	1746	2242
85°	790	1667	1924



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	60.8	3.2
10°-20°	173.3	9.1
20°-30°	260.9	13.6
30°-40°	313.1	16.4
40°-50°	327.3	17.1
50°-60°	305.0	15.9
60°-70°	250.2	13.1
70°-80°	168.6	8.8
80°-90°	54.9	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°	495.0	25.9
0°-40°	808.1	42.2
0°-60°	1440.4	75.3
0°-90°	1914.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1914.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	642	642	642	642	642	
5°	636	638	640	641	642	60
15°	606	609	615	620	621	171
25°	552	555	569	577	581	254
35°	476	483	500	518	525	298
45°	397	399	422	448	459	303
55°	304	310	339	371	386	269
65°	205	214	251	288	305	204
75°	110	122	162	199	213	116
85°	26	37	54	63	62	31
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	642.2	642.2	642.2	642.2	642.2
2.5°	638.5	640.3	643.1	644.0	644.0
5°	635.8	637.6	640.3	641.2	642.2
7.5°	631.2	633.0	636.7	638.5	639.4
10°	624.8	626.6	631.2	633.9	634.8
12.5°	616.5	618.3	623.8	627.5	628.4
15°	605.5	609.2	614.7	620.2	621.1
17.5°	598.2	597.3	604.6	611.0	612.8
20°	580.8	585.4	593.6	600.9	602.8
22.5°	566.1	569.8	580.8	589.0	592.7
25°	551.5	555.1	568.9	577.1	580.8
27.5°	533.2	538.6	551.5	563.4	568.0
30°	514.8	520.3	535.0	548.7	554.2
32.5°	496.5	502.9	518.5	533.2	539.6
35°	476.4	482.8	500.2	517.6	524.9
37.5°	455.3	463.5	481.9	501.1	509.3
40°	434.2	442.5	461.7	483.7	492.8
42.5°	416.8	420.5	442.5	466.3	475.4
45°	396.7	399.4	422.3	448.0	458.9
47.5°	367.3	377.4	402.2	430.6	441.5
50°	344.4	355.4	381.1	411.3	423.2
52.5°	325.2	332.5	360.9	391.2	404.9
55°	304.1	309.6	338.9	371.0	385.7
57.5°	278.5	288.6	317.9	350.9	365.5
60°	250.1	262.9	295.0	330.7	345.4
62.5°	231.8	239.1	273.9	309.6	326.1
65°	205.2	214.4	251.0	287.6	305.1
67.5°	183.2	192.4	229.9	266.6	284.0
70°	159.4	168.6	207.9	244.6	262.0
72.5°	131.9	144.7	186.0	222.6	240.9
75°	109.9	121.8	162.1	198.8	213.4
77.5°	85.2	100.8	138.3	168.6	179.5
80°	63.2	78.8	112.7	134.7	144.7
82.5°	43.1	58.6	84.3	100.8	106.3
85°	25.6	36.6	54.0	63.2	62.3
87.5°	11.9	15.6	22.0	22.0	21.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)