

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: P309934

Luminaire Tested: **24FCZ2-35HE-UNV-L82765-RDP-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: P309934  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)  
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-RDP-CP187-W2A-U-3500K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" POLYCARB SHEET  
Light Source: (336) 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: 1978.0 lumens  
Efficiency: N/A  
Efficacy: 75.8 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

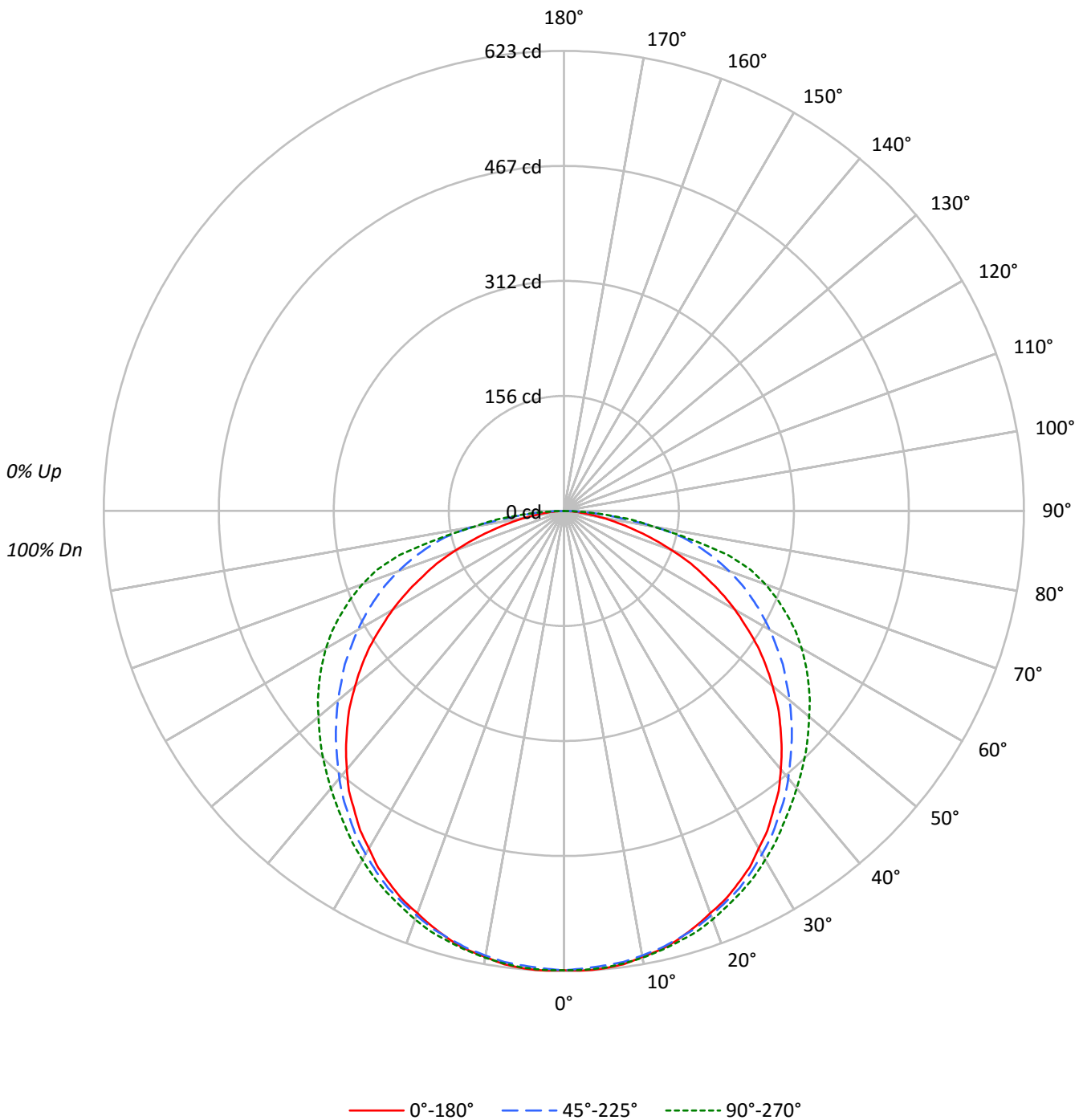
Input Watts (W): 26.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	100	96	92	96	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

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

	0°	45°	90°
0°	837	837	837
5°	840	835	839
10°	838	835	839
15°	836	835	841
20°	830	834	843
25°	827	836	845
30°	820	834	848
35°	812	832	851
40°	803	831	862
45°	790	831	881
50°	772	836	908
55°	753	849	948
60°	721	866	1001
65°	675	897	1062
70°	614	938	1142
75°	520	989	1194
80°	411	996	965
85°	303	758	848



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	59.0	3.0
10°-20°	169.8	8.6
20°-30°	259.7	13.1
30°-40°	317.5	16.0
40°-50°	338.4	17.1
50°-60°	323.5	16.4
60°-70°	274.1	13.9
70°-80°	184.2	9.3
80°-90°	52.0	2.6
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°	488.5	24.7
0°-40°	806.0	40.7
0°-60°	1467.8	74.2
0°-90°	1978.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1978.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	622	622	622	622	622	
5°	622	621	618	621	621	59
15°	600	600	600	604	603	169
25°	557	559	563	568	569	257
35°	494	498	506	516	518	310
45°	415	422	437	455	463	320
55°	321	333	362	390	404	286
65°	212	234	282	319	334	210
75°	100	136	190	223	230	107
85°	20	40	49	53	55	24
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	622.0	622.0	622.0	622.0	622.0
2.5°	623.0	623.0	620.1	622.0	622.0
5°	622.0	621.0	618.1	621.0	621.0
7.5°	619.1	618.1	616.1	619.1	618.1
10°	613.2	613.2	611.2	614.2	614.2
12.5°	608.3	607.3	606.3	610.3	609.3
15°	600.4	600.4	599.5	604.4	603.4
17.5°	590.6	591.6	592.6	596.5	597.5
20°	579.8	581.8	582.8	588.7	588.7
22.5°	570.0	571.0	573.0	578.9	578.9
25°	557.3	559.2	563.2	568.1	569.0
27.5°	544.5	545.5	550.4	557.3	558.3
30°	527.8	530.8	536.7	544.5	545.5
32.5°	513.1	516.1	522.9	530.8	532.7
35°	494.5	498.4	506.3	516.1	518.0
37.5°	477.8	480.7	490.6	501.3	504.3
40°	457.2	463.1	472.9	485.7	490.6
42.5°	436.6	442.5	454.3	470.9	476.8
45°	415.0	421.9	436.6	455.2	463.1
47.5°	393.4	401.3	418.0	439.5	448.4
50°	368.9	378.7	399.3	423.8	433.7
52.5°	345.4	357.1	379.7	407.2	419.9
55°	320.8	332.6	362.0	390.5	404.2
57.5°	293.4	309.1	341.4	373.8	388.5
60°	267.8	282.6	321.8	357.1	371.8
62.5°	240.4	260.0	302.2	339.5	354.2
65°	211.9	233.5	281.6	318.9	333.6
67.5°	186.4	210.0	261.0	298.3	313.0
70°	156.0	185.4	238.4	275.7	290.4
72.5°	127.5	159.9	214.9	251.2	264.9
75°	100.1	136.4	190.3	222.7	229.6
77.5°	74.6	112.8	164.8	178.6	173.7
80°	53.0	90.3	128.5	121.7	124.6
82.5°	34.3	68.7	79.5	90.3	93.2
85°	19.6	40.2	49.1	53.0	54.9
87.5°	8.8	14.7	19.6	19.6	18.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)