

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: P308449

Luminaire Tested: **22FCZ2-29HE-UNV-L82765-RDP-CP187-W2A-U-3500K**

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: P308449
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-3500K
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: 1570.0 lumens
Efficiency: N/A
Efficacy: 69.8 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

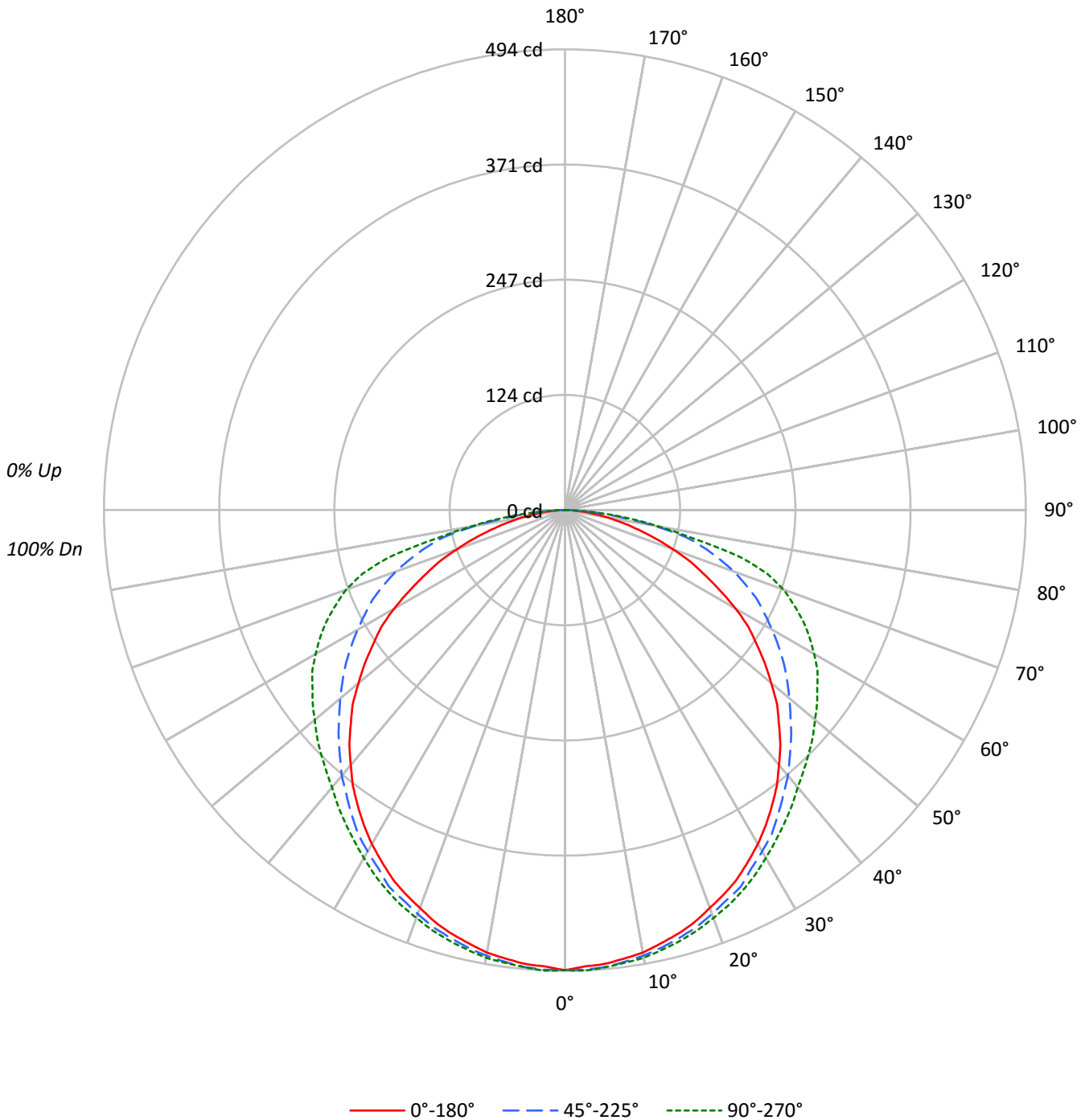
Input Watts (W): 22.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100
1	108	103	98	94	105	100	96	92	96	92	89	92	89	86	88	86	84	82				82
2	97	88	81	75	95	86	80	74	83	77	72	80	75	71	76	72	69	67				67
3	88	77	68	61	86	75	67	61	72	65	60	70	64	59	67	62	58	55				55
4	80	68	59	51	78	66	58	51	64	56	50	61	55	50	59	54	49	47				47
5	74	60	51	44	72	59	50	44	57	49	43	55	48	43	53	47	42	40				40
6	68	54	45	38	66	53	44	38	51	43	38	50	43	37	48	42	37	35				35
7	63	49	40	33	61	48	39	33	47	39	33	45	38	33	44	37	33	31				31
8	59	45	36	30	57	44	35	30	43	35	29	41	34	29	40	34	29	27				27
9	55	41	32	27	53	40	32	27	39	32	26	38	31	26	37	31	26	24				24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22				22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1327	1327	1327
5°	1320	1329	1329
10°	1316	1326	1332
15°	1310	1322	1332
20°	1300	1320	1333
25°	1296	1324	1337
30°	1285	1313	1339
35°	1271	1309	1347
40°	1254	1306	1363
45°	1235	1305	1407
50°	1209	1315	1465
55°	1176	1344	1550
60°	1138	1380	1660
65°	1059	1449	1794
70°	972	1518	1963
75°	853	1597	2030
80°	735	1522	1593
85°	642	1105	1213



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	46.6	3.0
10°-20°	133.9	8.5
20°-30°	204.3	13.0
30°-40°	249.5	15.9
40°-50°	266.8	17.0
50°-60°	257.5	16.4
60°-70°	221.7	14.1
70°-80°	150.0	9.6
80°-90°	39.6	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°	384.9	24.5
0°-40°	634.5	40.4
0°-60°	1158.8	73.8
0°-90°	1570.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1570.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	493	493	493	493	493	
5°	488	490	492	492	492	46
15°	470	471	475	477	478	133
25°	437	439	446	448	450	201
35°	387	390	398	406	410	242
45°	324	330	343	360	370	251
55°	251	259	286	315	330	225
65°	166	182	228	263	282	165
75°	82	109	154	185	195	88
85°	21	29	36	37	39	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	493.2	493.2	493.2	493.2	493.2
2.5°	489.7	490.9	493.2	493.2	494.3
5°	488.5	489.7	492.0	492.0	492.0
7.5°	485.1	486.2	488.5	489.7	489.7
10°	481.6	482.8	485.1	486.2	487.4
12.5°	475.8	477.0	480.5	482.8	482.8
15°	470.1	471.2	474.7	477.0	478.1
17.5°	463.1	465.4	468.9	471.2	472.4
20°	453.9	456.2	460.8	464.3	465.4
22.5°	445.8	448.1	452.7	456.2	458.5
25°	436.6	438.9	445.8	448.1	450.4
27.5°	425.0	427.3	433.1	437.7	441.2
30°	413.5	415.8	422.7	428.5	430.8
32.5°	400.8	404.2	412.3	416.9	420.4
35°	386.9	390.4	398.5	406.5	410.0
37.5°	373.0	376.5	384.6	395.0	399.6
40°	356.9	361.5	371.9	385.8	388.1
42.5°	341.9	347.6	356.9	373.0	378.8
45°	324.5	330.3	343.0	360.3	369.6
47.5°	308.4	314.1	328.0	348.8	360.3
50°	288.7	296.8	314.1	338.4	350.0
52.5°	270.3	277.2	300.3	326.9	340.7
55°	250.6	258.7	286.4	315.3	330.3
57.5°	233.3	240.2	271.4	303.8	321.1
60°	211.4	220.6	256.4	291.0	308.4
62.5°	188.3	202.1	241.4	277.2	295.7
65°	166.3	182.5	227.5	263.3	281.8
67.5°	146.7	164.0	210.2	248.3	265.6
70°	123.6	145.5	192.9	229.8	249.5
72.5°	102.8	127.0	173.2	210.2	227.5
75°	82.0	108.6	153.6	184.8	195.2
77.5°	63.5	88.9	131.7	140.9	142.1
80°	47.4	70.5	98.2	99.3	102.8
82.5°	32.3	49.7	63.5	69.3	70.5
85°	20.8	28.9	35.8	37.0	39.3
87.5°	9.2	10.4	12.7	11.5	11.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)