

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: P309942

Luminaire Tested: **24FCZ2-35HE-UNV-L82765-RDP-CP250-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: P309942  
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-CP250-W2A-U-3000K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB 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: 1896.0 lumens  
Efficiency: N/A  
Efficacy: 73.5 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

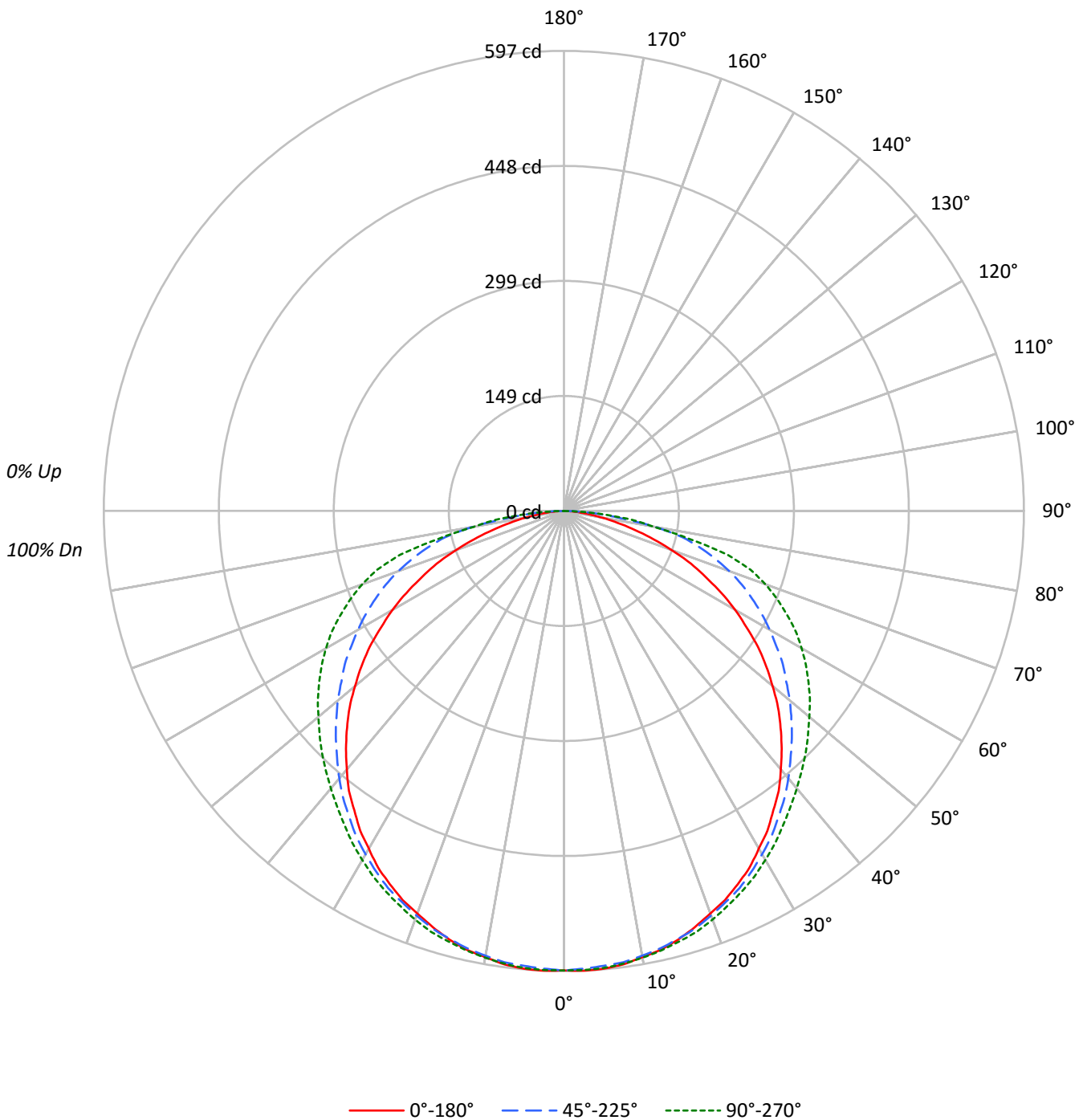
Input Watts (W): 25.8  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	802	802	802
5°	805	800	804
10°	803	800	804
15°	802	800	806
20°	796	800	808
25°	793	801	810
30°	786	799	812
35°	779	797	816
40°	770	796	826
45°	757	796	845
50°	740	801	870
55°	721	814	909
60°	691	830	959
65°	647	859	1018
70°	588	899	1095
75°	499	948	1144
80°	394	955	925
85°	290	726	814



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	56.6	3.0
10°-20°	162.8	8.6
20°-30°	248.9	13.1
30°-40°	304.3	16.0
40°-50°	324.3	17.1
50°-60°	310.1	16.4
60°-70°	262.7	13.9
70°-80°	176.6	9.3
80°-90°	49.8	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°	468.3	24.7
0°-40°	772.6	40.7
0°-60°	1407.0	74.2
0°-90°	1896.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1896.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	596	596	596	596	596	
5°	596	595	592	595	595	57
15°	576	576	575	579	578	162
25°	534	536	540	544	546	246
35°	474	478	485	495	497	297
45°	398	404	418	436	444	307
55°	308	319	347	374	388	274
65°	203	224	270	306	320	202
75°	96	131	182	214	220	103
85°	19	39	47	51	53	23
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	596.2	596.2	596.2	596.2	596.2
2.5°	597.2	597.2	594.4	596.2	596.2
5°	596.2	595.3	592.5	595.3	595.3
7.5°	593.4	592.5	590.6	593.4	592.5
10°	587.8	587.8	585.9	588.7	588.7
12.5°	583.1	582.1	581.2	585.0	584.0
15°	575.5	575.5	574.6	579.3	578.4
17.5°	566.1	567.1	568.0	571.8	572.7
20°	555.8	557.7	558.6	564.3	564.3
22.5°	546.4	547.3	549.2	554.9	554.9
25°	534.2	536.0	539.8	544.5	545.5
27.5°	521.9	522.9	527.6	534.2	535.1
30°	506.0	508.8	514.4	521.9	522.9
32.5°	491.8	494.7	501.3	508.8	510.7
35°	474.0	477.7	485.3	494.7	496.6
37.5°	458.0	460.8	470.2	480.6	483.4
40°	438.2	443.9	453.3	465.5	470.2
42.5°	418.5	424.1	435.4	451.4	457.1
45°	397.8	404.4	418.5	436.4	443.9
47.5°	377.1	384.6	400.6	421.3	429.8
50°	353.6	363.0	382.8	406.3	415.7
52.5°	331.0	342.3	363.9	390.3	402.5
55°	307.5	318.8	347.0	374.3	387.5
57.5°	281.2	296.2	327.3	358.3	372.4
60°	256.7	270.8	308.5	342.3	356.4
62.5°	230.4	249.2	289.7	325.4	339.5
65°	203.1	223.8	269.9	305.6	319.7
67.5°	178.7	201.3	250.2	285.9	300.0
70°	149.5	177.7	228.5	264.3	278.4
72.5°	122.3	153.3	206.0	240.8	253.9
75°	95.9	130.7	182.4	213.5	220.1
77.5°	71.5	108.2	158.0	171.2	166.5
80°	50.8	86.5	123.2	116.6	119.4
82.5°	32.9	65.8	76.2	86.5	89.3
85°	18.8	38.6	47.0	50.8	52.7
87.5°	8.5	14.1	18.8	18.8	17.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)