

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: P308455

Luminaire Tested: **22FCZ2-29HE-UNV-L82765-RDP-CP187-W2A-U-6500K**

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: P308455
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-6500K
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: 1680.0 lumens
Efficiency: N/A
Efficacy: 71.8 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

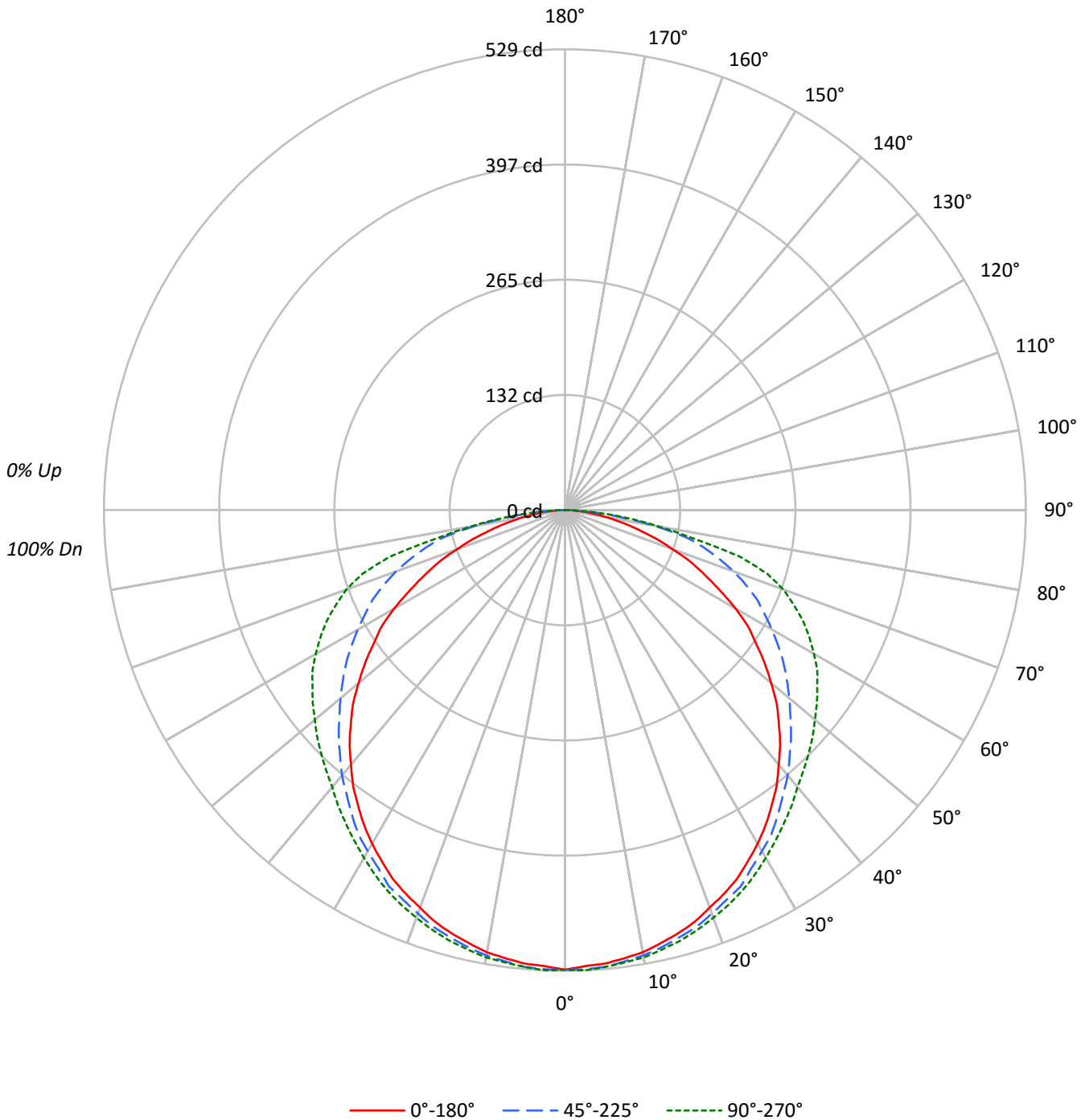
Input Watts (W): 23.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1420	1420	1420
5°	1412	1422	1422
10°	1408	1418	1425
15°	1401	1415	1426
20°	1391	1412	1426
25°	1387	1416	1431
30°	1375	1405	1432
35°	1360	1401	1441
40°	1342	1398	1459
45°	1322	1397	1505
50°	1294	1407	1568
55°	1258	1438	1658
60°	1217	1477	1776
65°	1133	1550	1920
70°	1040	1624	2100
75°	912	1709	2172
80°	786	1627	1705
85°	685	1183	1297



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	49.9	3.0
10°-20°	143.3	8.5
20°-30°	218.7	13.0
30°-40°	267.0	15.9
40°-50°	285.5	17.0
50°-60°	275.6	16.4
60°-70°	237.2	14.1
70°-80°	160.5	9.6
80°-90°	42.3	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°	411.9	24.5
0°-40°	678.9	40.4
0°-60°	1240.0	73.8
0°-90°	1680.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1680.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	528	528	528	528	528	
5°	523	524	526	526	526	50
15°	503	504	508	510	512	142
25°	467	470	477	480	482	215
35°	414	418	426	435	439	259
45°	347	354	367	386	396	268
55°	268	277	306	337	354	240
65°	178	195	244	282	302	177
75°	88	116	164	198	209	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°	527.7	527.7	527.7	527.7	527.7
2.5°	524.0	525.2	527.7	527.7	529.0
5°	522.8	524.0	526.5	526.5	526.5
7.5°	519.1	520.3	522.8	524.0	524.0
10°	515.4	516.6	519.1	520.3	521.5
12.5°	509.2	510.4	514.1	516.6	516.6
15°	503.0	504.2	507.9	510.4	511.7
17.5°	495.6	498.1	501.8	504.2	505.5
20°	485.7	488.2	493.1	496.8	498.1
22.5°	477.0	479.5	484.5	488.2	490.6
25°	467.2	469.6	477.0	479.5	482.0
27.5°	454.8	457.3	463.5	468.4	472.1
30°	442.4	444.9	452.3	458.5	461.0
32.5°	428.8	432.6	441.2	446.1	449.9
35°	414.0	417.7	426.4	435.0	438.7
37.5°	399.2	402.9	411.5	422.7	427.6
40°	381.9	386.8	398.0	412.8	415.3
42.5°	365.8	372.0	381.9	399.2	405.4
45°	347.3	353.5	367.1	385.6	395.5
47.5°	330.0	336.2	351.0	373.2	385.6
50°	309.0	317.6	336.2	362.1	374.5
52.5°	289.2	296.6	321.3	349.8	364.6
55°	268.2	276.8	306.5	337.4	353.5
57.5°	249.6	257.1	290.4	325.0	343.6
60°	226.2	236.1	274.4	311.4	330.0
62.5°	201.4	216.3	258.3	296.6	316.4
65°	178.0	195.3	243.5	281.8	301.6
67.5°	157.0	175.5	224.9	265.7	284.3
70°	132.2	155.7	206.4	245.9	266.9
72.5°	110.0	135.9	185.4	224.9	243.5
75°	87.7	116.2	164.4	197.7	208.9
77.5°	68.0	95.2	140.9	150.8	152.0
80°	50.7	75.4	105.0	106.3	110.0
82.5°	34.6	53.1	68.0	74.2	75.4
85°	22.2	30.9	38.3	39.5	42.0
87.5°	9.9	11.1	13.6	12.4	12.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)