

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: P309989

Luminaire Tested: **24FCZ2-35-UNV-L82765-RDP-CP250-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: P309989
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-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB SHEET
Light Source: (168) 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: 2026.0 lumens
Efficiency: N/A
Efficacy: 71.6 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

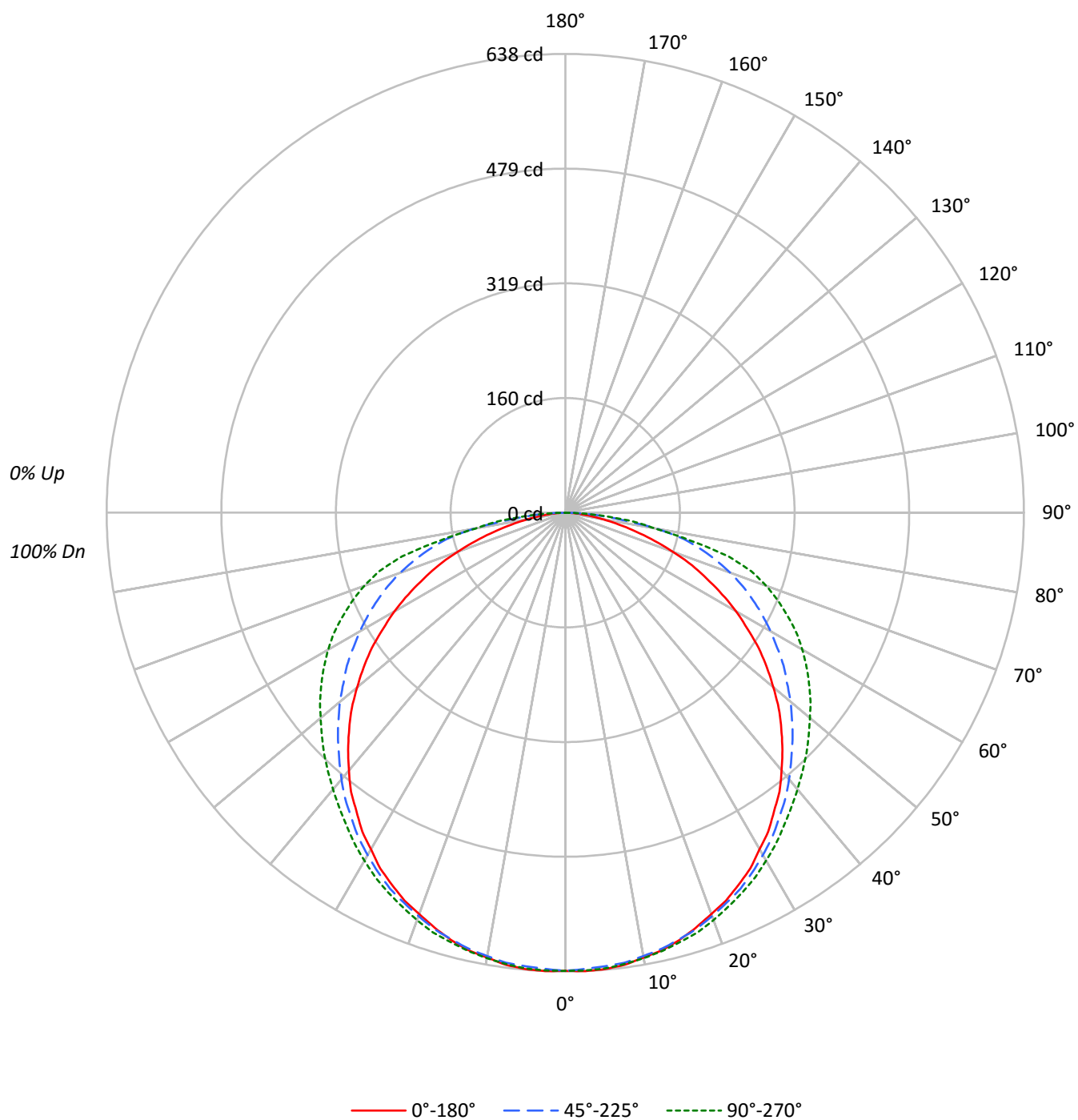
Input Watts (W): 28.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	857	857	857
5°	860	855	859
10°	858	855	860
15°	857	855	861
20°	850	855	863
25°	847	856	865
30°	840	854	868
35°	832	852	872
40°	823	851	883
45°	809	851	903
50°	791	856	930
55°	771	870	971
60°	738	887	1025
65°	691	918	1088
70°	629	961	1170
75°	533	1014	1223
80°	421	1020	989
85°	310	775	869



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	60.4	3.0
10°-20°	173.9	8.6
20°-30°	266.0	13.1
30°-40°	325.2	16.0
40°-50°	346.6	17.1
50°-60°	331.3	16.4
60°-70°	280.7	13.9
70°-80°	188.7	9.3
80°-90°	53.2	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°	500.4	24.7
0°-40°	825.5	40.7
0°-60°	1503.4	74.2
0°-90°	2026.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2026.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	637	637	637	637	637	
5°	637	636	633	636	636	61
15°	615	615	614	619	618	173
25°	571	573	577	582	583	263
35°	506	510	518	529	531	317
45°	425	432	447	466	474	328
55°	329	341	371	400	414	293
65°	217	239	288	327	342	215
75°	102	140	195	228	235	110
85°	20	41	50	54	56	25
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	637.1	637.1	637.1	637.1	637.1
2.5°	638.1	638.1	635.1	637.1	637.1
5°	637.1	636.1	633.1	636.1	636.1
7.5°	634.1	633.1	631.1	634.1	633.1
10°	628.1	628.1	626.1	629.1	629.1
12.5°	623.1	622.0	621.0	625.1	624.1
15°	615.0	615.0	614.0	619.0	618.0
17.5°	605.0	606.0	607.0	611.0	612.0
20°	593.9	595.9	596.9	603.0	603.0
22.5°	583.9	584.9	586.9	592.9	592.9
25°	570.8	572.8	576.8	581.8	582.9
27.5°	557.7	558.7	563.8	570.8	571.8
30°	540.6	543.7	549.7	557.7	558.7
32.5°	525.6	528.6	535.6	543.7	545.7
35°	506.5	510.5	518.5	528.6	530.6
37.5°	489.4	492.4	502.5	513.5	516.5
40°	468.3	474.3	484.4	497.4	502.5
42.5°	447.2	453.2	465.3	482.4	488.4
45°	425.1	432.1	447.2	466.3	474.3
47.5°	403.0	411.0	428.1	450.2	459.2
50°	377.8	387.9	409.0	434.1	444.2
52.5°	353.7	365.8	388.9	417.0	430.1
55°	328.6	340.7	370.8	400.0	414.0
57.5°	300.5	316.5	349.7	382.9	397.9
60°	274.3	289.4	329.6	365.8	380.9
62.5°	246.2	266.3	309.5	347.7	362.8
65°	217.1	239.2	288.4	326.6	341.7
67.5°	190.9	215.1	267.3	305.5	320.6
70°	159.8	189.9	244.2	282.4	297.5
72.5°	130.6	163.8	220.1	257.3	271.3
75°	102.5	139.7	195.0	228.1	235.2
77.5°	76.4	115.6	168.8	182.9	177.9
80°	54.3	92.5	131.6	124.6	127.6
82.5°	35.2	70.3	81.4	92.5	95.5
85°	20.1	41.2	50.2	54.3	56.3
87.5°	9.0	15.1	20.1	20.1	19.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)