

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: P309842

Luminaire Tested: **24FCZ2-30HE-UNV-L82765-RDP-CP187-W2A-U-2700K**

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: P309842
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-2700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" POLYCARB SHEET
Light Source: (336) 2700K 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: 1621.0 lumens
Efficiency: N/A
Efficacy: 76.8 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

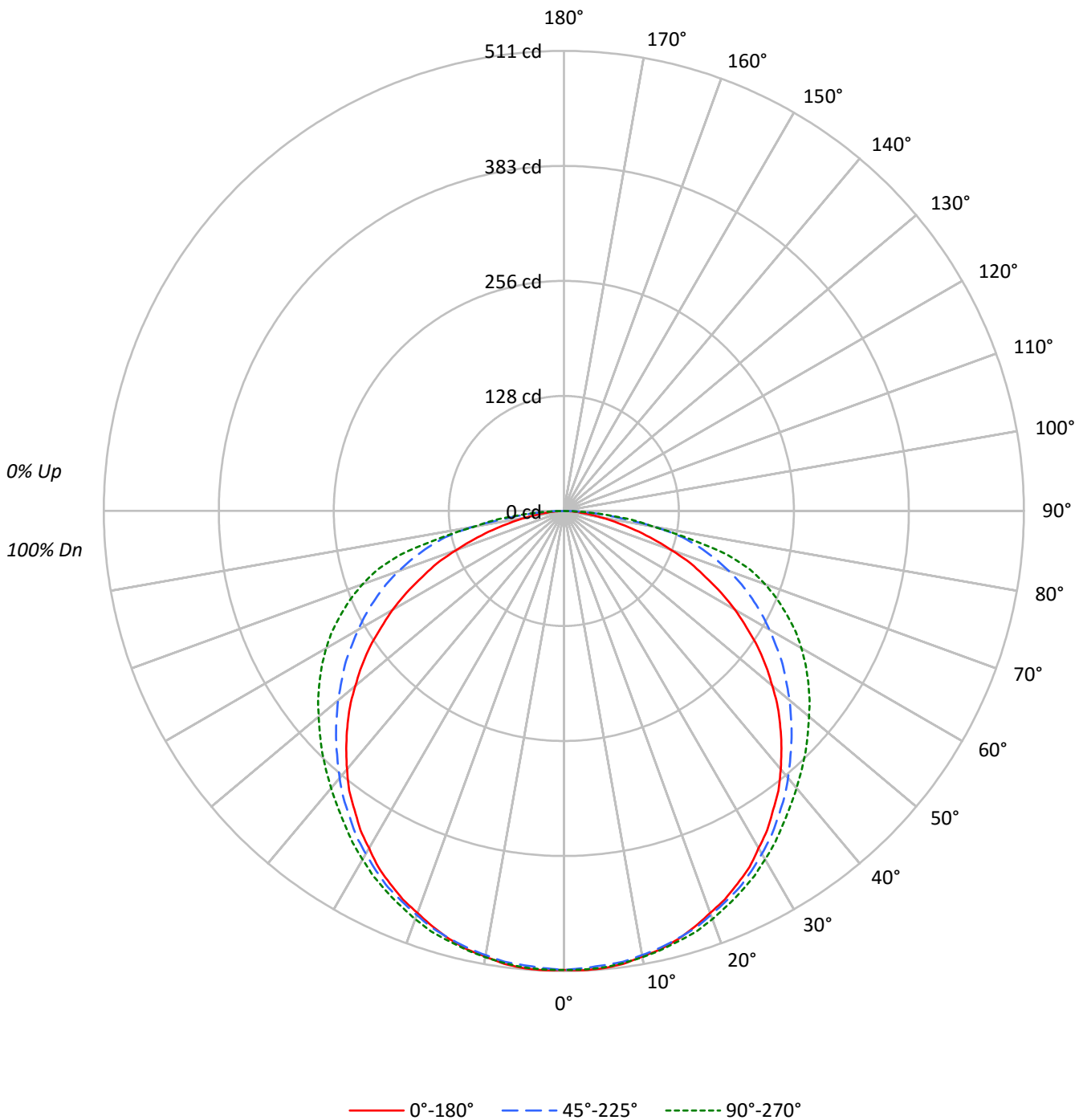
Input Watts (W): 21.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	686	686	686
5°	689	684	687
10°	687	684	688
15°	685	684	689
20°	680	684	691
25°	678	685	692
30°	672	683	694
35°	666	681	697
40°	658	681	706
45°	647	681	722
50°	633	685	744
55°	617	696	777
60°	591	710	820
65°	553	735	870
70°	503	769	936
75°	426	811	978
80°	336	816	791
85°	249	621	695



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	48.4	3.0
10°-20°	139.2	8.6
20°-30°	212.8	13.1
30°-40°	260.2	16.0
40°-50°	277.3	17.1
50°-60°	265.1	16.4
60°-70°	224.6	13.9
70°-80°	150.9	9.3
80°-90°	42.6	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°	400.3	24.7
0°-40°	660.5	40.7
0°-60°	1202.9	74.2
0°-90°	1621.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1621.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	510	510	510	510	510	
5°	510	509	506	509	509	48
15°	492	492	491	495	494	139
25°	457	458	462	466	466	210
35°	405	408	415	423	424	254
45°	340	346	358	373	380	262
55°	263	273	297	320	331	234
65°	174	191	231	261	273	172
75°	82	112	156	182	188	88
85°	16	33	40	43	45	20
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	509.8	509.8	509.8	509.8	509.8
2.5°	510.6	510.6	508.2	509.8	509.8
5°	509.8	509.0	506.5	509.0	509.0
7.5°	507.3	506.5	504.9	507.3	506.5
10°	502.5	502.5	500.9	503.3	503.3
12.5°	498.5	497.7	496.9	500.1	499.3
15°	492.1	492.1	491.3	495.3	494.5
17.5°	484.0	484.8	485.6	488.9	489.7
20°	475.2	476.8	477.6	482.4	482.4
22.5°	467.1	467.9	469.6	474.4	474.4
25°	456.7	458.3	461.5	465.5	466.3
27.5°	446.2	447.0	451.1	456.7	457.5
30°	432.6	435.0	439.8	446.2	447.0
32.5°	420.5	422.9	428.6	435.0	436.6
35°	405.2	408.4	414.9	422.9	424.5
37.5°	391.6	394.0	402.0	410.9	413.3
40°	374.7	379.5	387.5	398.0	402.0
42.5°	357.8	362.6	372.3	385.9	390.8
45°	340.1	345.7	357.8	373.1	379.5
47.5°	322.4	328.9	342.5	360.2	367.4
50°	302.3	310.4	327.2	347.3	355.4
52.5°	283.0	292.7	311.2	333.7	344.1
55°	262.9	272.6	296.7	320.0	331.3
57.5°	240.4	253.3	279.8	306.3	318.4
60°	219.5	231.6	263.7	292.7	304.7
62.5°	197.0	213.1	247.6	278.2	290.3
65°	173.7	191.4	230.8	261.3	273.4
67.5°	152.8	172.1	213.9	244.4	256.5
70°	127.8	152.0	195.4	225.9	238.0
72.5°	104.5	131.1	176.1	205.8	217.1
75°	82.0	111.8	156.0	182.5	188.1
77.5°	61.1	92.5	135.1	146.3	142.3
80°	43.4	74.0	105.3	99.7	102.1
82.5°	28.1	56.3	65.1	74.0	76.4
85°	16.1	33.0	40.2	43.4	45.0
87.5°	7.2	12.1	16.1	16.1	15.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)