

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: P309848

Luminaire Tested: **24FCZ2-30HE-UNV-L82765-RDP-CP187-W2A-U-5500K**

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: P309848
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-5500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" POLYCARB SHEET
Light Source: (336) 5500K 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: 1837.0 lumens
Efficiency: N/A
Efficacy: 84.7 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

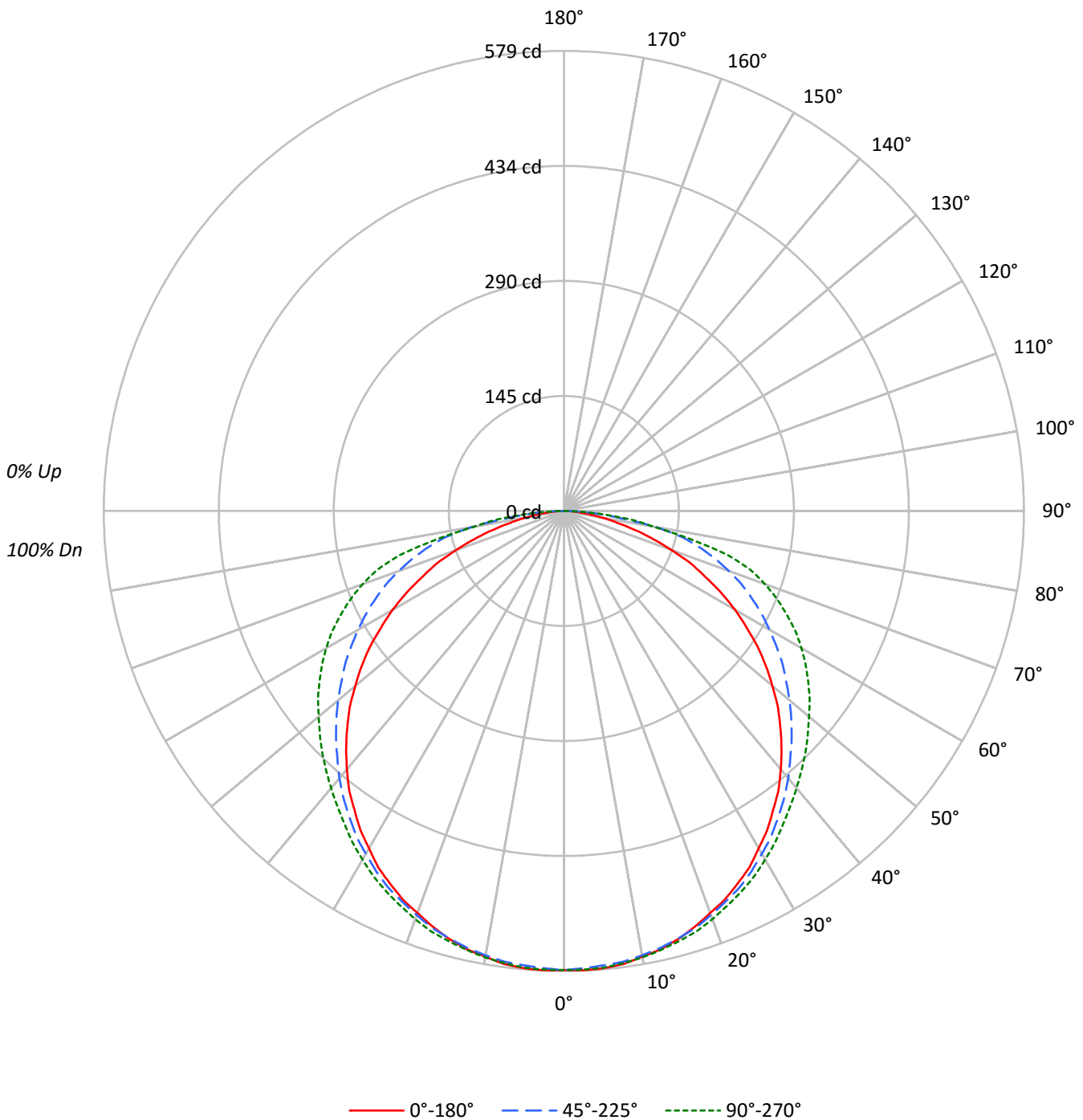
Input Watts (W): 21.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	777	777	777
5°	780	775	779
10°	778	776	779
15°	777	775	781
20°	771	775	783
25°	768	776	785
30°	762	774	787
35°	754	772	790
40°	746	771	800
45°	733	772	818
50°	717	776	843
55°	699	789	881
60°	670	804	929
65°	627	833	986
70°	570	871	1061
75°	483	919	1108
80°	381	925	896
85°	281	704	787



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	54.8	3.0
10°-20°	157.7	8.6
20°-30°	241.2	13.1
30°-40°	294.8	16.0
40°-50°	314.2	17.1
50°-60°	300.4	16.4
60°-70°	254.5	13.9
70°-80°	171.1	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°	453.7	24.7
0°-40°	748.5	40.7
0°-60°	1363.2	74.2
0°-90°	1837.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1837.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	578	578	578	578	578	
5°	578	577	574	577	577	55
15°	558	558	557	561	560	157
25°	518	519	523	528	528	239
35°	459	463	470	479	481	288
45°	385	392	406	423	430	297
55°	298	309	336	363	375	265
65°	197	217	262	296	310	195
75°	93	127	177	207	213	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°	577.7	577.7	577.7	577.7	577.7
2.5°	578.6	578.6	575.9	577.7	577.7
5°	577.7	576.8	574.0	576.8	576.8
7.5°	575.0	574.0	572.2	575.0	574.0
10°	569.5	569.5	567.7	570.4	570.4
12.5°	564.9	564.0	563.1	566.7	565.8
15°	557.6	557.6	556.7	561.3	560.4
17.5°	548.5	549.4	550.3	554.0	554.9
20°	538.5	540.3	541.2	546.7	546.7
22.5°	529.4	530.3	532.1	537.6	537.6
25°	517.5	519.4	523.0	527.6	528.5
27.5°	505.7	506.6	511.2	517.5	518.5
30°	490.2	492.9	498.4	505.7	506.6
32.5°	476.5	479.3	485.7	492.9	494.8
35°	459.2	462.9	470.2	479.3	481.1
37.5°	443.7	446.5	455.6	465.6	468.3
40°	424.6	430.1	439.2	451.0	455.6
42.5°	405.5	410.9	421.9	437.4	442.8
45°	385.4	391.8	405.5	422.8	430.1
47.5°	365.4	372.7	388.2	408.2	416.4
50°	342.6	351.7	370.8	393.6	402.7
52.5°	320.7	331.7	352.6	378.1	390.0
55°	298.0	308.9	336.2	362.6	375.4
57.5°	272.4	287.0	317.1	347.2	360.8
60°	248.8	262.4	298.9	331.7	345.3
62.5°	223.2	241.5	280.6	315.3	328.9
65°	196.8	216.9	261.5	296.1	309.8
67.5°	173.1	195.0	242.4	277.0	290.7
70°	144.9	172.2	221.4	256.0	269.7
72.5°	118.5	148.5	199.5	233.3	246.0
75°	92.9	126.7	176.8	206.8	213.2
77.5°	69.2	104.8	153.1	165.8	161.3
80°	49.2	83.8	119.4	113.0	115.7
82.5°	31.9	63.8	73.8	83.8	86.6
85°	18.2	37.4	45.6	49.2	51.0
87.5°	8.2	13.7	18.2	18.2	17.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)