

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: P309987

Luminaire Tested: **24FCZ2-35-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: P309987
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: 24FCZ2-35-UNV-L82765-RDP-CP250-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB SHEET
Light Source: (168) 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: 1916.0 lumens
Efficiency: N/A
Efficacy: 68.9 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

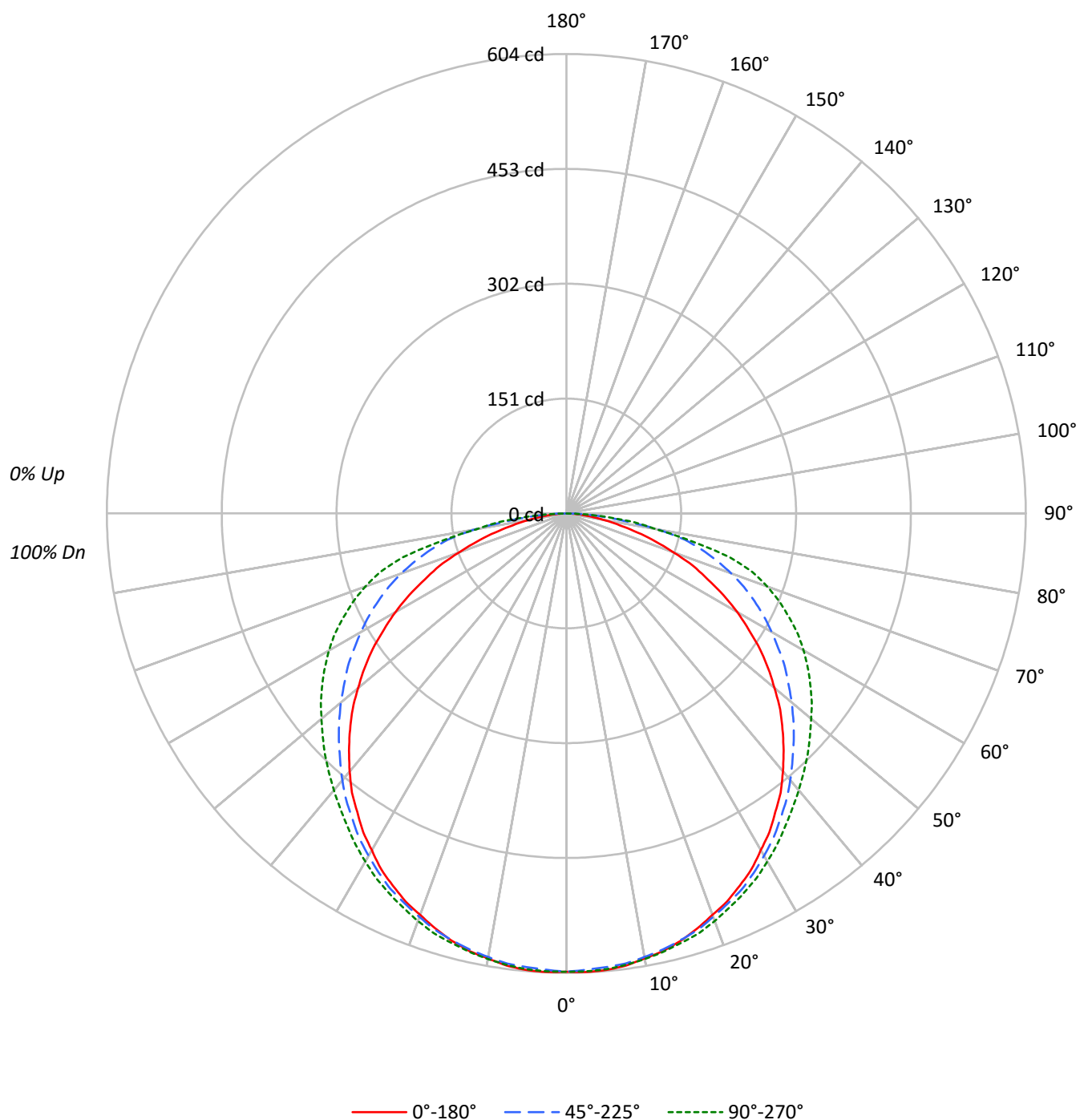
Input Watts (W): 27.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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CATALOG NUMBER: 24FC22-35-UNV-L82765-RDP-CP250-W2A-U-3000K

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°	811	811	811
5°	814	809	813
10°	812	809	813
15°	810	809	814
20°	804	808	816
25°	801	810	818
30°	794	808	821
35°	787	806	824
40°	778	805	835
45°	765	805	854
50°	748	810	879
55°	729	823	918
60°	698	839	969
65°	654	869	1029
70°	594	908	1107
75°	504	959	1156
80°	397	965	935
85°	293	733	821



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	57.2	3.0
10°-20°	164.5	8.6
20°-30°	251.5	13.1
30°-40°	307.5	16.0
40°-50°	327.8	17.1
50°-60°	313.4	16.4
60°-70°	265.5	13.9
70°-80°	178.4	9.3
80°-90°	50.3	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°	473.2	24.7
0°-40°	780.7	40.7
0°-60°	1421.8	74.2
0°-90°	1916.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1916.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	602	602	602	602	602	
5°	602	602	599	602	602	57
15°	582	582	581	585	584	164
25°	540	542	546	550	551	249
35°	479	483	490	500	502	300
45°	402	409	423	441	449	310
55°	311	322	351	378	392	277
65°	205	226	273	309	323	204
75°	97	132	184	216	222	104
85°	19	39	48	51	53	24
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	602.5	602.5	602.5	602.5	602.5
2.5°	603.5	603.5	600.6	602.5	602.5
5°	602.5	601.6	598.7	601.6	601.6
7.5°	599.7	598.7	596.8	599.7	598.7
10°	594.0	594.0	592.1	594.9	594.9
12.5°	589.2	588.3	587.3	591.1	590.2
15°	581.6	581.6	580.7	585.4	584.5
17.5°	572.1	573.1	574.0	577.8	578.8
20°	561.7	563.6	564.5	570.2	570.2
22.5°	552.2	553.1	555.0	560.7	560.7
25°	539.8	541.7	545.5	550.3	551.2
27.5°	527.4	528.4	533.2	539.8	540.8
30°	511.3	514.1	519.8	527.4	528.4
32.5°	497.0	499.9	506.5	514.1	516.0
35°	479.0	482.8	490.4	499.9	501.8
37.5°	462.8	465.7	475.2	485.6	488.5
40°	442.9	448.6	458.1	470.4	475.2
42.5°	422.9	428.6	440.0	456.2	461.9
45°	402.0	408.7	422.9	441.0	448.6
47.5°	381.1	388.7	404.9	425.8	434.3
50°	357.3	366.8	386.8	410.6	420.1
52.5°	334.5	345.9	367.8	394.4	406.8
55°	310.8	322.2	350.7	378.2	391.5
57.5°	284.2	299.4	330.7	362.1	376.3
60°	259.4	273.7	311.7	345.9	360.2
62.5°	232.8	251.8	292.7	328.8	343.1
65°	205.3	226.2	272.8	308.9	323.1
67.5°	180.6	203.4	252.8	288.9	303.2
70°	151.1	179.6	230.9	267.1	281.3
72.5°	123.5	154.9	208.1	243.3	256.6
75°	96.9	132.1	184.4	215.7	222.4
77.5°	72.2	109.3	159.7	173.0	168.2
80°	51.3	87.4	124.5	117.8	120.7
82.5°	33.3	66.5	77.0	87.4	90.3
85°	19.0	39.0	47.5	51.3	53.2
87.5°	8.6	14.3	19.0	19.0	18.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)