

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: P313482

Luminaire Tested: **24FCZ2-35HE-UNV-L83050-RDP-CP187-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: P313482  
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-CP187-W2A-U-4000K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" POLYCARB 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: 2126.0 lumens  
Efficiency: N/A  
Efficacy: 79.9 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

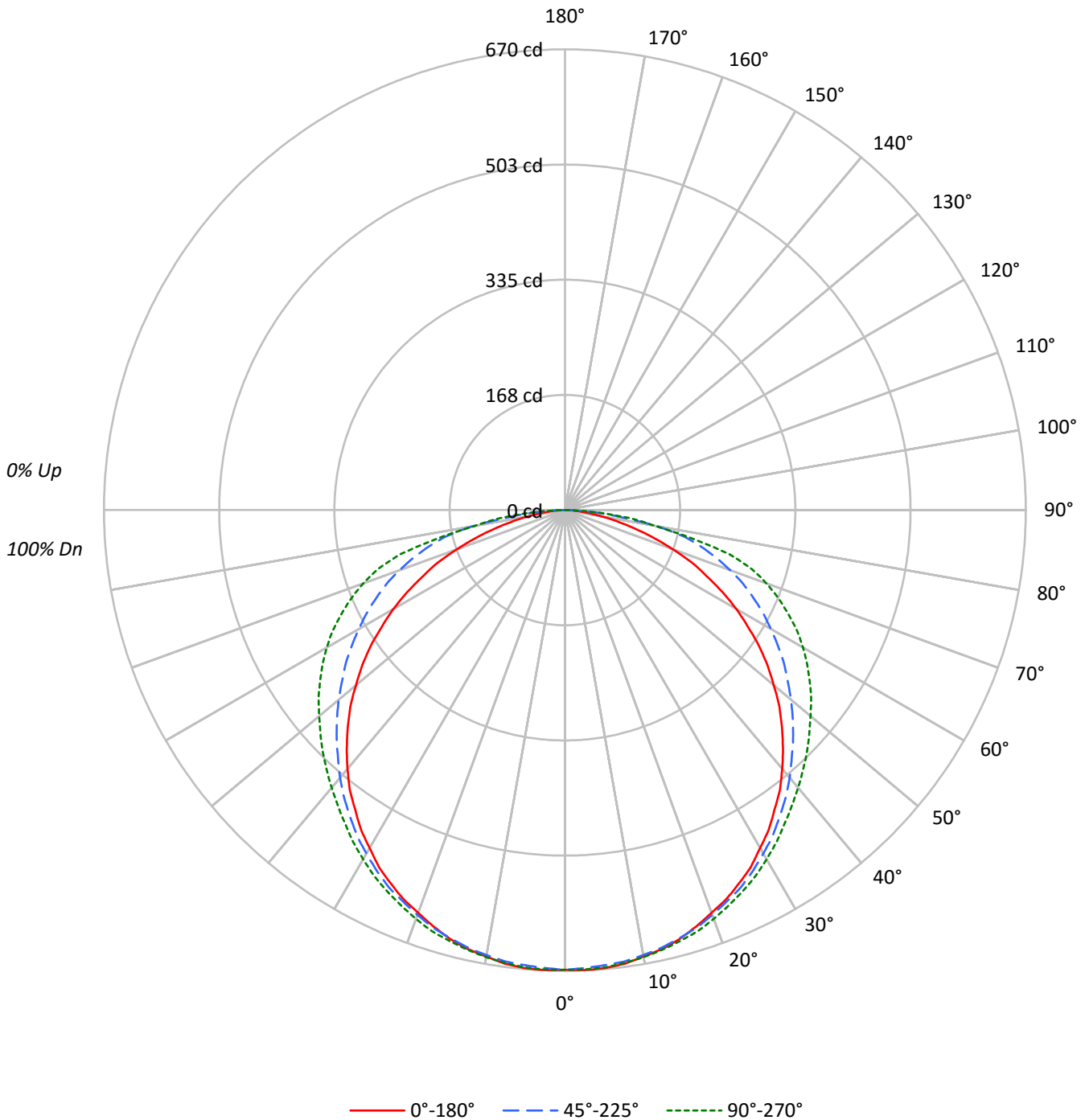
Input Watts (W): 26.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	900	900	900
5°	903	897	902
10°	900	898	902
15°	899	897	903
20°	892	897	906
25°	889	899	908
30°	881	896	911
35°	873	894	915
40°	863	893	926
45°	849	893	947
50°	830	898	976
55°	809	913	1019
60°	775	931	1076
65°	725	963	1141
70°	660	1008	1228
75°	559	1064	1283
80°	441	1070	1038
85°	326	814	912



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	63.4	3.0
10°-20°	182.5	8.6
20°-30°	279.1	13.1
30°-40°	341.2	16.0
40°-50°	363.7	17.1
50°-60°	347.7	16.4
60°-70°	294.6	13.9
70°-80°	198.0	9.3
80°-90°	55.8	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°	525.1	24.7
0°-40°	866.3	40.7
0°-60°	1577.6	74.2
0°-90°	2126.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2126.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	669	669	669	669	669	
5°	669	668	664	668	668	64
15°	645	645	644	650	648	182
25°	599	601	605	611	612	276
35°	532	536	544	555	557	333
45°	446	453	469	489	498	344
55°	345	358	389	420	434	307
65°	228	251	303	343	358	226
75°	108	147	205	239	247	115
85°	21	43	53	57	59	26
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	668.6	668.6	668.6	668.6	668.6
2.5°	669.6	669.6	666.5	668.6	668.6
5°	668.6	667.5	664.3	667.5	667.5
7.5°	665.4	664.3	662.2	665.4	664.3
10°	659.1	659.1	657.0	660.1	660.1
12.5°	653.8	652.7	651.7	655.9	654.9
15°	645.4	645.4	644.3	649.6	648.5
17.5°	634.8	635.9	636.9	641.1	642.2
20°	623.2	625.3	626.4	632.7	632.7
22.5°	612.7	613.7	615.8	622.2	622.2
25°	599.0	601.1	605.3	610.6	611.6
27.5°	585.3	586.3	591.6	599.0	600.0
30°	567.3	570.5	576.8	585.3	586.3
32.5°	551.5	554.7	562.1	570.5	572.6
35°	531.5	535.7	544.1	554.7	556.8
37.5°	513.6	516.7	527.3	538.9	542.0
40°	491.4	497.7	508.3	522.0	527.3
42.5°	469.3	475.6	488.2	506.2	512.5
45°	446.1	453.4	469.3	489.3	497.7
47.5°	422.9	431.3	449.2	472.4	481.9
50°	396.5	407.0	429.2	455.6	466.1
52.5°	371.2	383.8	408.1	437.6	451.3
55°	344.8	357.5	389.1	419.7	434.5
57.5°	315.3	332.2	367.0	401.8	417.6
60°	287.9	303.7	345.9	383.8	399.7
62.5°	258.4	279.4	324.8	364.9	380.7
65°	227.8	251.0	302.6	342.7	358.5
67.5°	200.4	225.7	280.5	320.6	336.4
70°	167.7	199.3	256.2	296.3	312.1
72.5°	137.1	171.9	230.9	270.0	284.7
75°	107.6	146.6	204.6	239.4	246.8
77.5°	80.1	121.3	177.2	191.9	186.7
80°	56.9	97.0	138.1	130.8	133.9
82.5°	36.9	73.8	85.4	97.0	100.2
85°	21.1	43.2	52.7	56.9	59.1
87.5°	9.5	15.8	21.1	21.1	20.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)