

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: P313437

Luminaire Tested: **24FCZ2-30HE-UNV-L83050-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: P313437
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-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB SHEET
Light Source: (336) 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: 1840.0 lumens
Efficiency: N/A
Efficacy: 85.2 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

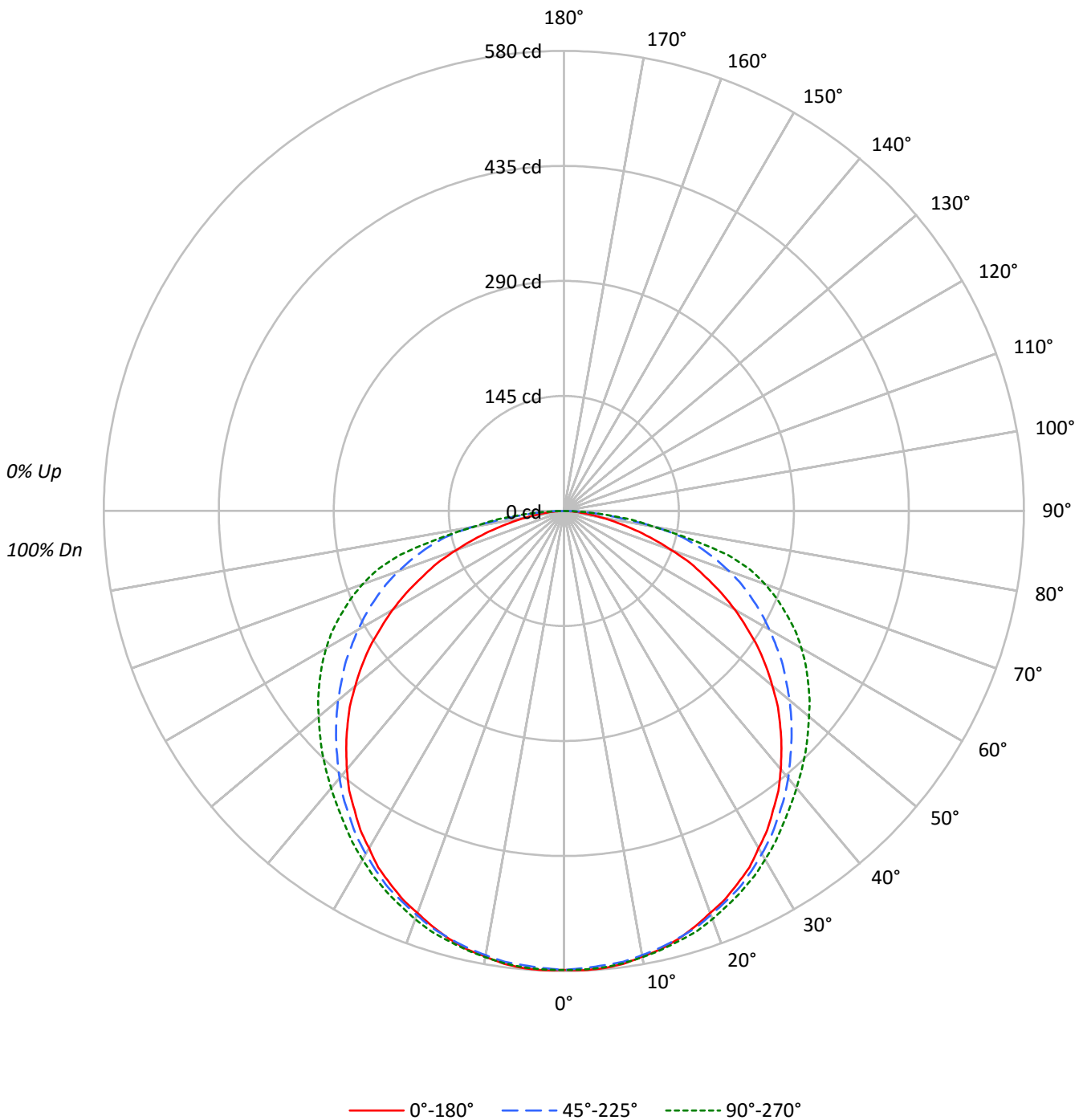
Input Watts (W): 21.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	779	779	779
5°	781	777	780
10°	779	777	781
15°	778	777	782
20°	772	776	784
25°	770	778	786
30°	763	776	788
35°	756	773	792
40°	747	773	801
45°	735	773	820
50°	718	778	844
55°	700	790	882
60°	671	806	931
65°	628	834	988
70°	571	873	1063
75°	484	921	1110
80°	382	927	898
85°	283	704	789



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	54.9	3.0
10°-20°	158.0	8.6
20°-30°	241.6	13.1
30°-40°	295.3	16.0
40°-50°	314.8	17.1
50°-60°	300.9	16.4
60°-70°	254.9	13.9
70°-80°	171.3	9.3
80°-90°	48.3	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°	454.4	24.7
0°-40°	749.7	40.7
0°-60°	1365.4	74.2
0°-90°	1840.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1840.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	579	579	579	579	579	
5°	579	578	575	578	578	55
15°	558	558	558	562	561	157
25°	518	520	524	528	529	239
35°	460	464	471	480	482	288
45°	386	392	406	424	431	298
55°	298	309	337	363	376	266
65°	197	217	262	297	310	196
75°	93	127	177	207	214	100
85°	18	37	46	49	51	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	578.6	578.6	578.6	578.6	578.6
2.5°	579.5	579.5	576.8	578.6	578.6
5°	578.6	577.7	575.0	577.7	577.7
7.5°	575.9	575.0	573.2	575.9	575.0
10°	570.4	570.4	568.6	571.3	571.3
12.5°	565.9	564.9	564.0	567.7	566.8
15°	558.5	558.5	557.6	562.2	561.3
17.5°	549.4	550.3	551.2	554.9	555.8
20°	539.4	541.2	542.1	547.6	547.6
22.5°	530.3	531.2	533.0	538.5	538.5
25°	518.4	520.2	523.9	528.4	529.3
27.5°	506.5	507.4	512.0	518.4	519.3
30°	491.0	493.7	499.2	506.5	507.4
32.5°	477.3	480.1	486.4	493.7	495.6
35°	460.0	463.6	470.9	480.1	481.9
37.5°	444.5	447.2	456.3	466.4	469.1
40°	425.3	430.8	439.9	451.8	456.3
42.5°	406.1	411.6	422.6	438.1	443.6
45°	386.1	392.4	406.1	423.5	430.8
47.5°	366.0	373.3	388.8	408.9	417.1
50°	343.2	352.3	371.5	394.3	403.4
52.5°	321.3	332.2	353.2	378.8	390.6
55°	298.4	309.4	336.8	363.2	376.0
57.5°	272.9	287.5	317.6	347.7	361.4
60°	249.2	262.8	299.4	332.2	345.9
62.5°	223.6	241.9	281.1	315.8	329.5
65°	197.1	217.2	261.9	296.6	310.3
67.5°	173.4	195.3	242.8	277.4	291.1
70°	145.1	172.5	221.8	256.5	270.1
72.5°	118.6	148.8	199.9	233.6	246.4
75°	93.1	126.9	177.1	207.2	213.6
77.5°	69.4	105.0	153.3	166.1	161.5
80°	49.3	84.0	119.6	113.2	115.9
82.5°	31.9	63.9	73.9	84.0	86.7
85°	18.3	37.4	45.6	49.3	51.1
87.5°	8.2	13.7	18.3	18.3	17.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)