

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: P309847

Luminaire Tested: **24FCZ2-30HE-UNV-L82765-RDP-CP187-W2A-U-5000K**

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: P309847
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-5000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" POLYCARB SHEET
Light Source: (336) 5000K 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: 1819.0 lumens
Efficiency: N/A
Efficacy: 84.2 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

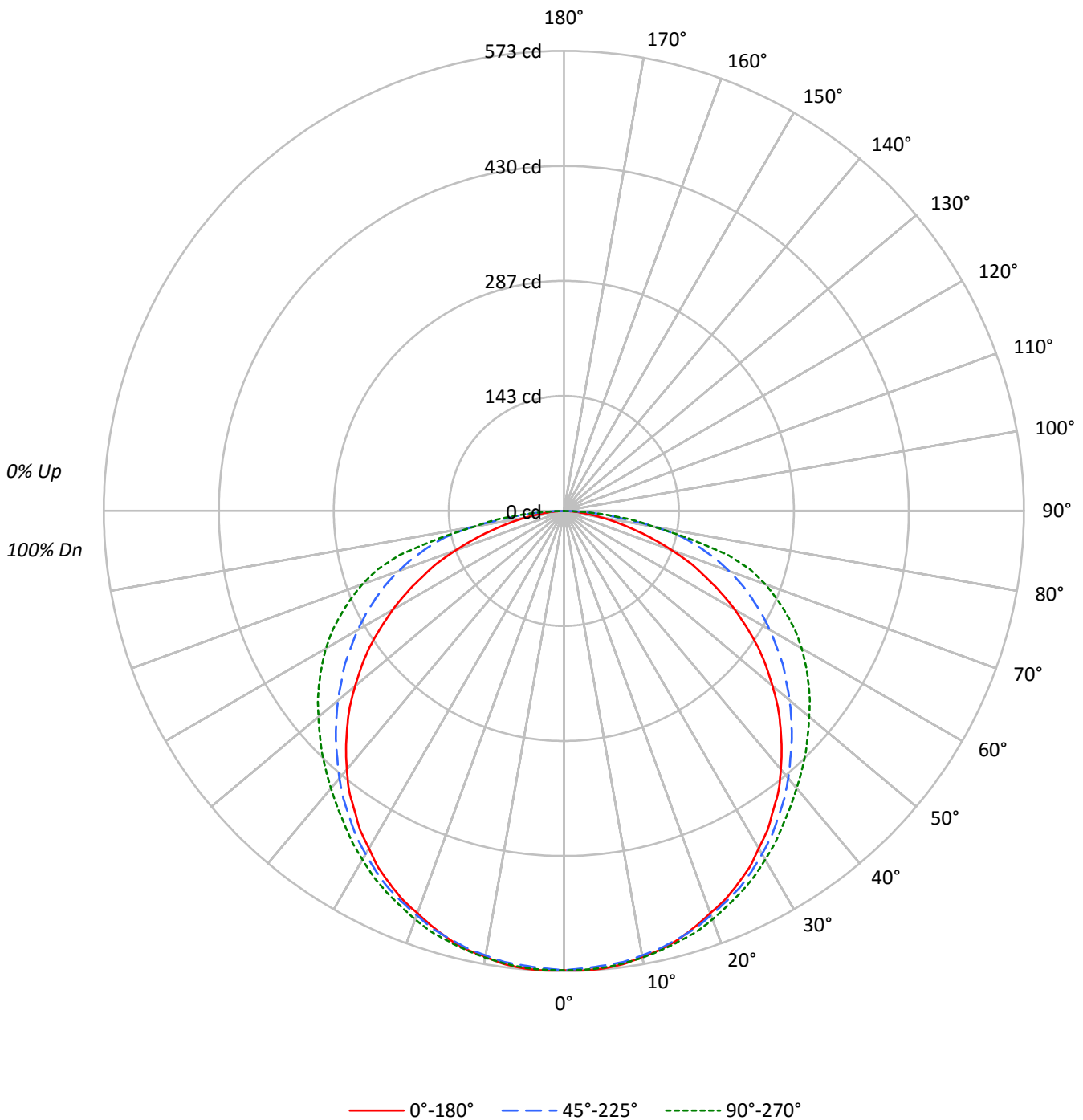
Input Watts (W): 21.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	770	770	770
5°	773	768	771
10°	770	768	772
15°	769	768	773
20°	763	767	775
25°	761	769	777
30°	754	767	779
35°	747	765	783
40°	738	764	792
45°	726	764	810
50°	710	769	835
55°	692	781	872
60°	663	796	920
65°	621	824	977
70°	565	862	1051
75°	478	910	1097
80°	377	916	888
85°	278	696	780



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	54.3	3.0
10°-20°	156.2	8.6
20°-30°	238.8	13.1
30°-40°	291.9	16.0
40°-50°	311.1	17.1
50°-60°	297.5	16.4
60°-70°	252.0	13.9
70°-80°	169.4	9.3
80°-90°	47.8	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°	449.2	24.7
0°-40°	741.2	40.7
0°-60°	1349.8	74.2
0°-90°	1819.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1819.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	572	572	572	572	572	
5°	572	571	568	571	571	54
15°	552	552	551	556	555	156
25°	512	514	518	522	523	236
35°	455	458	466	475	476	285
45°	382	388	402	419	426	294
55°	295	306	333	359	372	263
65°	195	215	259	293	307	193
75°	92	125	175	205	211	99
85°	18	37	45	49	50	22
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	572.0	572.0	572.0	572.0	572.0
2.5°	572.9	572.9	570.2	572.0	572.0
5°	572.0	571.1	568.4	571.1	571.1
7.5°	569.3	568.4	566.6	569.3	568.4
10°	563.9	563.9	562.1	564.8	564.8
12.5°	559.4	558.5	557.6	561.2	560.3
15°	552.2	552.2	551.3	555.8	554.9
17.5°	543.2	544.1	545.0	548.6	549.5
20°	533.2	535.0	535.9	541.3	541.3
22.5°	524.2	525.1	526.9	532.3	532.3
25°	512.5	514.3	517.9	522.4	523.3
27.5°	500.7	501.6	506.2	512.5	513.4
30°	485.4	488.1	493.5	500.7	501.6
32.5°	471.9	474.6	480.9	488.1	489.9
35°	454.7	458.3	465.6	474.6	476.4
37.5°	439.4	442.1	451.1	461.0	463.8
40°	420.4	425.9	434.9	446.6	451.1
42.5°	401.5	406.9	417.7	433.1	438.5
45°	381.6	388.0	401.5	418.6	425.9
47.5°	361.8	369.0	384.4	404.2	412.3
50°	339.2	348.3	367.2	389.8	398.8
52.5°	317.6	328.4	349.2	374.4	386.2
55°	295.0	305.9	332.9	359.1	371.7
57.5°	269.8	284.2	314.0	343.8	357.3
60°	246.3	259.8	295.9	328.4	342.0
62.5°	221.1	239.1	277.9	312.2	325.7
65°	194.9	214.7	258.9	293.2	306.8
67.5°	171.4	193.1	240.0	274.3	287.8
70°	143.5	170.5	219.2	253.5	267.1
72.5°	117.3	147.1	197.6	231.0	243.6
75°	92.0	125.4	175.0	204.8	211.1
77.5°	68.6	103.8	151.6	164.2	159.7
80°	48.7	83.0	118.2	111.9	114.6
82.5°	31.6	63.2	73.1	83.0	85.7
85°	18.0	37.0	45.1	48.7	50.5
87.5°	8.1	13.5	18.0	18.0	17.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)