

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: P309852

Luminaire Tested: **24FCZ2-30HE-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: P309852
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: 24FCZ2-30HE-UNV-L82765-RDP-CP250-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB SHEET
Light Source: (336) 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: 1654.0 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

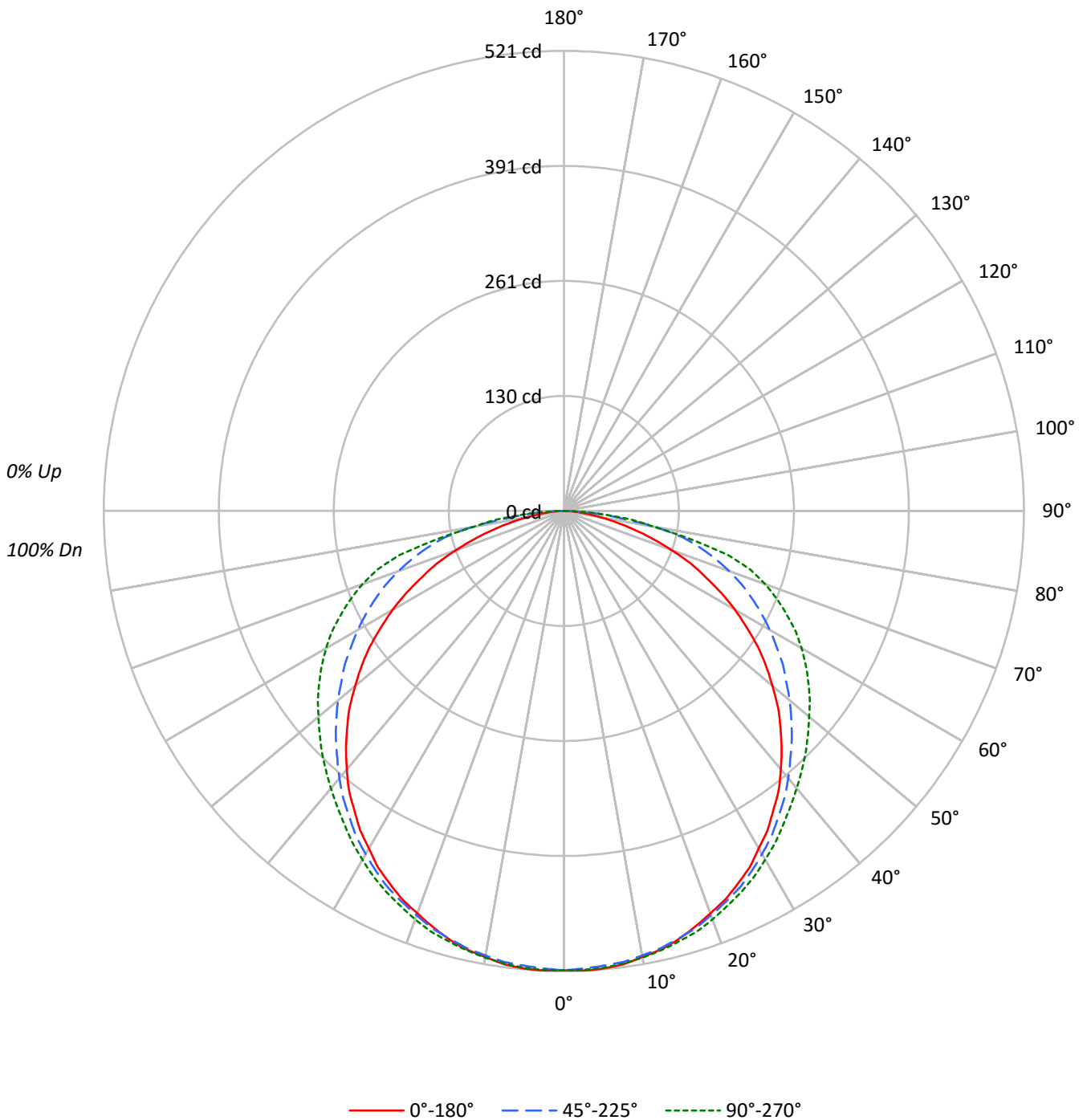
Input Watts (W): 21
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	700	700	700
5°	702	698	701
10°	701	698	702
15°	699	698	703
20°	694	698	705
25°	692	699	706
30°	686	697	709
35°	679	695	712
40°	671	694	720
45°	660	695	737
50°	646	699	759
55°	629	710	793
60°	603	724	837
65°	564	750	888
70°	513	784	955
75°	435	828	998
80°	343	833	807
85°	253	633	709



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	49.3	3.0
10°-20°	142.0	8.6
20°-30°	217.1	13.1
30°-40°	265.5	16.0
40°-50°	282.9	17.1
50°-60°	270.5	16.4
60°-70°	229.2	13.9
70°-80°	154.0	9.3
80°-90°	43.4	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°	408.5	24.7
0°-40°	673.9	40.7
0°-60°	1227.4	74.2
0°-90°	1654.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1654.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	520	520	520	520	520	
5°	520	519	517	519	519	49
15°	502	502	501	505	504	142
25°	466	468	471	475	476	215
35°	414	417	423	432	433	259
45°	347	353	365	381	387	268
55°	268	278	303	326	338	239
65°	177	195	236	267	279	176
75°	84	114	159	186	192	90
85°	16	34	41	44	46	20
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	520.1	520.1	520.1	520.1	520.1
2.5°	521.0	521.0	518.5	520.1	520.1
5°	520.1	519.3	516.9	519.3	519.3
7.5°	517.7	516.9	515.2	517.7	516.9
10°	512.8	512.8	511.1	513.6	513.6
12.5°	508.7	507.8	507.0	510.3	509.5
15°	502.1	502.1	501.3	505.4	504.5
17.5°	493.9	494.7	495.5	498.8	499.6
20°	484.9	486.5	487.3	492.2	492.2
22.5°	476.7	477.5	479.1	484.0	484.0
25°	466.0	467.6	470.9	475.0	475.8
27.5°	455.3	456.1	460.2	466.0	466.8
30°	441.4	443.8	448.8	455.3	456.1
32.5°	429.1	431.5	437.3	443.8	445.5
35°	413.5	416.8	423.3	431.5	433.2
37.5°	399.5	402.0	410.2	419.2	421.7
40°	382.3	387.2	395.4	406.1	410.2
42.5°	365.1	370.0	379.8	393.8	398.7
45°	347.0	352.8	365.1	380.7	387.2
47.5°	329.0	335.5	349.5	367.5	374.9
50°	308.5	316.7	333.9	354.4	362.6
52.5°	288.8	298.6	317.5	340.5	351.1
55°	268.3	278.1	302.7	326.5	338.0
57.5°	245.3	258.4	285.5	312.6	324.9
60°	224.0	236.3	269.1	298.6	310.9
62.5°	201.0	217.4	252.7	283.9	296.2
65°	177.2	195.3	235.5	266.6	278.9
67.5°	155.9	175.6	218.2	249.4	261.7
70°	130.4	155.1	199.4	230.5	242.8
72.5°	106.7	133.7	179.7	210.0	221.5
75°	83.7	114.0	159.2	186.2	192.0
77.5°	62.4	94.3	137.8	149.3	145.2
80°	44.3	75.5	107.5	101.7	104.2
82.5°	28.7	57.4	66.5	75.5	77.9
85°	16.4	33.6	41.0	44.3	45.9
87.5°	7.4	12.3	16.4	16.4	15.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)