

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: P309938

Luminaire Tested: **24FCZ2-35HE-UNV-L82765-RDP-CP187-W2A-U-5500K**

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: P309938
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-5500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" POLYCARB SHEET
Light Source: (336) 5500K 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: 2105.0 lumens
Efficiency: N/A
Efficacy: 78.8 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

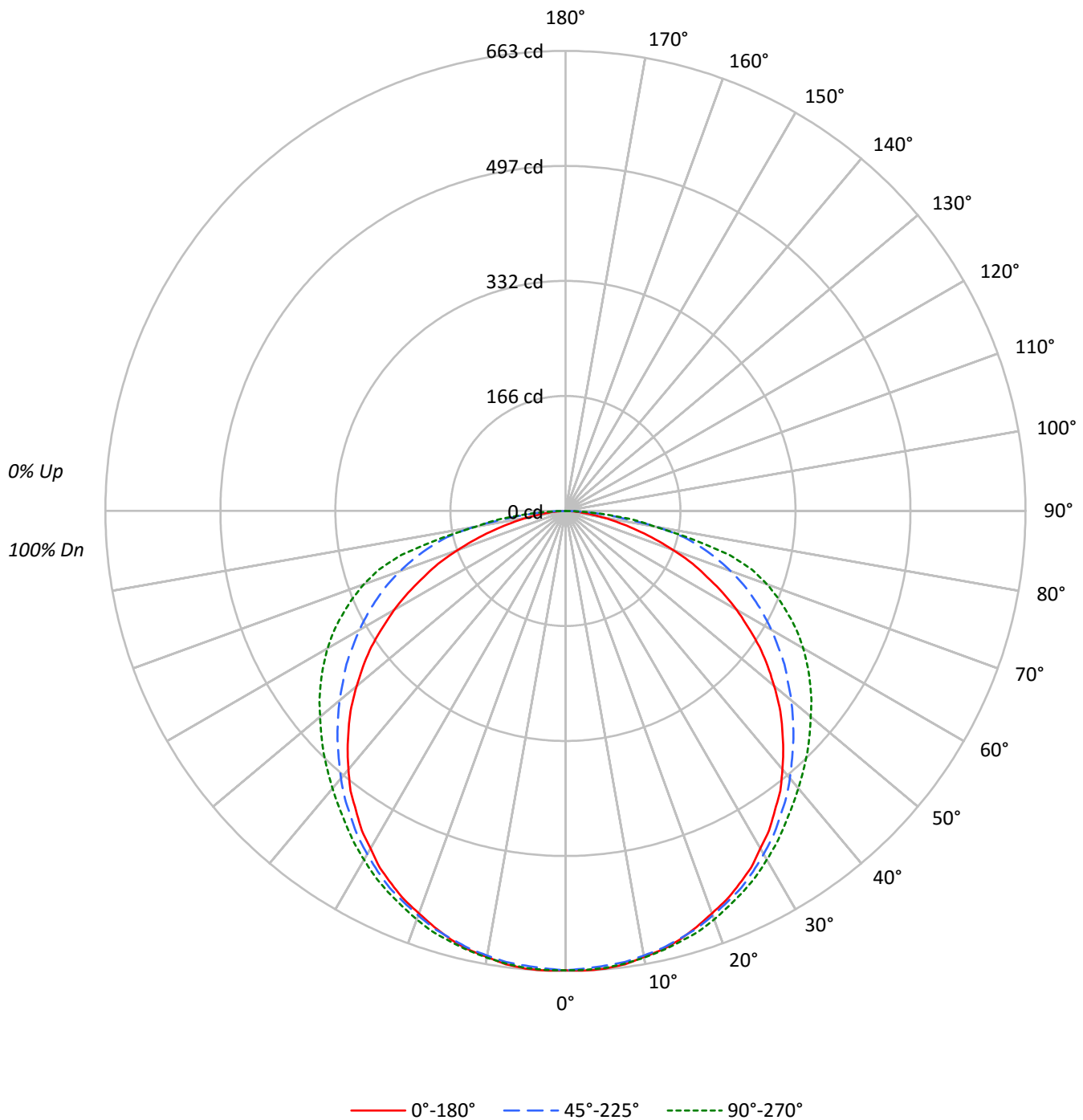
Input Watts (W): 26.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	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		100
1	108	103	98	94	105	100	96	92	96	93	89		92	89	87		82
2	97	89	81	75	95	87	80	74	83	77	72		80	75	71		67
3	88	77	68	62	86	76	67	61	72	66	60		70	64	59		56
4	81	68	59	52	78	67	58	51	64	57	51		62	55	50		47
5	74	60	51	44	72	59	51	44	57	49	43		55	48	43		40
6	68	54	45	38	66	53	45	38	51	44	38		50	43	37		35
7	63	49	40	34	61	48	40	34	47	39	33		45	38	33		31
8	59	45	36	30	57	44	36	30	43	35	30		41	34	29		27
9	55	41	33	27	53	40	32	27	39	32	27		38	31	26		24
10	51	38	30	24	50	37	29	24	36	29	24		35	29	24		22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	891	891	891
5°	894	888	893
10°	892	889	893
15°	890	889	894
20°	884	888	897
25°	881	890	899
30°	873	887	902
35°	864	885	906
40°	855	884	917
45°	840	884	938
50°	822	890	966
55°	801	904	1009
60°	767	922	1065
65°	718	954	1130
70°	653	998	1216
75°	554	1053	1270
80°	437	1060	1027
85°	323	806	903



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	62.8	3.0
10°-20°	180.7	8.6
20°-30°	276.4	13.1
30°-40°	337.8	16.0
40°-50°	360.1	17.1
50°-60°	344.3	16.4
60°-70°	291.6	13.9
70°-80°	196.0	9.3
80°-90°	55.3	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°	519.9	24.7
0°-40°	857.7	40.7
0°-60°	1562.1	74.2
0°-90°	2105.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2105.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	662	662	662	662	662	
5°	662	661	658	661	661	63
15°	639	639	638	643	642	180
25°	593	595	599	604	606	273
35°	526	530	539	549	551	330
45°	442	449	465	484	493	341
55°	341	354	385	416	430	304
65°	226	248	300	339	355	224
75°	106	145	203	237	244	114
85°	21	43	52	56	58	26
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	662.0	662.0	662.0	662.0	662.0
2.5°	663.0	663.0	659.9	662.0	662.0
5°	662.0	660.9	657.8	660.9	660.9
7.5°	658.8	657.8	655.7	658.8	657.8
10°	652.6	652.6	650.5	653.6	653.6
12.5°	647.3	646.3	645.3	649.4	648.4
15°	639.0	639.0	637.9	643.2	642.1
17.5°	628.6	629.6	630.6	634.8	635.9
20°	617.1	619.2	620.2	626.5	626.5
22.5°	606.6	607.7	609.8	616.0	616.0
25°	593.1	595.1	599.3	604.5	605.6
27.5°	579.5	580.5	585.7	593.1	594.1
30°	561.7	564.9	571.1	579.5	580.5
32.5°	546.1	549.2	556.5	564.9	566.9
35°	526.2	530.4	538.8	549.2	551.3
37.5°	508.5	511.6	522.1	533.5	536.7
40°	486.6	492.8	503.3	516.8	522.1
42.5°	464.6	470.9	483.4	501.2	507.4
45°	441.7	449.0	464.6	484.5	492.8
47.5°	418.7	427.0	444.8	467.8	477.2
50°	392.6	403.0	425.0	451.1	461.5
52.5°	367.5	380.1	404.1	433.3	446.9
55°	341.4	354.0	385.3	415.6	430.2
57.5°	312.2	328.9	363.3	397.8	413.5
60°	285.0	300.7	342.5	380.1	395.7
62.5°	255.8	276.7	321.6	361.3	376.9
65°	225.5	248.5	299.7	339.3	355.0
67.5°	198.4	223.4	277.7	317.4	333.1
70°	166.0	197.3	253.7	293.4	309.1
72.5°	135.7	170.2	228.7	267.3	281.9
75°	106.5	145.1	202.6	237.0	244.3
77.5°	79.4	120.1	175.4	190.0	184.8
80°	56.4	96.1	136.8	129.5	132.6
82.5°	36.5	73.1	84.6	96.1	99.2
85°	20.9	42.8	52.2	56.4	58.5
87.5°	9.4	15.7	20.9	20.9	19.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)