

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: P309940

Luminaire Tested: **24FCZ2-35HE-UNV-L82765-RDP-CP187-W2A-U-6500K**

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: P309940  
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-6500K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" POLYCARB SHEET  
Light Source: (336) 6500K 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**

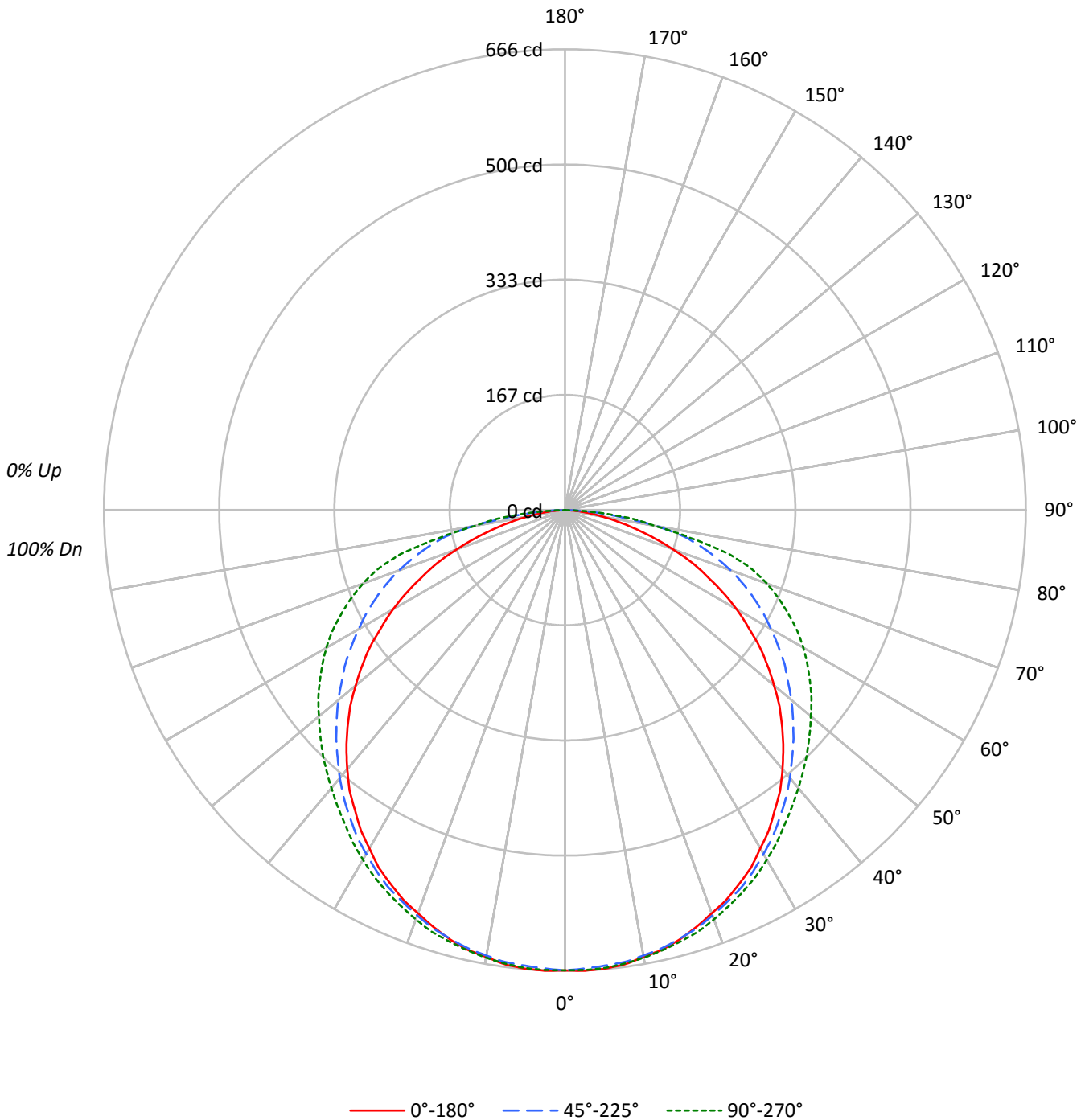
Lumens per Lamp: N/A  
Luminaire Lumens: 2116.0 lumens  
Efficiency: N/A  
Efficacy: 77.8 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 27.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
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°	895	895	895
5°	899	893	897
10°	896	893	898
15°	895	893	899
20°	888	893	902
25°	885	894	904
30°	877	892	907
35°	869	890	910
40°	859	889	922
45°	845	889	943
50°	826	894	971
55°	805	909	1014
60°	771	927	1070
65°	722	959	1136
70°	657	1003	1222
75°	557	1058	1277
80°	439	1065	1033
85°	324	810	908



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	63.1	3.0
10°-20°	181.7	8.6
20°-30°	277.8	13.1
30°-40°	339.6	16.0
40°-50°	362.0	17.1
50°-60°	346.1	16.4
60°-70°	293.2	13.9
70°-80°	197.0	9.3
80°-90°	55.6	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°	522.6	24.7
0°-40°	862.2	40.7
0°-60°	1570.2	74.2
0°-90°	2116.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2116.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	665	665	665	665	665	
5°	665	664	661	664	664	63
15°	642	642	641	646	646	181
25°	596	598	602	608	609	275
35°	529	533	542	552	554	331
45°	444	451	467	487	495	342
55°	343	356	387	418	432	306
65°	227	250	301	341	357	225
75°	107	146	204	238	246	115
85°	21	43	52	57	59	26
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	665.4	665.4	665.4	665.4	665.4
2.5°	666.5	666.5	663.3	665.4	665.4
5°	665.4	664.4	661.2	664.4	664.4
7.5°	662.3	661.2	659.1	662.3	661.2
10°	656.0	656.0	653.9	657.0	657.0
12.5°	650.7	649.7	648.6	652.8	651.8
15°	642.3	642.3	641.3	646.5	645.5
17.5°	631.8	632.9	633.9	638.1	639.2
20°	620.3	622.4	623.4	629.7	629.7
22.5°	609.8	610.8	612.9	619.2	619.2
25°	596.2	598.2	602.4	607.7	608.7
27.5°	582.5	583.6	588.8	596.2	597.2
30°	564.7	567.8	574.1	582.5	583.6
32.5°	548.9	552.1	559.4	567.8	569.9
35°	529.0	533.2	541.6	552.1	554.2
37.5°	511.1	514.3	524.8	536.3	539.5
40°	489.1	495.4	505.9	519.5	524.8
42.5°	467.1	473.4	485.9	503.8	510.1
45°	444.0	451.3	467.1	487.0	495.4
47.5°	420.9	429.3	447.1	470.2	479.6
50°	394.6	405.1	427.2	453.4	463.9
52.5°	369.4	382.0	406.2	435.6	449.2
55°	343.2	355.8	387.3	417.7	432.4
57.5°	313.8	330.6	365.2	399.9	415.6
60°	286.5	302.3	344.3	382.0	397.8
62.5°	257.1	278.1	323.3	363.1	378.9
65°	226.7	249.8	301.2	341.1	356.9
67.5°	199.4	224.6	279.2	319.1	334.8
70°	166.9	198.4	255.0	294.9	310.7
72.5°	136.4	171.1	229.9	268.7	283.4
75°	107.1	145.9	203.6	238.3	245.6
77.5°	79.8	120.7	176.3	191.0	185.8
80°	56.7	96.6	137.5	130.1	133.3
82.5°	36.7	73.5	85.0	96.6	99.7
85°	21.0	43.0	52.5	56.7	58.8
87.5°	9.4	15.7	21.0	21.0	19.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)