

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: P313465

Luminaire Tested: **24FCZ2-35HE-UNV-L83050-RDP-CA08-W2A-U-3000K**

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: P313465  
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-L83050-RDP-CA08-W2A-U-3000K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC SHEET  
Light Source: (336) 3000K 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: 2045.0 lumens  
Efficiency: N/A  
Efficacy: 79.0 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

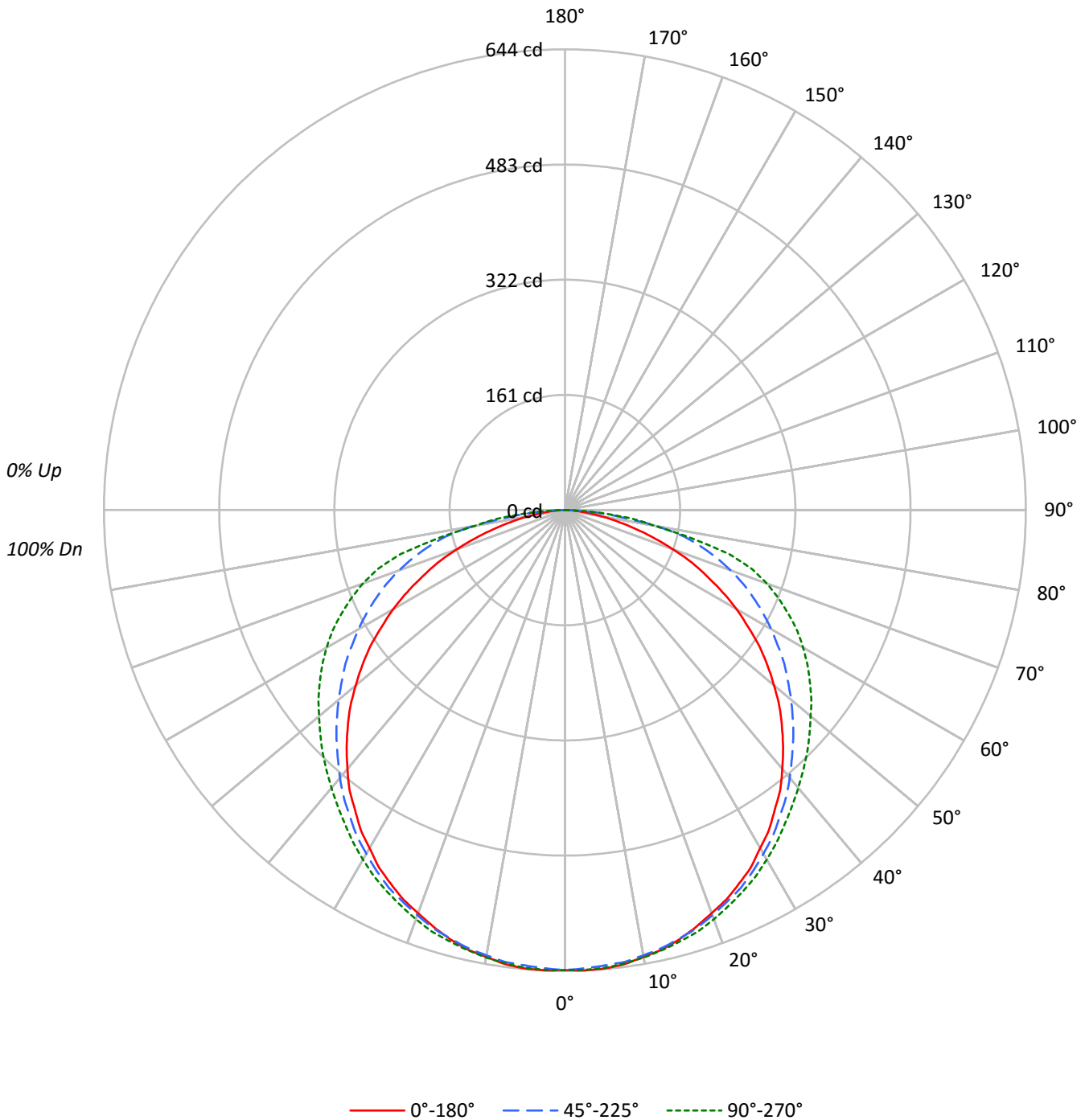
Input Watts (W): 25.9  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	865	865	865
5°	869	863	867
10°	866	863	868
15°	865	863	869
20°	858	863	871
25°	855	864	873
30°	848	862	876
35°	840	860	880
40°	830	859	891
45°	816	859	911
50°	798	864	938
55°	778	878	980
60°	745	895	1034
65°	698	927	1098
70°	635	970	1181
75°	538	1023	1234
80°	425	1030	998
85°	313	783	877



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	61.0	3.0
10°-20°	175.6	8.6
20°-30°	268.5	13.1
30°-40°	328.2	16.0
40°-50°	349.8	17.1
50°-60°	334.5	16.4
60°-70°	283.3	13.9
70°-80°	190.4	9.3
80°-90°	53.7	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°	505.0	24.7
0°-40°	833.3	40.7
0°-60°	1517.5	74.2
0°-90°	2045.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2045.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	643	643	643	643	643	
5°	643	642	639	642	642	61
15°	621	621	620	625	624	175
25°	576	578	582	587	588	266
35°	511	515	523	534	536	320
45°	429	436	451	471	479	331
55°	332	344	374	404	418	295
65°	219	241	291	330	345	218
75°	104	141	197	230	237	111
85°	20	42	51	55	57	25
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	643.1	643.1	643.1	643.1	643.1
2.5°	644.1	644.1	641.1	643.1	643.1
5°	643.1	642.1	639.0	642.1	642.1
7.5°	640.1	639.0	637.0	640.1	639.0
10°	634.0	634.0	631.9	635.0	635.0
12.5°	628.9	627.9	626.9	630.9	629.9
15°	620.8	620.8	619.8	624.8	623.8
17.5°	610.6	611.6	612.7	616.7	617.7
20°	599.5	601.5	602.5	608.6	608.6
22.5°	589.3	590.3	592.4	598.5	598.5
25°	576.1	578.2	582.2	587.3	588.3
27.5°	563.0	564.0	569.0	576.1	577.2
30°	545.7	548.8	554.8	563.0	564.0
32.5°	530.5	533.5	540.6	548.8	550.8
35°	511.2	515.3	523.4	533.5	535.6
37.5°	494.0	497.0	507.2	518.3	521.4
40°	472.7	478.8	488.9	502.1	507.2
42.5°	451.4	457.5	469.6	486.9	493.0
45°	429.1	436.2	451.4	470.7	478.8
47.5°	406.8	414.9	432.1	454.4	463.6
50°	381.4	391.5	412.8	438.2	448.3
52.5°	357.0	369.2	392.6	421.0	434.1
55°	331.7	343.9	374.3	403.7	417.9
57.5°	303.3	319.5	353.0	386.5	401.7
60°	276.9	292.1	332.7	369.2	384.4
62.5°	248.5	268.8	312.4	351.0	366.2
65°	219.1	241.4	291.1	329.7	344.9
67.5°	192.7	217.1	269.8	308.4	323.6
70°	161.3	191.7	246.5	285.0	300.2
72.5°	131.9	165.3	222.1	259.7	273.9
75°	103.5	141.0	196.8	230.3	237.4
77.5°	77.1	116.6	170.4	184.6	179.5
80°	54.8	93.3	132.9	125.8	128.8
82.5°	35.5	71.0	82.2	93.3	96.4
85°	20.3	41.6	50.7	54.8	56.8
87.5°	9.1	15.2	20.3	20.3	19.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)