

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: P312533

Luminaire Tested: **22FCZ2-34HE-UNV-L83050-HRP-CP187-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: P312533  
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-4500K  
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.187" POLYCARB 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**

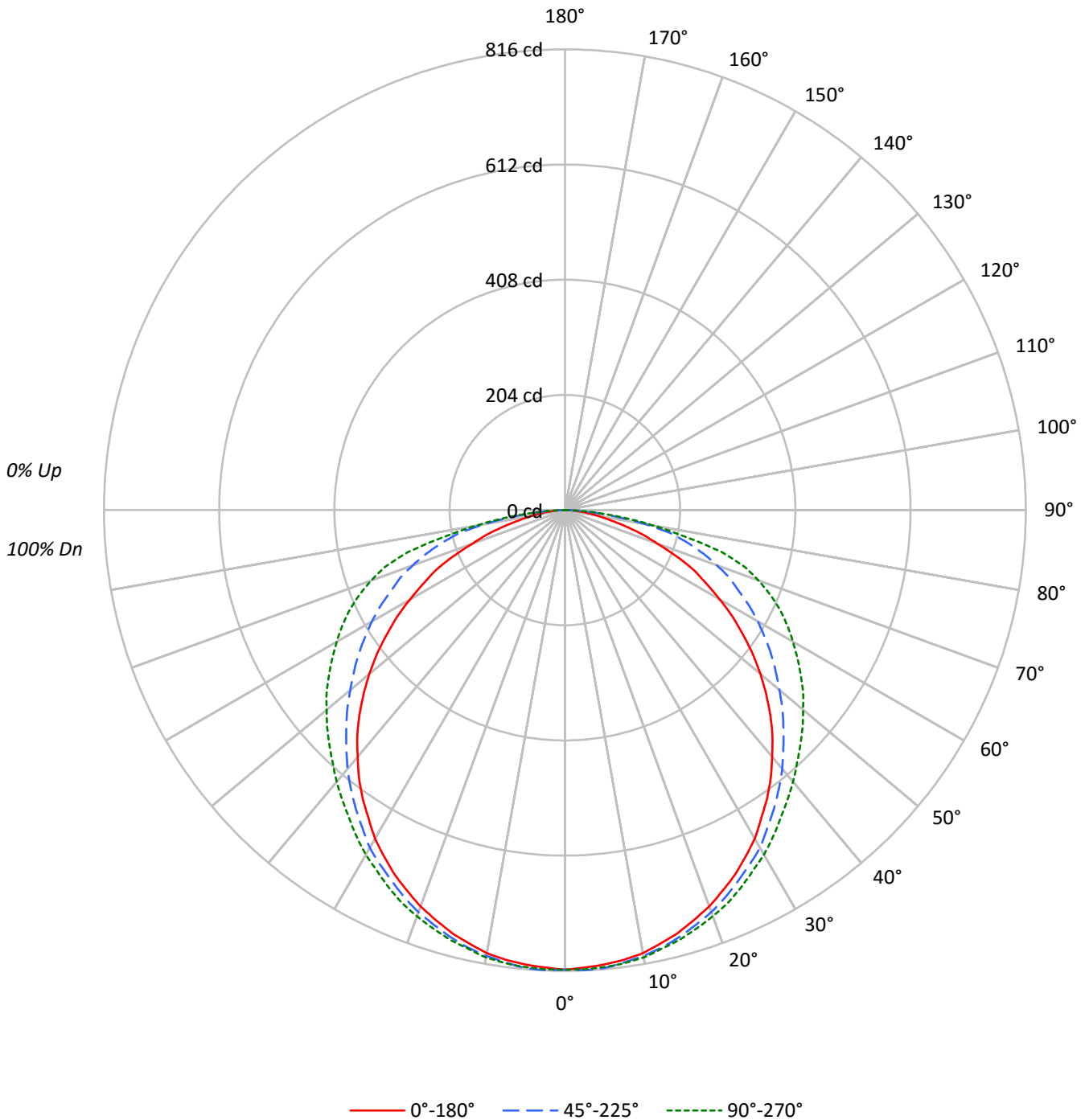
Lumens per Lamp: N/A  
Luminaire Lumens: 2472.0 lumens  
Efficiency: N/A  
Efficacy: 85.2 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 29  
Input Voltage (V): NR  
Input Current (Ain): NR  
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°	2190	2190	2190
5°	2182	2199	2195
10°	2177	2190	2199
15°	2159	2181	2194
20°	2139	2170	2193
25°	2116	2153	2190
30°	2088	2147	2190
35°	2049	2121	2188
40°	2005	2103	2207
45°	1958	2083	2243
50°	1893	2076	2305
55°	1807	2092	2392
60°	1704	2123	2510
65°	1608	2164	2681
70°	1375	2257	2871
75°	1151	2351	2983
80°	942	2272	2489
85°	818	1686	1831



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	77.1	3.1
10°-20°	220.7	8.9
20°-30°	334.4	13.5
30°-40°	403.8	16.3
40°-50°	424.3	17.2
50°-60°	399.3	16.2
60°-70°	332.9	13.5
70°-80°	220.6	8.9
80°-90°	58.8	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°	632.3	25.6
0°-40°	1036.1	41.9
0°-60°	1859.7	75.2
0°-90°	2472.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2472.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	814	814	814	814	814	
5°	808	809	814	814	812	77
15°	775	778	783	786	788	219
25°	713	717	725	734	738	328
35°	624	630	646	660	666	390
45°	515	522	547	575	589	396
55°	385	402	446	491	510	345
65°	253	274	340	396	421	246
75°	111	154	226	273	287	120
85°	26	40	55	59	59	31
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	814.0	814.0	814.0	814.0	814.0
2.5°	810.9	812.4	815.6	815.6	814.0
5°	807.8	809.3	814.0	814.0	812.4
7.5°	803.1	804.6	807.8	810.9	809.3
10°	796.8	798.4	801.5	804.6	804.6
12.5°	785.9	787.5	793.7	795.3	795.3
15°	775.0	778.1	782.8	785.9	787.5
17.5°	761.0	764.1	770.3	776.6	776.6
20°	746.9	750.1	757.9	764.1	765.7
22.5°	729.8	734.5	742.3	750.1	753.2
25°	712.6	717.3	725.1	734.5	737.6
27.5°	692.4	697.0	708.0	718.9	720.4
30°	672.1	676.8	690.8	700.2	704.8
32.5°	647.1	653.4	667.4	681.5	686.1
35°	623.8	630.0	645.6	659.6	665.9
37.5°	598.8	605.0	622.2	639.4	647.1
40°	570.7	578.5	598.8	617.5	628.4
42.5°	544.2	552.0	572.3	597.2	608.2
45°	514.6	522.4	547.3	575.4	589.4
47.5°	483.4	492.8	522.4	556.7	570.7
50°	452.2	463.1	495.9	534.9	550.5
52.5°	419.5	433.5	470.9	513.0	531.8
55°	385.2	402.3	446.0	491.2	509.9
57.5°	352.4	368.0	419.5	467.8	488.1
60°	316.6	336.8	394.5	444.4	466.3
62.5°	282.2	304.1	368.0	421.0	444.4
65°	252.6	274.5	339.9	396.1	421.0
67.5°	213.6	243.3	316.6	369.6	394.5
70°	174.7	215.2	286.9	341.5	364.9
72.5°	145.0	184.0	257.3	311.9	333.7
75°	110.7	154.4	226.1	272.9	286.9
77.5°	82.6	127.9	193.4	216.8	218.3
80°	60.8	98.2	146.6	154.4	160.6
82.5°	42.1	68.6	95.1	104.5	107.6
85°	26.5	40.5	54.6	59.3	59.3
87.5°	14.0	15.6	18.7	18.7	18.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)