

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: P309257

Luminaire Tested: **24FCZ2-35HE-UNV-L82765-HRP-CP187-W2A-U-2700K**

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: P309257  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 24FCZ2-35HE-UNV-L82765-HRP-CP187-W2A-U-2700K  
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.187"  
POLYCARB SHEET  
Light Source: (336) 2700K 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: 2096.0 lumens  
Efficiency: N/A  
Efficacy: 80.6 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

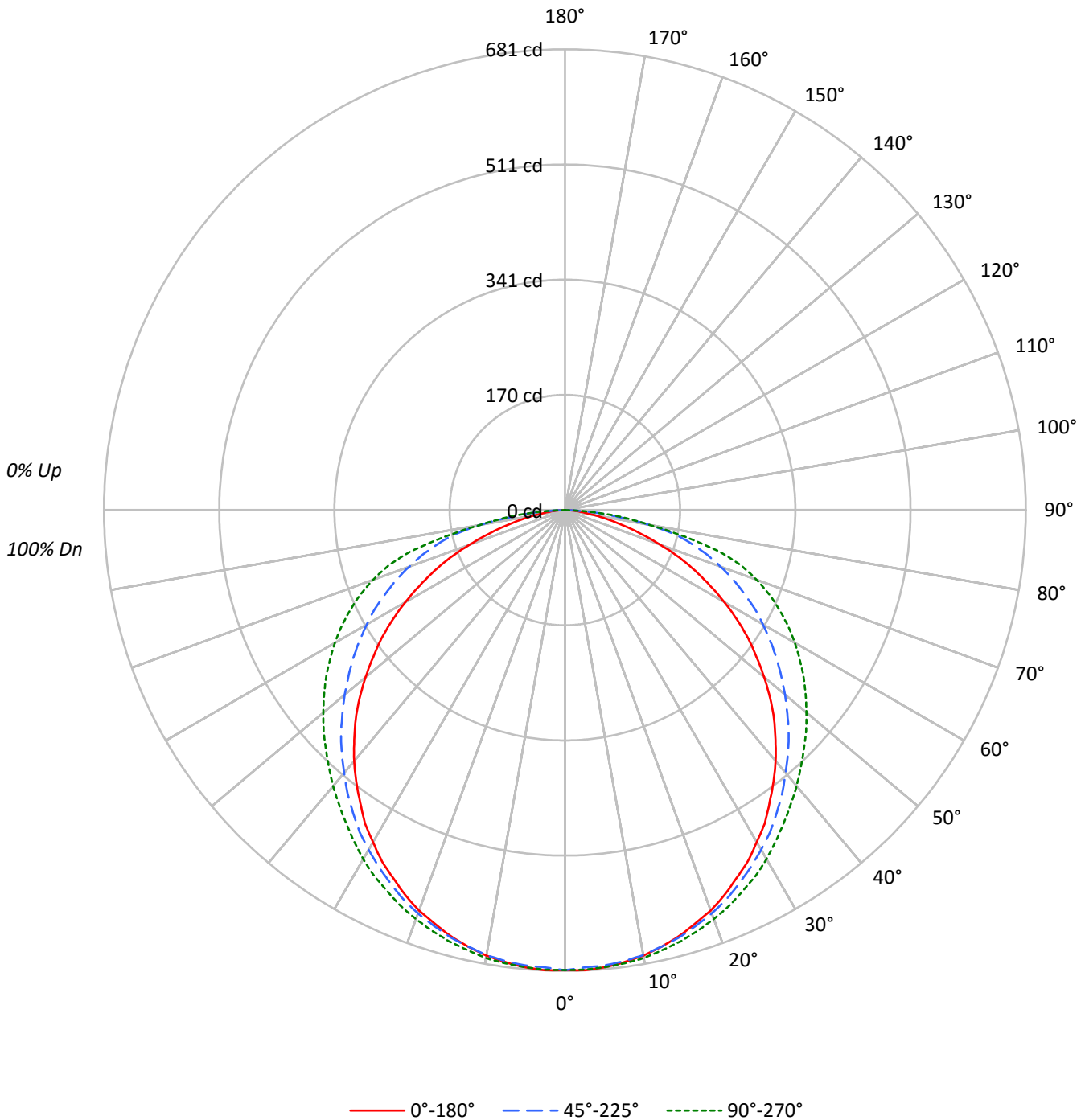
Input Watts (W): 26  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	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	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	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	24	35	29	24	23

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

	0°	45°	90°
0°	915	915	915
5°	916	913	916
10°	913	912	918
15°	908	911	919
20°	902	908	921
25°	891	904	922
30°	881	901	926
35°	866	896	927
40°	851	891	935
45°	832	890	950
50°	804	889	975
55°	776	895	1011
60°	732	909	1055
65°	676	930	1115
70°	590	963	1188
75°	479	1013	1227
80°	353	993	993
85°	270	732	826



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	64.4	3.1
10°-20°	185.0	8.8
20°-30°	281.6	13.4
30°-40°	342.0	16.3
40°-50°	361.3	17.2
50°-60°	340.9	16.3
60°-70°	283.5	13.5
70°-80°	186.5	8.9
80°-90°	50.8	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°	531.0	25.3
0°-40°	873.0	41.7
0°-60°	1575.2	75.2
0°-90°	2096.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2096.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	680	680	680	680	680	
5°	678	678	676	678	678	64
15°	652	653	654	660	660	184
25°	600	604	609	620	621	277
35°	527	534	546	560	564	330
45°	437	446	468	490	499	337
55°	331	345	382	418	431	295
65°	212	237	292	335	350	210
75°	92	134	195	231	236	99
85°	18	39	47	53	54	21
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	680.0	680.0	680.0	680.0	680.0
2.5°	680.9	680.0	676.5	680.0	680.0
5°	678.3	678.3	675.7	678.3	678.3
7.5°	673.9	673.9	672.2	675.7	675.7
10°	668.6	668.6	667.8	672.2	672.2
12.5°	660.7	661.6	660.7	666.0	666.0
15°	652.0	652.8	653.7	659.9	659.9
17.5°	640.6	642.3	644.1	651.1	652.0
20°	630.0	630.9	634.4	642.3	643.2
22.5°	616.0	618.6	623.0	630.9	633.5
25°	600.2	603.7	609.0	619.5	621.3
27.5°	585.3	587.9	594.9	606.3	609.9
30°	566.9	571.2	580.0	591.4	595.8
32.5°	549.3	553.7	564.2	576.5	580.0
35°	527.4	533.5	545.8	559.8	564.2
37.5°	506.3	512.4	527.4	543.2	548.4
40°	484.4	491.4	507.2	525.6	532.6
42.5°	460.7	470.3	487.9	508.1	516.0
45°	437.0	445.8	467.7	490.5	499.3
47.5°	411.5	422.1	445.8	473.0	483.5
50°	384.3	397.5	424.7	454.5	465.9
52.5°	357.1	372.1	402.8	436.1	448.4
55°	330.8	344.9	381.7	417.7	430.8
57.5°	301.9	319.4	359.8	398.4	411.5
60°	272.0	291.3	337.8	378.2	392.2
62.5°	242.2	264.1	316.8	357.1	372.1
65°	212.4	236.9	292.2	335.2	350.1
67.5°	183.4	210.6	269.4	312.4	327.3
70°	150.0	184.3	244.8	286.9	301.9
72.5°	119.3	158.8	221.1	260.6	273.8
75°	92.1	134.3	194.8	230.8	236.0
77.5°	67.6	109.7	167.6	179.9	180.8
80°	45.6	87.7	128.1	126.4	128.1
82.5°	29.8	65.8	80.7	90.4	91.3
85°	17.5	38.6	47.4	52.6	53.5
87.5°	8.8	13.2	16.7	17.5	19.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)