

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: P308448

Luminaire Tested: **22FCZ2-29HE-UNV-L82765-RDP-CP187-W2A-U-3000K**

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: P308448
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-3000K
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: 1518.0 lumens
Efficiency: N/A
Efficacy: 68.4 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

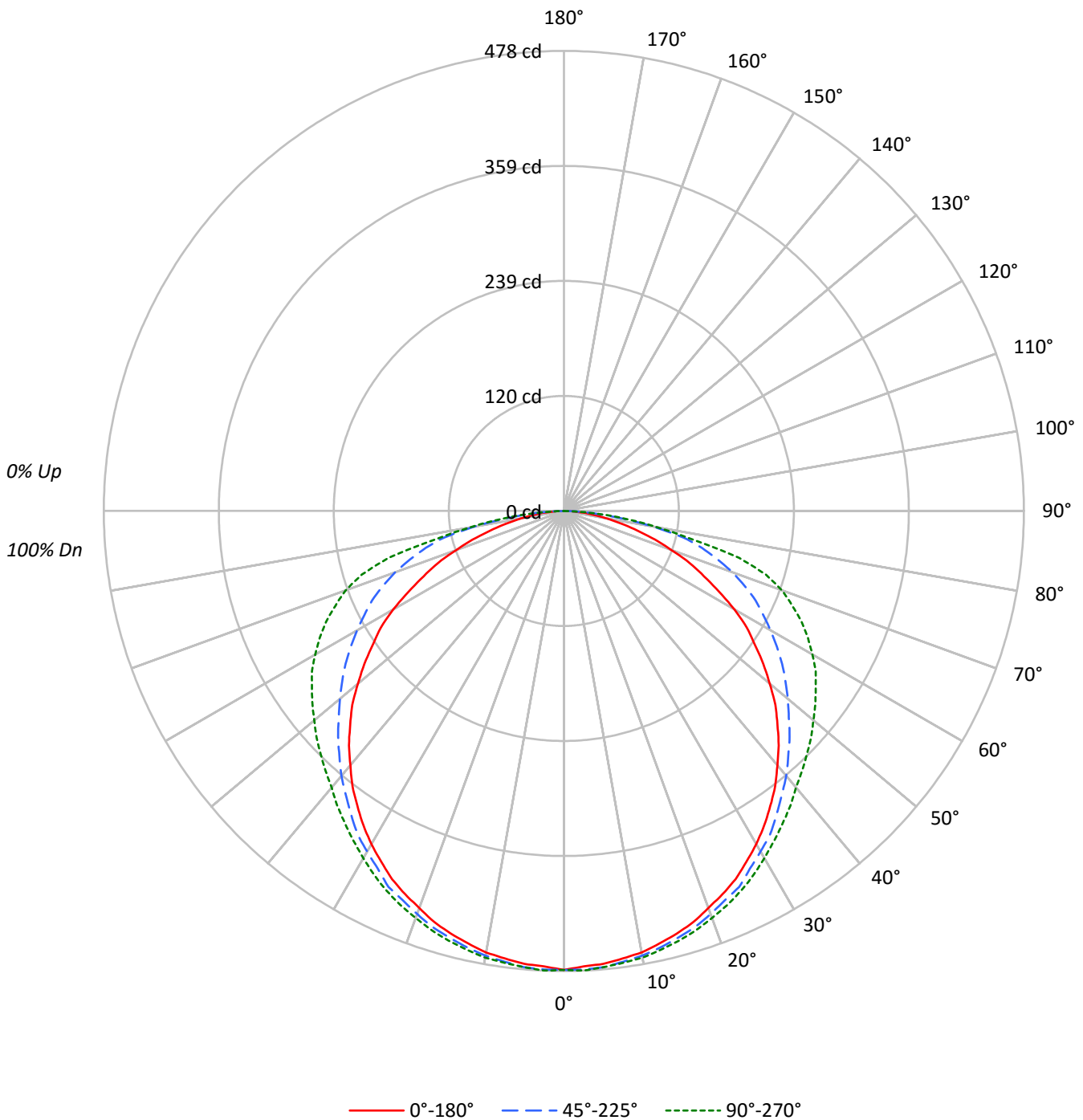
Input Watts (W): 22.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1283	1283	1283
5°	1276	1285	1285
10°	1273	1282	1288
15°	1266	1279	1288
20°	1257	1276	1289
25°	1253	1280	1293
30°	1242	1270	1294
35°	1229	1266	1302
40°	1212	1263	1318
45°	1194	1262	1360
50°	1169	1271	1417
55°	1137	1299	1498
60°	1100	1334	1605
65°	1024	1401	1735
70°	940	1467	1898
75°	824	1544	1962
80°	710	1471	1540
85°	621	1068	1173



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	45.1	3.0
10°-20°	129.5	8.5
20°-30°	197.6	13.0
30°-40°	241.3	15.9
40°-50°	258.0	17.0
50°-60°	249.0	16.4
60°-70°	214.3	14.1
70°-80°	145.0	9.6
80°-90°	38.3	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°	372.2	24.5
0°-40°	613.4	40.4
0°-60°	1120.4	73.8
0°-90°	1518.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1518.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	477	477	477	477	477	
5°	472	474	476	476	476	45
15°	454	456	459	461	462	128
25°	422	424	431	433	436	194
35°	374	377	385	393	396	234
45°	314	319	332	348	357	242
55°	242	250	277	305	319	217
65°	161	176	220	255	272	160
75°	79	105	148	179	189	85
85°	20	28	35	36	38	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	476.8	476.8	476.8	476.8	476.8
2.5°	473.5	474.6	476.8	476.8	477.9
5°	472.4	473.5	475.7	475.7	475.7
7.5°	469.0	470.1	472.4	473.5	473.5
10°	465.7	466.8	469.0	470.1	471.2
12.5°	460.1	461.2	464.5	466.8	466.8
15°	454.5	455.6	459.0	461.2	462.3
17.5°	447.8	450.0	453.4	455.6	456.7
20°	438.9	441.1	445.6	448.9	450.0
22.5°	431.0	433.3	437.7	441.1	443.3
25°	422.1	424.3	431.0	433.3	435.5
27.5°	410.9	413.2	418.8	423.2	426.6
30°	399.8	402.0	408.7	414.3	416.5
32.5°	387.5	390.8	398.7	403.1	406.5
35°	374.1	377.4	385.3	393.1	396.4
37.5°	360.7	364.0	371.9	381.9	386.4
40°	345.1	349.5	359.6	373.0	375.2
42.5°	330.5	336.1	345.1	360.7	366.3
45°	313.8	319.4	331.7	348.4	357.3
47.5°	298.2	303.7	317.1	337.2	348.4
50°	279.2	287.0	303.7	327.2	338.4
52.5°	261.3	268.0	290.3	316.0	329.4
55°	242.3	250.1	276.9	304.9	319.4
57.5°	225.6	232.3	262.4	293.7	310.4
60°	204.4	213.3	247.9	281.4	298.2
62.5°	182.0	195.4	233.4	268.0	285.9
65°	160.8	176.4	220.0	254.6	272.5
67.5°	141.8	158.6	203.2	240.1	256.8
70°	119.5	140.7	186.5	222.2	241.2
72.5°	99.4	122.8	167.5	203.2	220.0
75°	79.3	105.0	148.5	178.7	188.7
77.5°	61.4	86.0	127.3	136.2	137.4
80°	45.8	68.1	94.9	96.0	99.4
82.5°	31.3	48.0	61.4	67.0	68.1
85°	20.1	27.9	34.6	35.7	38.0
87.5°	8.9	10.1	12.3	11.2	11.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)