

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: P309843

Luminaire Tested: **24FCZ2-30HE-UNV-L82765-RDP-CP187-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: P309843
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-CP187-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" 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: 1667.0 lumens
Efficiency: N/A
Efficacy: 79.4 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

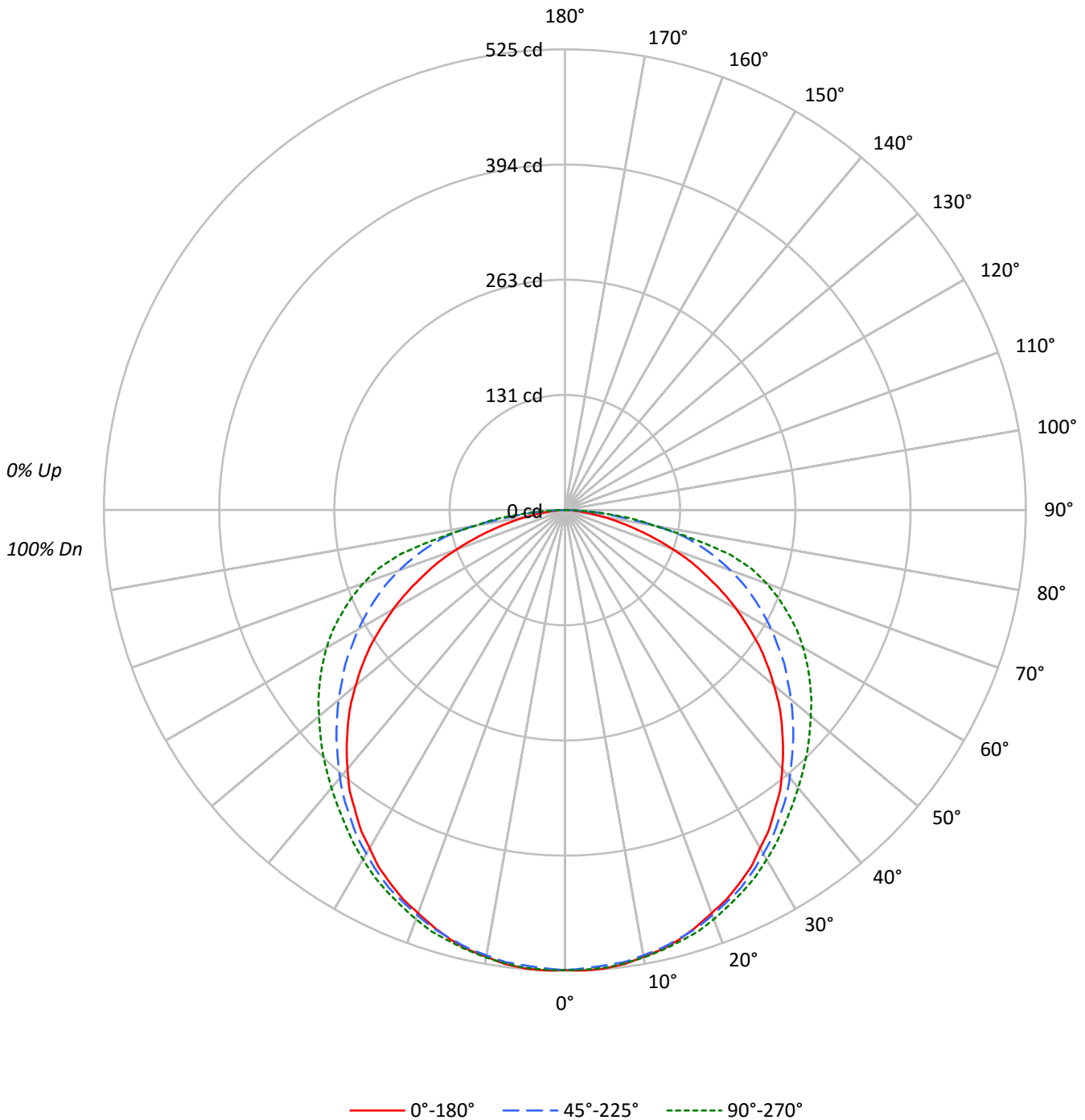
Input Watts (W): 21
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	705	705	705
5°	708	704	707
10°	706	704	707
15°	705	704	708
20°	700	703	710
25°	697	705	712
30°	691	703	714
35°	684	701	717
40°	677	700	726
45°	666	700	743
50°	651	704	765
55°	634	716	799
60°	607	730	843
65°	569	755	895
70°	517	790	963
75°	438	834	1006
80°	346	839	814
85°	255	638	715



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	49.7	3.0
10°-20°	143.1	8.6
20°-30°	218.9	13.1
30°-40°	267.5	16.0
40°-50°	285.1	17.1
50°-60°	272.6	16.4
60°-70°	231.0	13.9
70°-80°	155.2	9.3
80°-90°	43.8	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°	411.7	24.7
0°-40°	679.2	40.7
0°-60°	1237.0	74.2
0°-90°	1667.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1667.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	524	524	524	524	524	
5°	524	523	521	523	523	50
15°	506	506	505	509	508	143
25°	470	471	475	479	480	216
35°	417	420	427	435	437	261
45°	350	356	368	384	390	270
55°	270	280	305	329	341	241
65°	179	197	237	269	281	177
75°	84	115	160	188	194	90
85°	16	34	41	45	46	20
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	524.2	524.2	524.2	524.2	524.2
2.5°	525.1	525.1	522.6	524.2	524.2
5°	524.2	523.4	520.9	523.4	523.4
7.5°	521.7	520.9	519.3	521.7	520.9
10°	516.8	516.8	515.1	517.6	517.6
12.5°	512.6	511.8	511.0	514.3	513.5
15°	506.0	506.0	505.2	509.3	508.5
17.5°	497.8	498.6	499.4	502.7	503.6
20°	488.7	490.3	491.1	496.1	496.1
22.5°	480.4	481.2	482.9	487.8	487.8
25°	469.7	471.3	474.6	478.7	479.6
27.5°	458.9	459.7	463.9	469.7	470.5
30°	444.8	447.3	452.3	458.9	459.7
32.5°	432.4	434.9	440.7	447.3	449.0
35°	416.7	420.0	426.7	434.9	436.6
37.5°	402.7	405.2	413.4	422.5	425.0
40°	385.3	390.3	398.5	409.3	413.4
42.5°	367.9	372.9	382.8	396.9	401.8
45°	349.8	355.5	367.9	383.7	390.3
47.5°	331.6	338.2	352.2	370.4	377.9
50°	310.9	319.2	336.5	357.2	365.5
52.5°	291.1	301.0	320.0	343.1	353.9
55°	270.4	280.3	305.1	329.1	340.7
57.5°	247.2	260.5	287.7	315.0	327.4
60°	225.7	238.1	271.2	301.0	313.4
62.5°	202.6	219.1	254.7	286.1	298.5
65°	178.6	196.8	237.3	268.7	281.1
67.5°	157.1	176.9	219.9	251.4	263.8
70°	131.5	156.3	200.9	232.3	244.7
72.5°	107.5	134.8	181.1	211.7	223.2
75°	84.3	114.9	160.4	187.7	193.5
77.5°	62.8	95.1	138.9	150.5	146.4
80°	44.6	76.1	108.3	102.5	105.0
82.5°	28.9	57.9	67.0	76.1	78.6
85°	16.5	33.9	41.3	44.6	46.3
87.5°	7.4	12.4	16.5	16.5	15.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)