

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: P312531

Luminaire Tested: **22FCZ2-34HE-UNV-L83050-HRP-CP187-W2A-U-3500K**

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: P312531  
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: 22FCZ2-34HE-UNV-L83050-HRP-CP187-W2A-U-3500K  
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.187"  
POLYCARB SHEET  
Light Source: (168) 3500K 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**

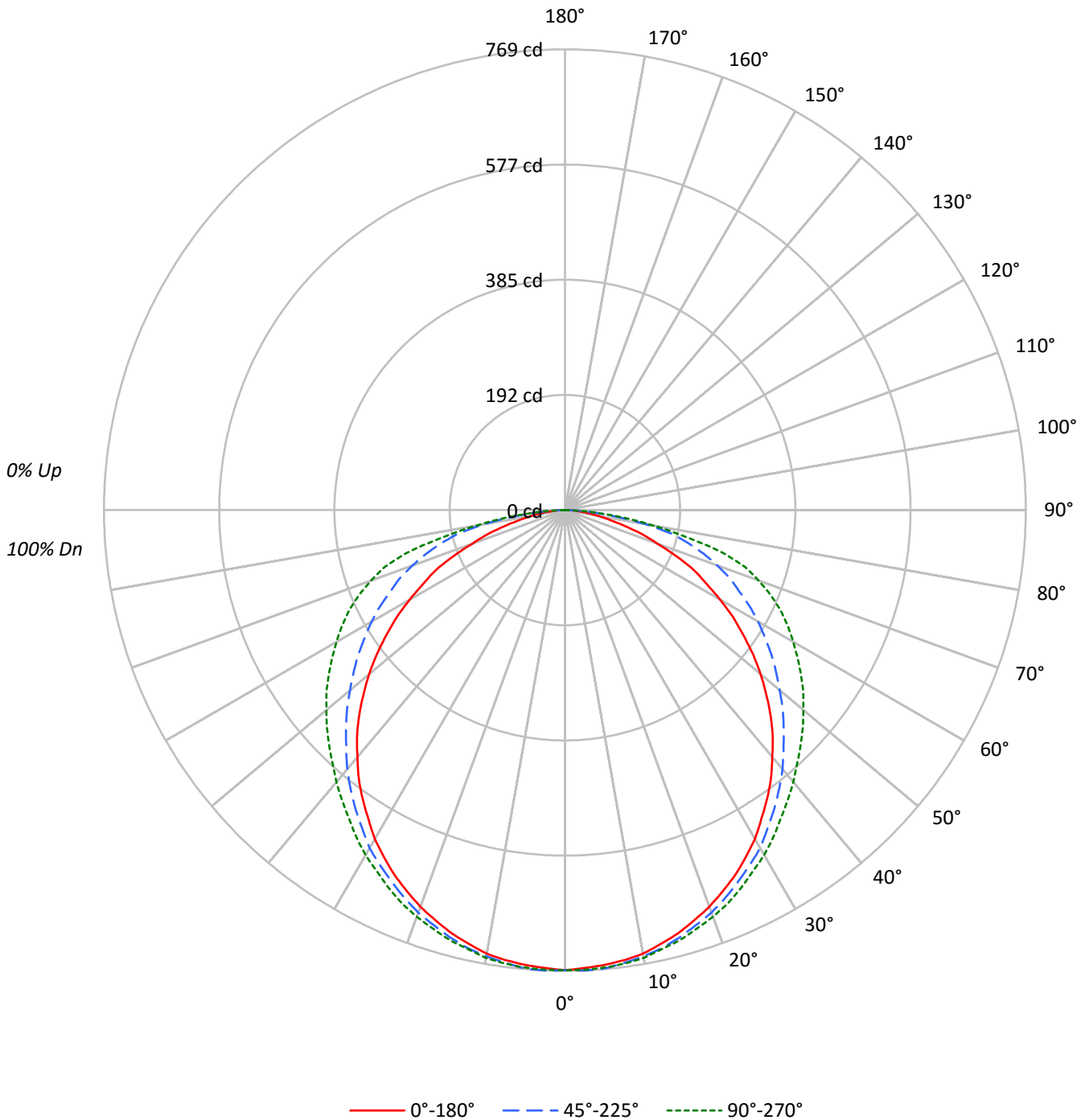
Lumens per Lamp: N/A  
Luminaire Lumens: 2332.0 lumens  
Efficiency: N/A  
Efficacy: 84.5 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 27.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
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°	2066	2066	2066
5°	2058	2074	2070
10°	2054	2066	2074
15°	2037	2057	2070
20°	2018	2047	2068
25°	1996	2031	2066
30°	1970	2025	2066
35°	1933	2001	2063
40°	1891	1984	2082
45°	1848	1965	2116
50°	1786	1958	2174
55°	1705	1974	2257
60°	1607	2003	2368
65°	1517	2042	2529
70°	1297	2130	2708
75°	1085	2218	2815
80°	890	2143	2348
85°	772	1590	1726



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	72.8	3.1
10°-20°	208.2	8.9
20°-30°	315.5	13.5
30°-40°	381.0	16.3
40°-50°	400.3	17.2
50°-60°	376.7	16.2
60°-70°	314.1	13.5
70°-80°	208.1	8.9
80°-90°	55.5	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°	596.5	25.6
0°-40°	977.4	41.9
0°-60°	1754.4	75.2
0°-90°	2332.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2332.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	768	768	768	768	768	
5°	762	764	768	768	766	72
15°	731	734	738	741	743	206
25°	672	677	684	693	696	310
35°	588	594	609	622	628	368
45°	486	493	516	543	556	374
55°	363	380	421	463	481	325
65°	238	259	321	374	397	232
75°	104	146	213	257	271	113
85°	25	38	52	56	56	29
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	767.9	767.9	767.9	767.9	767.9
2.5°	765.0	766.4	769.4	769.4	767.9
5°	762.0	763.5	767.9	767.9	766.4
7.5°	757.6	759.1	762.0	765.0	763.5
10°	751.7	753.2	756.1	759.1	759.1
12.5°	741.4	742.9	748.8	750.2	750.2
15°	731.1	734.1	738.5	741.4	742.9
17.5°	717.9	720.8	726.7	732.6	732.6
20°	704.6	707.6	714.9	720.8	722.3
22.5°	688.5	692.9	700.2	707.6	710.5
25°	672.3	676.7	684.1	692.9	695.8
27.5°	653.2	657.6	667.9	678.2	679.6
30°	634.0	638.4	651.7	660.5	664.9
32.5°	610.5	616.4	629.6	642.9	647.3
35°	588.4	594.3	609.0	622.3	628.1
37.5°	564.9	570.8	587.0	603.1	610.5
40°	538.4	545.8	564.9	582.5	592.8
42.5°	513.4	520.8	539.9	563.4	573.7
45°	485.5	492.8	516.3	542.8	556.1
47.5°	456.0	464.9	492.8	525.2	538.4
50°	426.6	436.9	467.8	504.6	519.3
52.5°	395.7	409.0	444.3	484.0	501.6
55°	363.4	379.5	420.7	463.4	481.0
57.5°	332.5	347.2	395.7	441.3	460.4
60°	298.6	317.8	372.2	419.3	439.9
62.5°	266.3	286.9	347.2	397.2	419.3
65°	238.3	258.9	320.7	373.7	397.2
67.5°	201.5	229.5	298.6	348.6	372.2
70°	164.8	203.0	270.7	322.2	344.2
72.5°	136.8	173.6	242.7	294.2	314.8
75°	104.4	145.6	213.3	257.4	270.7
77.5°	78.0	120.6	182.4	204.5	206.0
80°	57.4	92.7	138.3	145.6	151.5
82.5°	39.7	64.7	89.7	98.6	101.5
85°	25.0	38.2	51.5	55.9	55.9
87.5°	13.2	14.7	17.7	17.7	17.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)