

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: P309168

Luminaire Tested: **24FCZ2-30HE-UNV-L82765-HRP-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: P309168
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)
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-HRP-CP187-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 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: 1881.0 lumens
Efficiency: N/A
Efficacy: 89.6 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

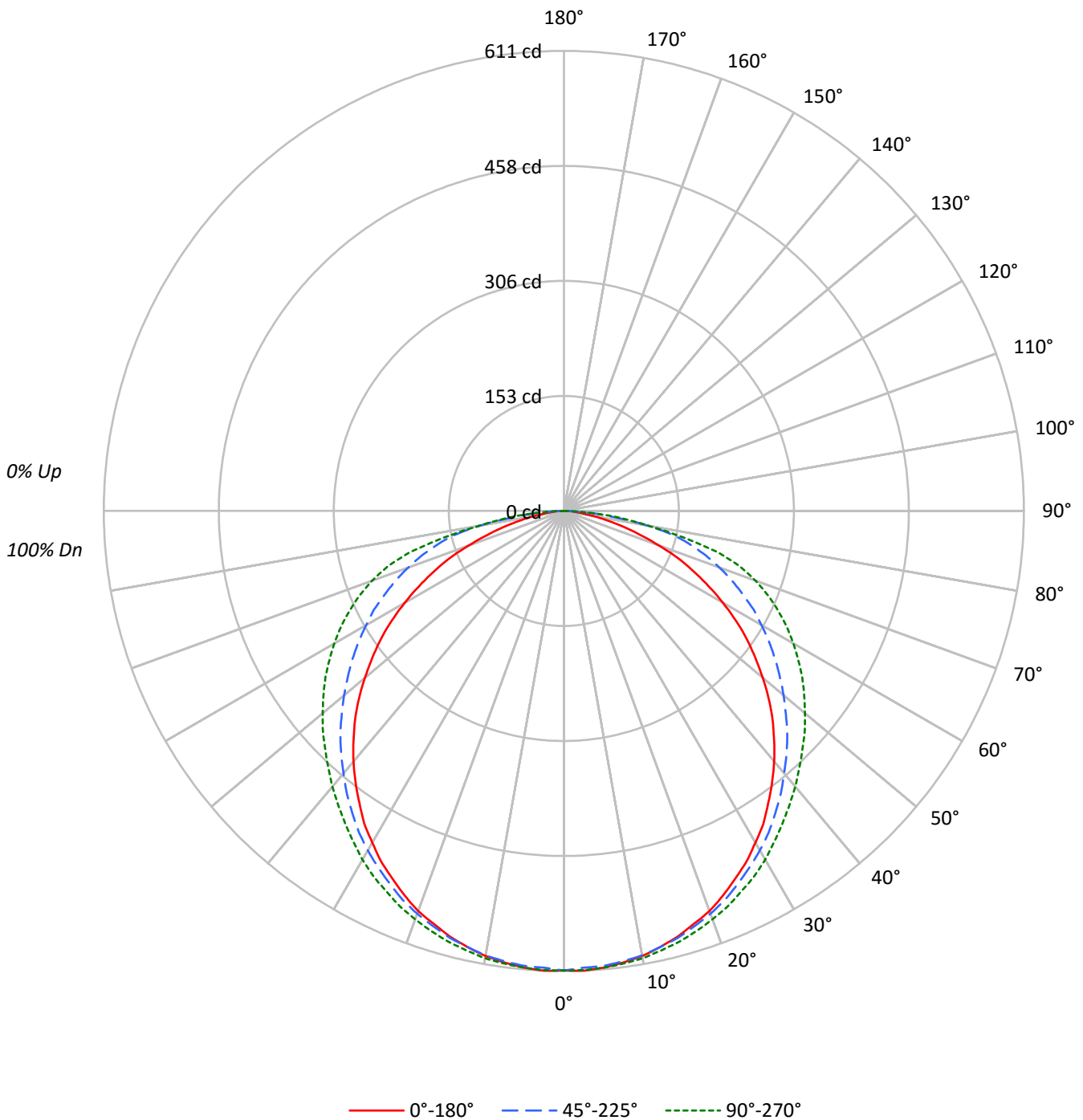
Input Watts (W): 21
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	24	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	821	821	821
5°	822	819	822
10°	820	819	824
15°	815	817	825
20°	810	815	826
25°	800	811	828
30°	790	809	831
35°	777	805	832
40°	764	800	840
45°	746	799	853
50°	722	798	875
55°	696	804	907
60°	657	816	947
65°	607	835	1000
70°	530	864	1066
75°	430	909	1101
80°	317	891	891
85°	242	656	741



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	57.8	3.1
10°-20°	166.0	8.8
20°-30°	252.7	13.4
30°-40°	306.9	16.3
40°-50°	324.2	17.2
50°-60°	305.9	16.3
60°-70°	254.4	13.5
70°-80°	167.3	8.9
80°-90°	45.6	2.4
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°	476.6	25.3
0°-40°	783.5	41.7
0°-60°	1413.6	75.2
0°-90°	1881.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1881.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	610	610	610	610	610	
5°	609	609	606	609	609	58
15°	585	586	587	592	592	165
25°	539	542	546	556	558	248
35°	473	479	490	502	506	296
45°	392	400	420	440	448	302
55°	297	310	343	375	387	264
65°	191	213	262	301	314	188
75°	83	120	175	207	212	89
85°	16	35	42	47	48	19
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	610.3	610.3	610.3	610.3	610.3
2.5°	611.1	610.3	607.1	610.3	610.3
5°	608.7	608.7	606.4	608.7	608.7
7.5°	604.8	604.8	603.2	606.4	606.4
10°	600.1	600.1	599.3	603.2	603.2
12.5°	593.0	593.8	593.0	597.7	597.7
15°	585.1	585.9	586.7	592.2	592.2
17.5°	574.9	576.4	578.0	584.3	585.1
20°	565.4	566.2	569.3	576.4	577.2
22.5°	552.8	555.2	559.1	566.2	568.6
25°	538.6	541.8	546.5	556.0	557.5
27.5°	525.2	527.6	533.9	544.1	547.3
30°	508.7	512.6	520.5	530.8	534.7
32.5°	493.0	496.9	506.3	517.4	520.5
35°	473.3	478.8	489.8	502.4	506.3
37.5°	454.4	459.9	473.3	487.4	492.2
40°	434.7	441.0	455.2	471.7	478.0
42.5°	413.4	422.1	437.8	455.9	463.0
45°	392.2	400.0	419.7	440.2	448.1
47.5°	369.3	378.8	400.0	424.4	433.9
50°	344.9	356.7	381.1	407.9	418.1
52.5°	320.5	333.9	361.5	391.4	402.4
55°	296.9	309.5	342.6	374.8	386.6
57.5°	270.9	286.6	322.9	357.5	369.3
60°	244.1	261.4	303.2	339.4	352.0
62.5°	217.3	237.0	284.3	320.5	333.9
65°	190.6	212.6	262.2	300.8	314.2
67.5°	164.6	189.0	241.8	280.3	293.7
70°	134.7	165.4	219.7	257.5	270.9
72.5°	107.1	142.5	198.4	233.9	245.7
75°	82.7	120.5	174.8	207.1	211.8
77.5°	60.6	98.4	150.4	161.4	162.2
80°	40.9	78.7	115.0	113.4	115.0
82.5°	26.8	59.1	72.4	81.1	81.9
85°	15.7	34.6	42.5	47.2	48.0
87.5°	7.9	11.8	15.0	15.7	17.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)