

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: P313438

Luminaire Tested: **24FCZ2-30HE-UNV-L83050-RDP-CP250-W2A-U-4500K**

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: P313438
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-L83050-RDP-CP250-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB SHEET
Light Source: (336) 4500K 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: 1857.0 lumens
Efficiency: N/A
Efficacy: 84.0 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

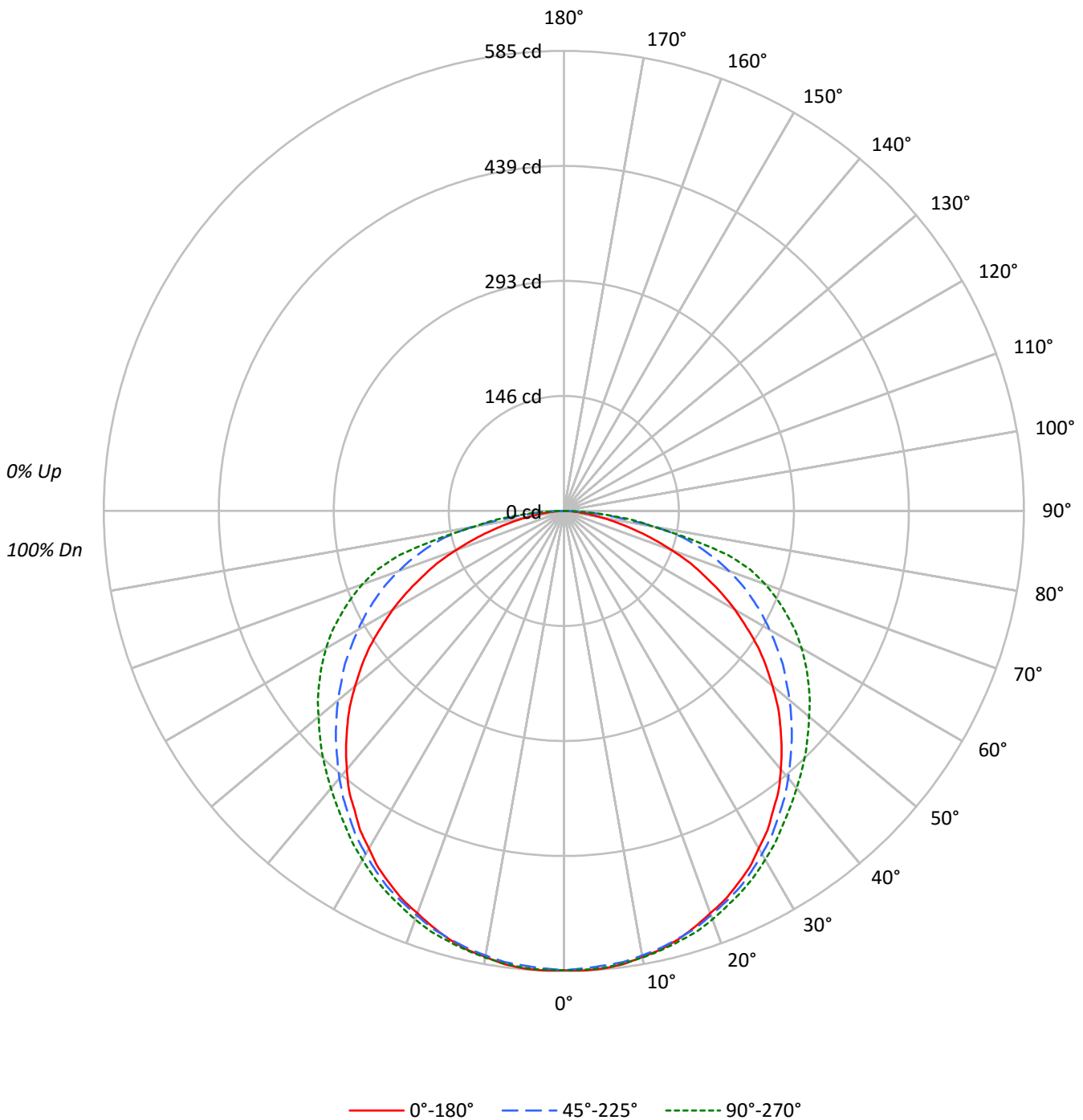
Input Watts (W): 22.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	68	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°	786	786	786
5°	789	784	788
10°	787	784	788
15°	785	784	789
20°	779	783	791
25°	777	785	793
30°	770	783	796
35°	762	781	799
40°	754	780	809
45°	741	780	827
50°	725	785	852
55°	707	797	890
60°	677	813	939
65°	634	842	997
70°	576	880	1072
75°	489	929	1120
80°	385	935	907
85°	284	712	797



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	55.4	3.0
10°-20°	159.4	8.6
20°-30°	243.8	13.1
30°-40°	298.0	16.0
40°-50°	317.7	17.1
50°-60°	303.7	16.4
60°-70°	257.3	13.9
70°-80°	172.9	9.3
80°-90°	48.8	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°	458.6	24.7
0°-40°	756.6	40.7
0°-60°	1378.0	74.2
0°-90°	1857.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1857.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	584	584	584	584	584	
5°	584	583	580	583	583	55
15°	564	564	563	567	566	159
25°	523	525	529	533	534	241
35°	464	468	475	484	486	291
45°	390	396	410	427	435	301
55°	301	312	340	367	380	268
65°	199	219	264	299	313	198
75°	94	128	179	209	216	101
85°	18	38	46	50	52	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	584.0	584.0	584.0	584.0	584.0
2.5°	584.9	584.9	582.1	584.0	584.0
5°	584.0	583.1	580.3	583.1	583.1
7.5°	581.2	580.3	578.4	581.2	580.3
10°	575.7	575.7	573.8	576.6	576.6
12.5°	571.1	570.2	569.2	572.9	572.0
15°	563.7	563.7	562.8	567.4	566.5
17.5°	554.5	555.4	556.3	560.0	560.9
20°	544.4	546.2	547.1	552.7	552.7
22.5°	535.2	536.1	537.9	543.4	543.4
25°	523.2	525.0	528.7	533.3	534.2
27.5°	511.2	512.1	516.7	523.2	524.1
30°	495.5	498.3	503.8	511.2	512.1
32.5°	481.7	484.5	490.9	498.3	500.2
35°	464.2	467.9	475.3	484.5	486.3
37.5°	448.6	451.3	460.5	470.7	473.4
40°	429.2	434.8	444.0	455.9	460.5
42.5°	409.9	415.4	426.5	442.1	447.7
45°	389.6	396.1	409.9	427.4	434.8
47.5°	369.4	376.7	392.4	412.7	420.9
50°	346.3	355.5	374.9	397.9	407.1
52.5°	324.2	335.3	356.5	382.3	394.2
55°	301.2	312.3	339.9	366.6	379.5
57.5°	275.4	290.1	320.5	350.9	364.8
60°	251.5	265.3	302.1	335.3	349.1
62.5°	225.7	244.1	283.7	318.7	332.5
65°	199.0	219.2	264.4	299.4	313.2
67.5°	175.0	197.1	245.0	280.0	293.8
70°	146.5	174.1	223.8	258.8	272.6
72.5°	119.7	150.1	201.7	235.8	248.7
75°	94.0	128.0	178.7	209.1	215.5
77.5°	70.0	105.9	154.7	167.6	163.0
80°	49.7	84.7	120.7	114.2	117.0
82.5°	32.2	64.5	74.6	84.7	87.5
85°	18.4	37.8	46.1	49.7	51.6
87.5°	8.3	13.8	18.4	18.4	17.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)