

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: P308454

Luminaire Tested: **22FCZ2-29HE-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: P308454
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-24)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 22FCZ2-29HE-UNV-L82765-RDP-CP187-W2A-U-5700K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" POLYCARB SHEET
Light Source: (168) 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: 1676.0 lumens
Efficiency: N/A
Efficacy: 72.9 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

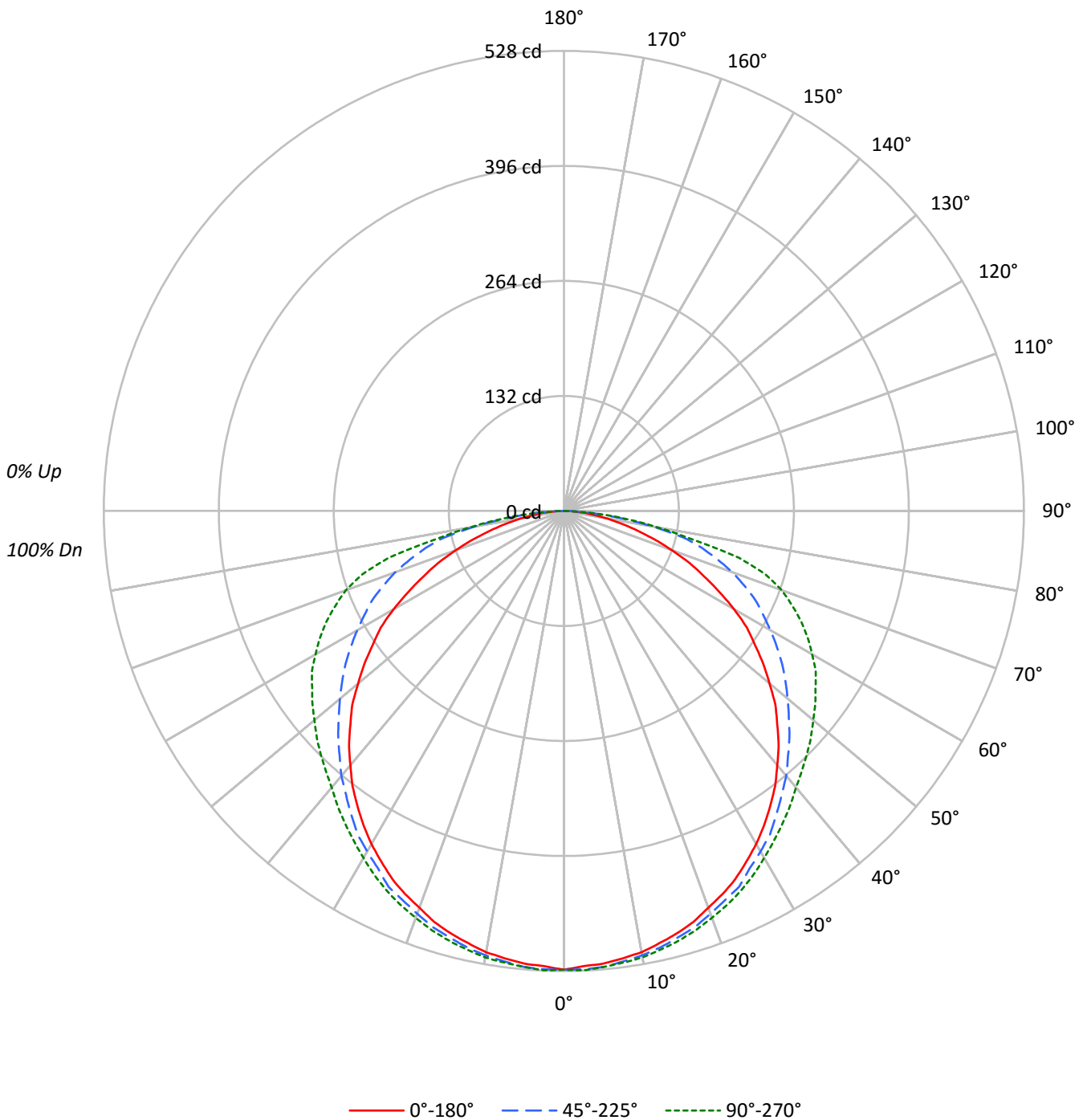
Input Watts (W): 23
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	92	89	92	89	86	88	86	84	82
2	97	88	81	75	95	86	80	74	83	77	72	80	75	71	76	72	69	67
3	88	77	68	61	86	75	67	61	72	65	60	70	64	59	67	62	58	55
4	80	68	59	51	78	66	58	51	64	56	50	61	55	50	59	54	49	47
5	74	60	51	44	72	59	50	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	44	38	51	43	38	50	43	37	48	42	37	35
7	63	49	40	33	61	48	39	33	47	39	33	45	38	33	44	37	33	31
8	59	45	36	30	57	44	35	30	43	35	29	41	34	29	40	34	29	27
9	55	41	32	27	53	40	32	27	39	32	26	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°	1417	1417	1417
5°	1409	1419	1419
10°	1405	1415	1422
15°	1398	1412	1422
20°	1387	1409	1423
25°	1384	1413	1428
30°	1372	1402	1429
35°	1357	1397	1438
40°	1338	1395	1455
45°	1319	1394	1501
50°	1290	1404	1564
55°	1255	1435	1654
60°	1214	1473	1772
65°	1130	1547	1915
70°	1038	1620	2095
75°	910	1705	2167
80°	784	1624	1700
85°	685	1179	1294



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	49.8	3.0
10°-20°	143.0	8.5
20°-30°	218.1	13.0
30°-40°	266.4	15.9
40°-50°	284.8	17.0
50°-60°	274.9	16.4
60°-70°	236.6	14.1
70°-80°	160.1	9.6
80°-90°	42.2	2.5
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°	410.9	24.5
0°-40°	677.3	40.4
0°-60°	1237.0	73.8
0°-90°	1676.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1676.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	526	526	526	526	526	
5°	522	523	525	525	525	50
15°	502	503	507	509	510	142
25°	466	468	476	478	481	214
35°	413	417	425	434	438	258
45°	346	353	366	385	394	267
55°	268	276	306	337	353	240
65°	178	195	243	281	301	177
75°	88	116	164	197	208	94
85°	22	31	38	40	42	25
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	526.5	526.5	526.5	526.5	526.5
2.5°	522.8	524.0	526.5	526.5	527.7
5°	521.5	522.8	525.2	525.2	525.2
7.5°	517.8	519.1	521.5	522.8	522.8
10°	514.1	515.4	517.8	519.1	520.3
12.5°	508.0	509.2	512.9	515.4	515.4
15°	501.8	503.0	506.7	509.2	510.4
17.5°	494.4	496.9	500.6	503.0	504.3
20°	484.5	487.0	491.9	495.6	496.9
22.5°	475.9	478.4	483.3	487.0	489.5
25°	466.0	468.5	475.9	478.4	480.8
27.5°	453.7	456.2	462.3	467.3	471.0
30°	441.4	443.9	451.3	457.4	459.9
32.5°	427.8	431.5	440.2	445.1	448.8
35°	413.0	416.7	425.4	434.0	437.7
37.5°	398.2	401.9	410.6	421.7	426.6
40°	381.0	385.9	397.0	411.8	414.3
42.5°	364.9	371.1	381.0	398.2	404.4
45°	346.5	352.6	366.2	384.7	394.5
47.5°	329.2	335.4	350.2	372.3	384.7
50°	308.2	316.9	335.4	361.2	373.6
52.5°	288.5	295.9	320.6	348.9	363.7
55°	267.5	276.2	305.8	336.6	352.6
57.5°	249.1	256.4	289.7	324.3	342.8
60°	225.6	235.5	273.7	310.7	329.2
62.5°	201.0	215.8	257.7	295.9	315.6
65°	177.5	194.8	242.9	281.1	300.8
67.5°	156.6	175.1	224.4	265.1	283.6
70°	131.9	155.3	205.9	245.4	266.3
72.5°	109.7	135.6	184.9	224.4	242.9
75°	87.5	115.9	164.0	197.3	208.4
77.5°	67.8	94.9	140.6	150.4	151.7
80°	50.6	75.2	104.8	106.0	109.7
82.5°	34.5	53.0	67.8	74.0	75.2
85°	22.2	30.8	38.2	39.5	41.9
87.5°	9.9	11.1	13.6	12.3	12.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)