

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: P308450

Luminaire Tested: **22FCZ2-29HE-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: P308450
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-4000K
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: 1605.0 lumens
Efficiency: N/A
Efficacy: 70.7 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

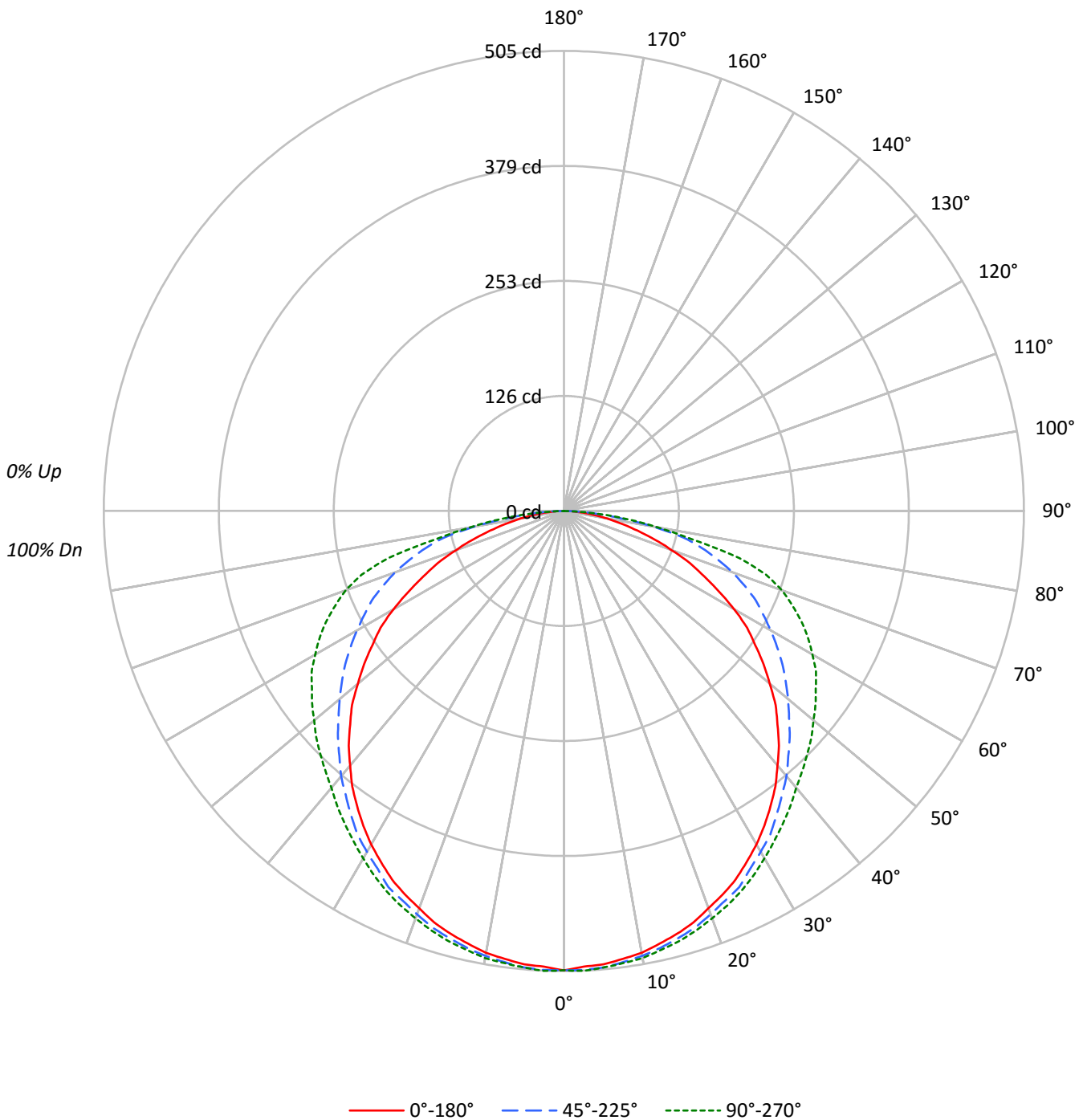
Input Watts (W): 22.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P308450

CATALOG NUMBER: 22FCZ2-29HE-UNV-L82765-RDP-CP187-W2A-U-4000K

Luminous Intensity Polar Plot





TEST NUMBER: P308450

CATALOG NUMBER: 22FCZ2-29HE-UNV-L82765-RDP-CP187-W2A-U-4000K

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°	1357	1357	1357
5°	1349	1359	1359
10°	1345	1355	1362
15°	1339	1352	1362
20°	1329	1349	1363
25°	1325	1353	1367
30°	1313	1343	1368
35°	1299	1338	1377
40°	1281	1336	1394
45°	1263	1335	1438
50°	1236	1345	1498
55°	1202	1374	1584
60°	1163	1411	1696
65°	1082	1481	1834
70°	994	1552	2006
75°	871	1632	2074
80°	750	1556	1629
85°	658	1130	1238



TEST NUMBER: P308450

CATALOG NUMBER: 22FCZ2-29HE-UNV-L82765-RDP-CP187-W2A-U-4000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	47.7	3.0
10°-20°	136.9	8.5
20°-30°	208.9	13.0
30°-40°	255.1	15.9
40°-50°	272.7	17.0
50°-60°	263.3	16.4
60°-70°	226.6	14.1
70°-80°	153.3	9.6
80°-90°	40.5	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°	393.5	24.5
0°-40°	648.6	40.4
0°-60°	1184.6	73.8
0°-90°	1605.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1605.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	504	504	504	504	504	
5°	499	501	503	503	503	47
15°	480	482	485	488	489	136
25°	446	449	456	458	460	205
35°	396	399	407	416	419	247
45°	332	338	351	368	378	256
55°	256	264	293	322	338	230
65°	170	187	233	269	288	169
75°	84	111	157	189	200	90
85°	21	30	37	38	40	24
90°	0	0	0	0	0	



TEST NUMBER: P308450

CATALOG NUMBER: 22FCZ2-29HE-UNV-L82765-RDP-CP187-W2A-U-4000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	504.2	504.2	504.2	504.2	504.2
2.5°	500.6	501.8	504.2	504.2	505.3
5°	499.4	500.6	503.0	503.0	503.0
7.5°	495.9	497.1	499.4	500.6	500.6
10°	492.4	493.5	495.9	497.1	498.3
12.5°	486.4	487.6	491.2	493.5	493.5
15°	480.5	481.7	485.3	487.6	488.8
17.5°	473.5	475.8	479.4	481.7	482.9
20°	464.0	466.4	471.1	474.6	475.8
22.5°	455.7	458.1	462.8	466.4	468.7
25°	446.3	448.7	455.7	458.1	460.5
27.5°	434.5	436.9	442.8	447.5	451.0
30°	422.7	425.1	432.1	438.0	440.4
32.5°	409.7	413.2	421.5	426.2	429.8
35°	395.5	399.1	407.3	415.6	419.1
37.5°	381.4	384.9	393.2	403.8	408.5
40°	364.8	369.6	380.2	394.4	396.7
42.5°	349.5	355.4	364.8	381.4	387.3
45°	331.8	337.7	350.7	368.4	377.8
47.5°	315.2	321.2	335.3	356.6	368.4
50°	295.2	303.4	321.2	345.9	357.8
52.5°	276.3	283.4	307.0	334.1	348.3
55°	256.2	264.5	292.8	322.3	337.7
57.5°	238.5	245.6	277.5	310.5	328.2
60°	216.1	225.5	262.1	297.5	315.2
62.5°	192.5	206.6	246.8	283.4	302.3
65°	170.0	186.6	232.6	269.2	288.1
67.5°	149.9	167.7	214.9	253.9	271.6
70°	126.3	148.8	197.2	235.0	255.0
72.5°	105.1	129.9	177.1	214.9	232.6
75°	83.8	111.0	157.0	188.9	199.5
77.5°	64.9	90.9	134.6	144.0	145.2
80°	48.4	72.0	100.4	101.5	105.1
82.5°	33.1	50.8	64.9	70.8	72.0
85°	21.3	29.5	36.6	37.8	40.1
87.5°	9.4	10.6	13.0	11.8	11.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)