

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: P309908

Luminaire Tested: **24FCZ2-35HE-UNV-L82765-RDP-CA08-W2A-U-4000K**

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: P309908  
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-CA08-W2A-U-4000K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC SHEET  
Light Source: (336) 4000K 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**

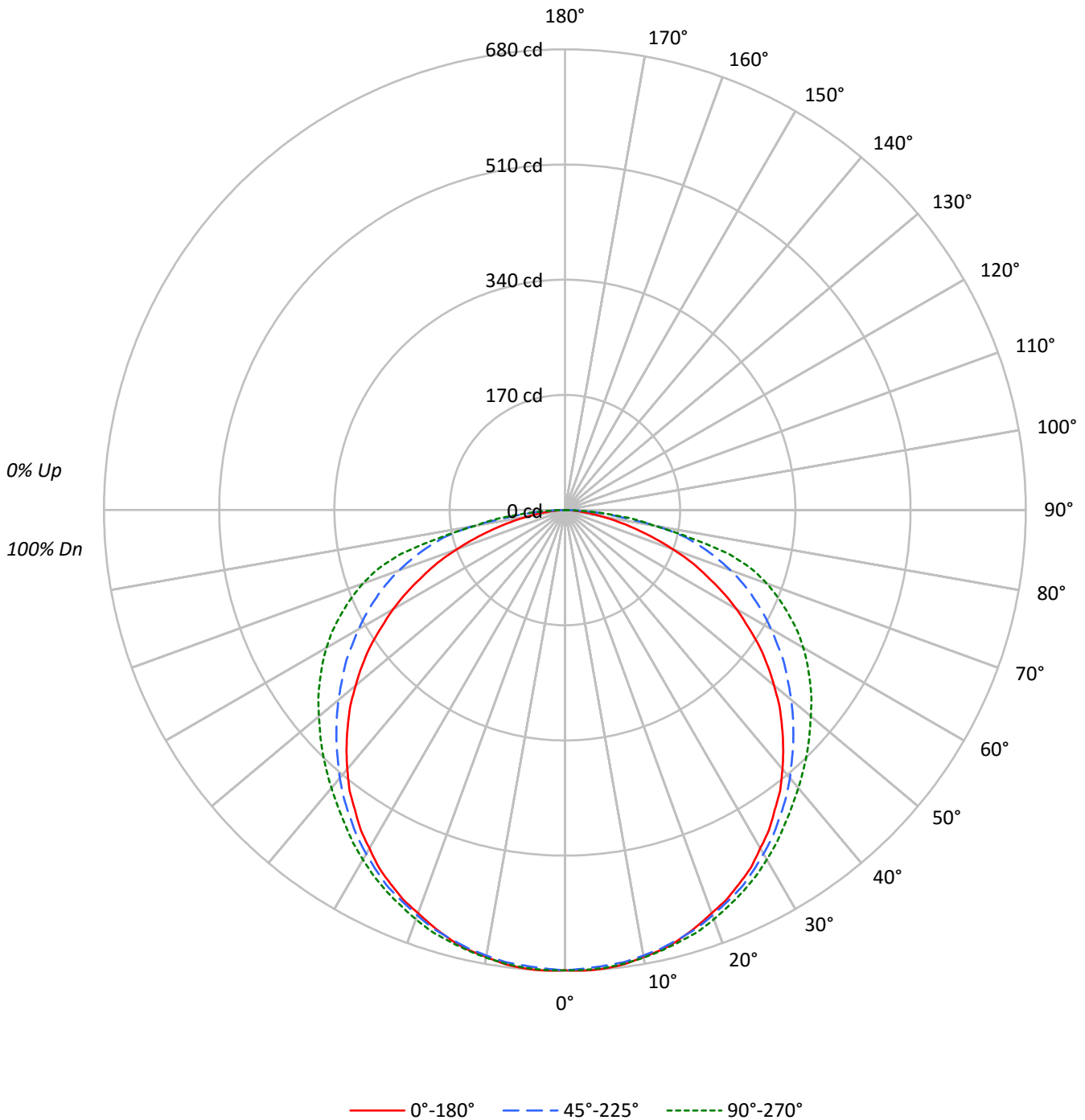
Lumens per Lamp: N/A  
Luminaire Lumens: 2160.0 lumens  
Efficiency: N/A  
Efficacy: 82.1 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 26.3  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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°	914	914	914
5°	917	912	916
10°	915	912	916
15°	913	912	918
20°	907	911	920
25°	903	913	923
30°	896	910	926
35°	887	908	929
40°	877	907	941
45°	862	907	962
50°	843	913	991
55°	822	927	1035
60°	787	946	1093
65°	737	979	1160
70°	670	1024	1247
75°	568	1080	1303
80°	449	1088	1055
85°	330	827	926



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	64.4	3.0
10°-20°	185.4	8.6
20°-30°	283.6	13.1
30°-40°	346.7	16.0
40°-50°	369.5	17.1
50°-60°	353.3	16.4
60°-70°	299.3	13.9
70°-80°	201.1	9.3
80°-90°	56.7	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°	533.4	24.7
0°-40°	880.1	40.7
0°-60°	1602.9	74.2
0°-90°	2160.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2160.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	679	679	679	679	679	
5°	679	678	675	678	678	65
15°	656	656	655	660	659	185
25°	608	611	615	620	621	280
35°	540	544	553	564	566	338
45°	453	461	477	497	506	350
55°	350	363	395	426	441	312
65°	231	255	308	348	364	230
75°	109	149	208	243	251	117
85°	21	44	54	58	60	27
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	679.3	679.3	679.3	679.3	679.3
2.5°	680.3	680.3	677.1	679.3	679.3
5°	679.3	678.2	675.0	678.2	678.2
7.5°	676.0	675.0	672.8	676.0	675.0
10°	669.6	669.6	667.5	670.7	670.7
12.5°	664.3	663.2	662.1	666.4	665.3
15°	655.7	655.7	654.6	660.0	658.9
17.5°	645.0	646.0	647.1	651.4	652.5
20°	633.2	635.3	636.4	642.8	642.8
22.5°	622.5	623.5	625.7	632.1	632.1
25°	608.5	610.7	615.0	620.3	621.4
27.5°	594.6	595.7	601.0	608.5	609.6
30°	576.4	579.6	586.0	594.6	595.7
32.5°	560.3	563.5	571.0	579.6	581.8
35°	540.0	544.3	552.8	563.5	565.7
37.5°	521.8	525.0	535.7	547.5	550.7
40°	499.3	505.7	516.4	530.3	535.7
42.5°	476.8	483.2	496.1	514.3	520.7
45°	453.2	460.7	476.8	497.1	505.7
47.5°	429.6	438.2	456.4	480.0	489.6
50°	402.8	413.6	436.1	462.8	473.6
52.5°	377.1	390.0	414.6	444.6	458.6
55°	350.3	363.2	395.3	426.4	441.4
57.5°	320.3	337.5	372.8	408.2	424.3
60°	292.5	308.6	351.4	390.0	406.1
62.5°	262.5	283.9	330.0	370.7	386.8
65°	231.4	255.0	307.5	348.2	364.3
67.5°	203.6	229.3	285.0	325.7	341.8
70°	170.4	202.5	260.3	301.1	317.1
72.5°	139.3	174.6	234.6	274.3	289.3
75°	109.3	148.9	207.8	243.2	250.7
77.5°	81.4	123.2	180.0	195.0	189.6
80°	57.9	98.6	140.4	132.9	136.1
82.5°	37.5	75.0	86.8	98.6	101.8
85°	21.4	43.9	53.6	57.9	60.0
87.5°	9.6	16.1	21.4	21.4	20.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)