

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: P309845

Luminaire Tested: **24FCZ2-30HE-UNV-L82765-RDP-CP187-W2A-U-4000K**

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: P309845
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-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" POLYCARB SHEET
Light Source: (336) 4000K 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: 1763.0 lumens
Efficiency: N/A
Efficacy: 82.8 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

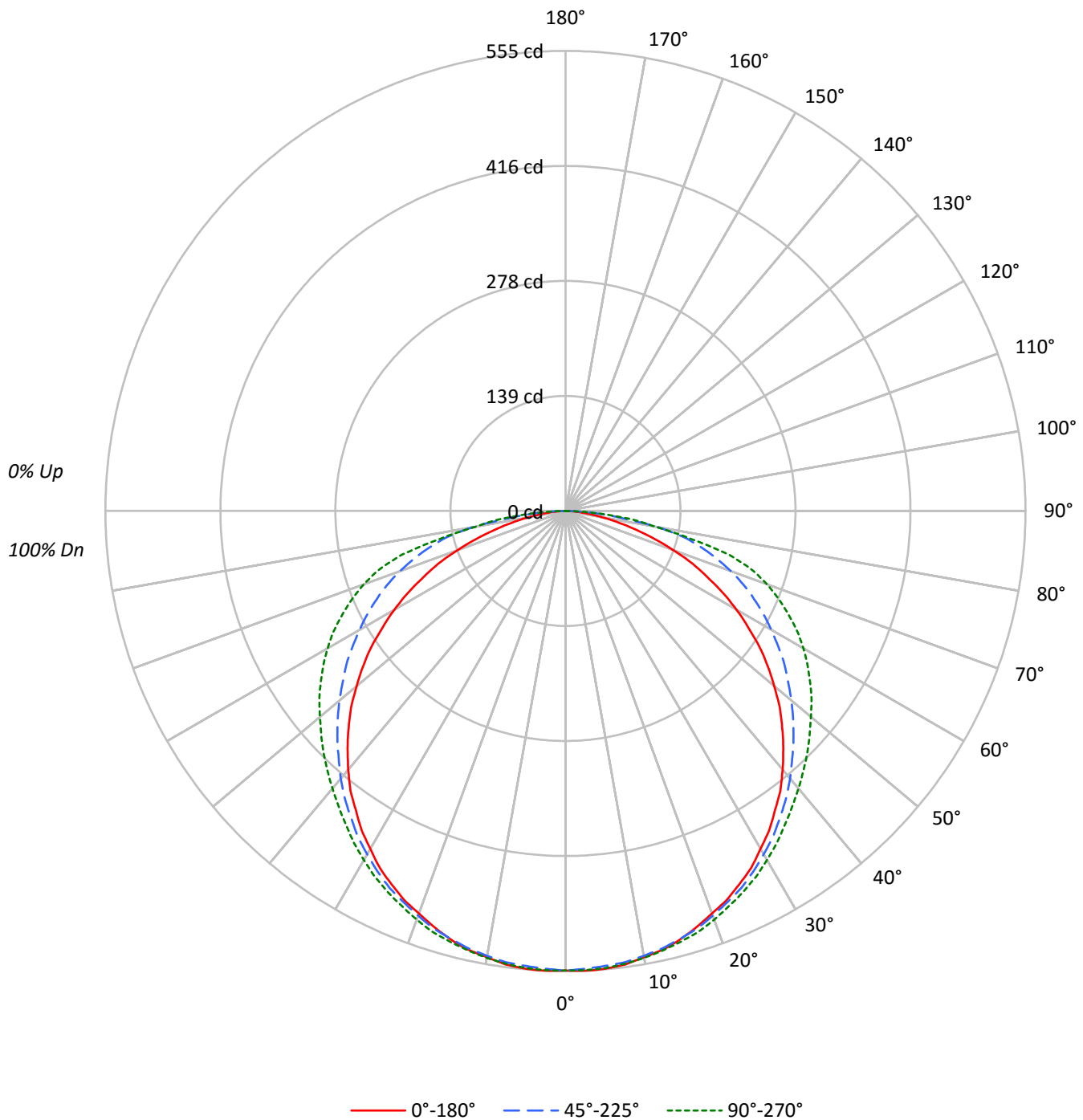
Input Watts (W): 21.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	746	746	746
5°	749	744	748
10°	747	744	748
15°	746	744	749
20°	740	744	751
25°	737	745	753
30°	731	743	755
35°	724	741	758
40°	716	740	768
45°	704	740	785
50°	688	745	809
55°	671	757	845
60°	642	772	892
65°	601	799	947
70°	547	836	1018
75°	464	882	1064
80°	366	888	861
85°	270	675	756



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	52.6	3.0
10°-20°	151.4	8.6
20°-30°	231.5	13.1
30°-40°	283.0	16.0
40°-50°	301.6	17.1
50°-60°	288.3	16.4
60°-70°	244.2	13.9
70°-80°	164.2	9.3
80°-90°	46.3	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°	435.4	24.7
0°-40°	718.4	40.7
0°-60°	1308.3	74.2
0°-90°	1763.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1763.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	554	554	554	554	554	
5°	554	554	551	554	554	53
15°	535	535	534	539	538	151
25°	497	498	502	506	507	229
35°	441	444	451	460	462	276
45°	370	376	389	406	413	285
55°	286	296	323	348	360	255
65°	189	208	251	284	297	187
75°	89	122	170	198	205	96
85°	18	36	44	47	49	22
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	554.4	554.4	554.4	554.4	554.4
2.5°	555.3	555.3	552.7	554.4	554.4
5°	554.4	553.5	550.9	553.5	553.5
7.5°	551.8	550.9	549.2	551.8	550.9
10°	546.5	546.5	544.8	547.4	547.4
12.5°	542.2	541.3	540.4	543.9	543.0
15°	535.2	535.2	534.3	538.7	537.8
17.5°	526.4	527.3	528.2	531.7	532.6
20°	516.8	518.6	519.4	524.7	524.7
22.5°	508.1	508.9	510.7	515.9	515.9
25°	496.7	498.4	501.9	506.3	507.2
27.5°	485.3	486.2	490.6	496.7	497.6
30°	470.5	473.1	478.3	485.3	486.2
32.5°	457.3	460.0	466.1	473.1	474.8
35°	440.7	444.2	451.2	460.0	461.7
37.5°	425.9	428.5	437.2	446.9	449.5
40°	407.5	412.7	421.5	432.9	437.2
42.5°	389.1	394.4	404.9	419.7	425.0
45°	369.9	376.0	389.1	405.8	412.7
47.5°	350.7	357.7	372.5	391.8	399.6
50°	328.8	337.5	355.9	377.8	386.5
52.5°	307.8	318.3	338.4	362.9	374.3
55°	286.0	296.4	322.7	348.0	360.3
57.5°	261.5	275.5	304.3	333.2	346.3
60°	238.7	251.8	286.8	318.3	331.4
62.5°	214.2	231.7	269.3	302.6	315.7
65°	188.9	208.1	251.0	284.2	297.3
67.5°	166.1	187.1	232.6	265.8	279.0
70°	139.0	165.3	212.5	245.7	258.8
72.5°	113.7	142.5	191.5	223.9	236.1
75°	89.2	121.6	169.6	198.5	204.6
77.5°	66.5	100.6	146.9	159.2	154.8
80°	47.2	80.5	114.6	108.4	111.1
82.5°	30.6	61.2	70.8	80.5	83.1
85°	17.5	35.9	43.7	47.2	49.0
87.5°	7.9	13.1	17.5	17.5	16.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)