

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: P312468

Luminaire Tested: **22FCZ2-24HE-UNV-L83050-HRP-CA08-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: P312468  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-22)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 22FCZ2-24HE-UNV-L83050-HRP-CA08-W2A-U-4500K  
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC 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**

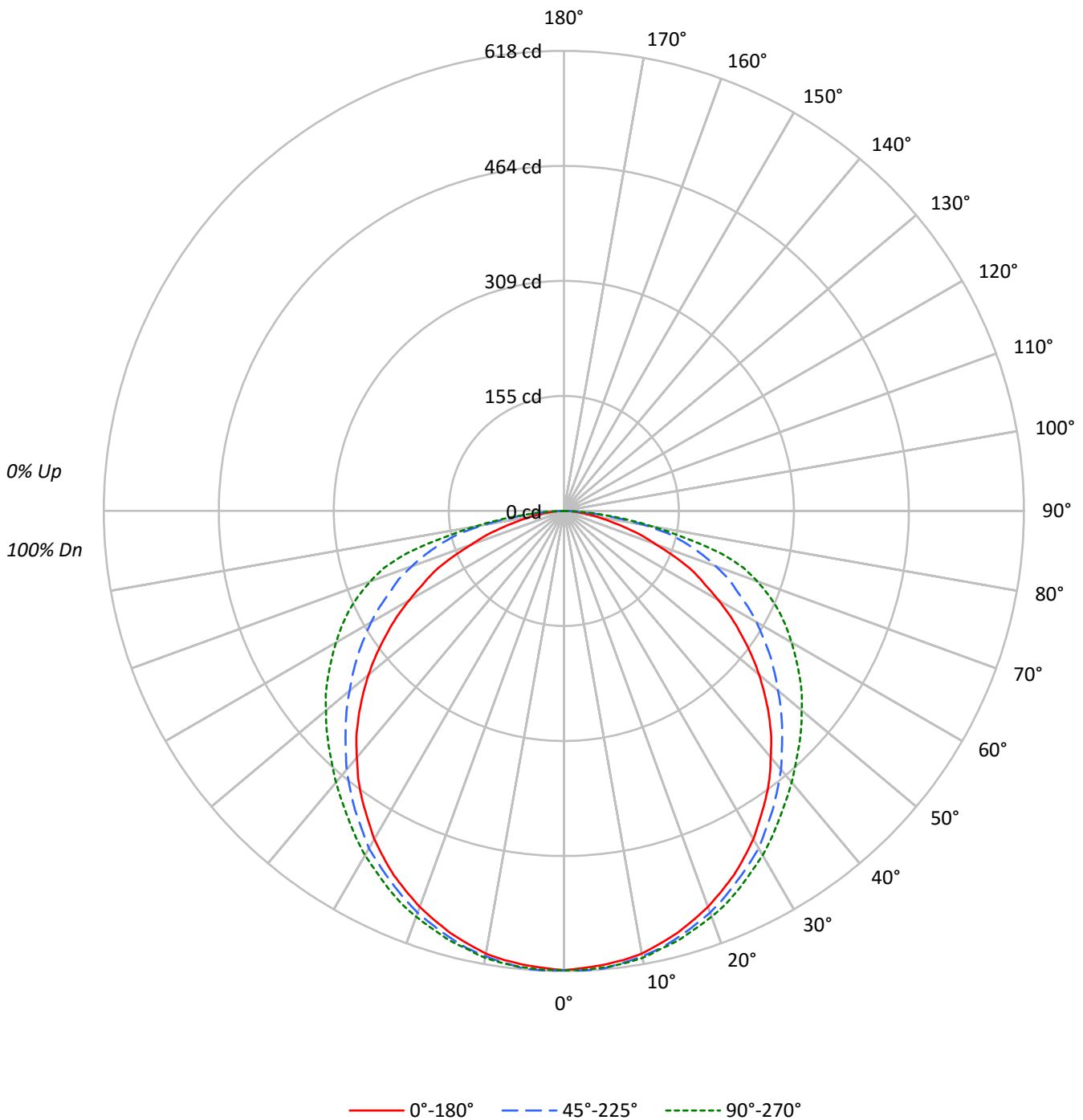
Lumens per Lamp: N/A  
Luminaire Lumens: 1873.0 lumens  
Efficiency: N/A  
Efficacy: 94.6 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 19.8  
Input Voltage (V): NR  
Input Current (Ain): NR  
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	101	96	93	96	93	90	92	90	87	89	87	84	82
2	98	89	82	76	95	87	80	75	84	78	73	80	75	71	77	73	70	68
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	59	52	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	50	43	38	49	43	38	36
7	64	50	41	34	62	49	40	34	47	40	34	46	39	34	44	38	33	31
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	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	1660	1660	1660
5°	1653	1666	1663
10°	1650	1659	1666
15°	1636	1652	1662
20°	1621	1644	1661
25°	1603	1631	1659
30°	1582	1626	1660
35°	1553	1607	1657
40°	1519	1594	1673
45°	1484	1578	1700
50°	1434	1573	1746
55°	1369	1585	1813
60°	1291	1609	1901
65°	1219	1640	2031
70°	1041	1710	2175
75°	872	1781	2260
80°	714	1722	1886
85°	621	1278	1386



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	58.5	3.1
10°-20°	167.2	8.9
20°-30°	253.4	13.5
30°-40°	306.0	16.3
40°-50°	321.5	17.2
50°-60°	302.5	16.2
60°-70°	252.2	13.5
70°-80°	167.1	8.9
80°-90°	44.6	2.4
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°	479.1	25.6
0°-40°	785.0	41.9
0°-60°	1409.1	75.2
0°-90°	1873.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1873.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	617	617	617	617	617	
5°	612	613	617	617	616	58
15°	587	590	593	596	597	166
25°	540	544	549	556	559	249
35°	473	477	489	500	504	295
45°	390	396	415	436	447	300
55°	292	305	338	372	386	261
65°	191	208	258	300	319	186
75°	84	117	171	207	217	91
85°	20	31	41	45	45	23
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	616.8	616.8	616.8	616.8	616.8
2.5°	614.4	615.6	617.9	617.9	616.8
5°	612.0	613.2	616.8	616.8	615.6
7.5°	608.5	609.7	612.0	614.4	613.2
10°	603.8	604.9	607.3	609.7	609.7
12.5°	595.5	596.7	601.4	602.6	602.6
15°	587.2	589.6	593.1	595.5	596.7
17.5°	576.6	578.9	583.7	588.4	588.4
20°	566.0	568.3	574.2	578.9	580.1
22.5°	553.0	556.5	562.4	568.3	570.7
25°	540.0	543.5	549.4	556.5	558.9
27.5°	524.6	528.1	536.4	544.7	545.9
30°	509.2	512.8	523.4	530.5	534.1
32.5°	490.3	495.1	505.7	516.3	519.9
35°	472.6	477.3	489.2	499.8	504.5
37.5°	453.7	458.4	471.4	484.4	490.3
40°	432.4	438.3	453.7	467.9	476.2
42.5°	412.4	418.3	433.6	452.5	460.8
45°	389.9	395.8	414.7	436.0	446.6
47.5°	366.3	373.4	395.8	421.8	432.4
50°	342.6	350.9	375.7	405.3	417.1
52.5°	317.8	328.5	356.8	388.7	402.9
55°	291.8	304.8	337.9	372.2	386.4
57.5°	267.0	278.8	317.8	354.5	369.8
60°	239.9	255.2	298.9	336.7	353.3
62.5°	213.9	230.4	278.8	319.0	336.7
65°	191.4	207.9	257.6	300.1	319.0
67.5°	161.9	184.3	239.9	280.0	298.9
70°	132.3	163.1	217.4	258.8	276.5
72.5°	109.9	139.4	195.0	236.3	252.8
75°	83.9	117.0	171.3	206.8	217.4
77.5°	62.6	96.9	146.5	164.2	165.4
80°	46.1	74.4	111.1	117.0	121.7
82.5°	31.9	52.0	72.1	79.2	81.5
85°	20.1	30.7	41.4	44.9	44.9
87.5°	10.6	11.8	14.2	14.2	14.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)