

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: P309849

Luminaire Tested: **24FCZ2-30HE-UNV-L82765-RDP-CP187-W2A-U-5700K**

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: P309849
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-5700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" POLYCARB SHEET
Light Source: (336) 5700K 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: 1842.0 lumens
Efficiency: N/A
Efficacy: 84.9 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

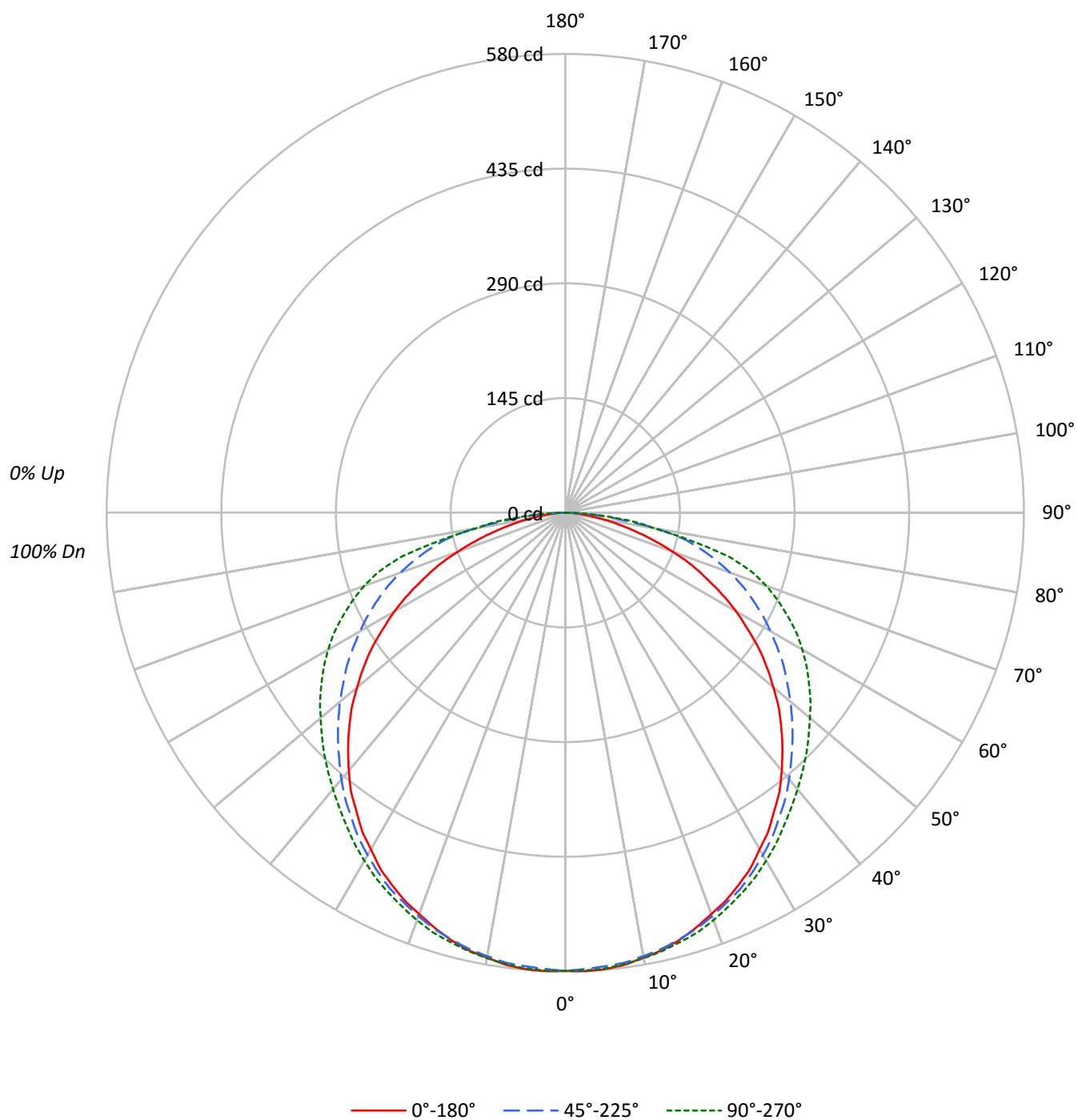
Input Watts (W): 21.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	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		100
1	108	103	98	94	105	100	96	92	96	93	89		92	89	87		82
2	97	89	81	75	95	87	80	74	83	77	72		80	75	71		67
3	88	77	68	62	86	76	67	61	72	66	60		70	64	59		56
4	81	68	59	52	78	67	58	51	64	57	51		62	55	50		47
5	74	60	51	44	72	59	51	44	57	49	43		55	48	43		40
6	68	54	45	38	66	53	45	38	51	44	38		50	43	37		35
7	63	49	40	34	61	48	40	34	47	39	33		45	38	33		31
8	59	45	36	30	57	44	36	30	43	35	30		41	34	29		27
9	55	41	33	27	53	40	32	27	39	32	27		38	31	26		24
10	51	38	30	24	50	37	29	24	36	29	24		35	29	24		22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	779	779	779
5°	782	777	781
10°	780	778	781
15°	779	778	783
20°	773	777	785
25°	770	779	787
30°	764	777	789
35°	756	774	792
40°	748	774	802
45°	735	774	820
50°	719	778	845
55°	701	791	883
60°	671	806	932
65°	628	835	989
70°	572	873	1064
75°	485	921	1111
80°	382	927	899
85°	283	706	790



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	54.9	3.0
10°-20°	158.1	8.6
20°-30°	241.8	13.1
30°-40°	295.6	16.0
40°-50°	315.1	17.1
50°-60°	301.3	16.4
60°-70°	255.2	13.9
70°-80°	171.5	9.3
80°-90°	48.4	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°	454.9	24.7
0°-40°	750.5	40.7
0°-60°	1366.9	74.2
0°-90°	1842.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1842.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	579	579	579	579	579	
5°	579	578	576	578	578	55
15°	559	559	558	563	562	158
25°	519	521	524	529	530	239
35°	460	464	471	481	482	288
45°	386	393	407	424	431	298
55°	299	310	337	364	376	266
65°	197	217	262	297	311	196
75°	93	127	177	207	214	100
85°	18	38	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°	579.3	579.3	579.3	579.3	579.3
2.5°	580.2	580.2	577.4	579.3	579.3
5°	579.3	578.3	575.6	578.3	578.3
7.5°	576.5	575.6	573.8	576.5	575.6
10°	571.0	571.0	569.2	571.9	571.9
12.5°	566.5	565.6	564.6	568.3	567.4
15°	559.2	559.2	558.2	562.8	561.9
17.5°	550.0	550.9	551.8	555.5	556.4
20°	540.0	541.8	542.7	548.2	548.2
22.5°	530.8	531.7	533.6	539.1	539.1
25°	519.0	520.8	524.4	529.0	529.9
27.5°	507.1	508.0	512.6	519.0	519.9
30°	491.5	494.3	499.8	507.1	508.0
32.5°	477.8	480.6	487.0	494.3	496.1
35°	460.5	464.1	471.4	480.6	482.4
37.5°	444.9	447.7	456.8	466.9	469.6
40°	425.8	431.2	440.4	452.3	456.8
42.5°	406.6	412.1	423.0	438.6	444.0
45°	386.5	392.9	406.6	423.9	431.2
47.5°	366.4	373.7	389.2	409.3	417.5
50°	343.5	352.7	371.9	394.7	403.8
52.5°	321.6	332.6	353.6	379.2	391.0
55°	298.8	309.7	337.1	363.6	376.4
57.5°	273.2	287.8	318.0	348.1	361.8
60°	249.4	263.1	299.7	332.6	346.3
62.5°	223.8	242.1	281.4	316.1	329.8
65°	197.3	217.4	262.2	296.9	310.6
67.5°	173.6	195.5	243.0	277.8	291.5
70°	145.3	172.7	222.0	256.7	270.4
72.5°	118.8	148.9	200.1	233.9	246.7
75°	93.2	127.0	177.2	207.4	213.8
77.5°	69.4	105.1	153.5	166.3	161.7
80°	49.3	84.1	119.7	113.3	116.0
82.5°	32.0	64.0	74.0	84.1	86.8
85°	18.3	37.5	45.7	49.3	51.2
87.5°	8.2	13.7	18.3	18.3	17.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)