

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: P312796

Luminaire Tested: **22FCZ2-29HE-UNV-L83050-CA125-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: P312796
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-33)
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-L83050-CA125-W2A-U-3500K
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS, 0.125" ACRYLIC SHEET
Light Source: (168) 3500K 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: 2558.0 lumens
Efficiency: N/A
Efficacy: 114.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

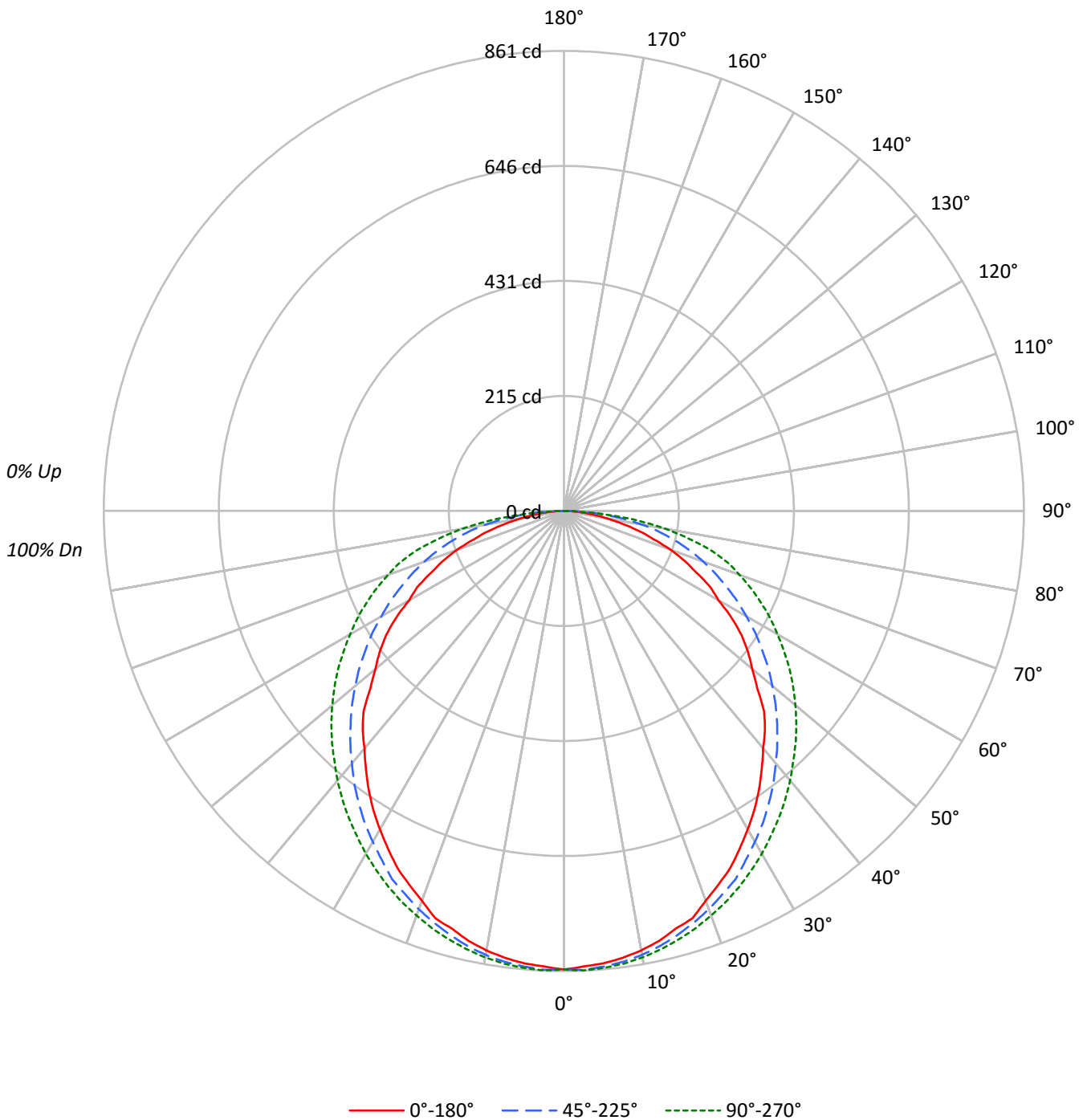
Input Watts (W): 22.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	93	90	92	89	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	60	53	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	51	44	38	49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2309	2309	2309
5°	2295	2312	2318
10°	2282	2305	2318
15°	2255	2289	2313
20°	2223	2272	2307
25°	2188	2257	2305
30°	2138	2222	2302
35°	2091	2196	2304
40°	2038	2167	2314
45°	2017	2148	2334
50°	1927	2132	2368
55°	1907	2125	2418
60°	1799	2122	2484
65°	1746	2136	2596
70°	1676	2186	2755
75°	1527	2253	2966
80°	1309	2334	2997
85°	1059	2229	2572



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.2	3.2
10°-20°	231.7	9.1
20°-30°	348.7	13.6
30°-40°	418.5	16.4
40°-50°	437.4	17.1
50°-60°	407.6	15.9
60°-70°	334.3	13.1
70°-80°	225.3	8.8
80°-90°	73.4	2.9
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°	661.5	25.9
0°-40°	1080.0	42.2
0°-60°	1925.0	75.3
0°-90°	2558.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2558.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	858	858	858	858	858	
5°	850	852	856	857	858	81
15°	809	814	822	829	830	229
25°	737	742	760	771	776	339
35°	637	645	668	692	702	398
45°	530	534	564	599	613	405
55°	406	414	453	496	515	360
65°	274	286	336	384	408	273
75°	147	163	217	266	285	154
85°	34	49	72	84	83	41
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	858.2	858.2	858.2	858.2	858.2
2.5°	853.3	855.8	859.5	860.7	860.7
5°	849.7	852.1	855.8	857.0	858.2
7.5°	843.5	846.0	850.9	853.3	854.6
10°	835.0	837.4	843.5	847.2	848.4
12.5°	824.0	826.4	833.7	838.6	839.9
15°	809.3	814.2	821.5	828.8	830.1
17.5°	799.5	798.2	808.0	816.6	819.1
20°	776.2	782.3	793.3	803.1	805.6
22.5°	756.6	761.5	776.2	787.2	792.1
25°	737.0	741.9	760.3	771.3	776.2
27.5°	712.5	719.9	737.0	752.9	759.1
30°	688.1	695.4	715.0	733.4	740.7
32.5°	663.6	672.1	693.0	712.5	721.1
35°	636.6	645.2	668.5	691.7	701.5
37.5°	608.5	619.5	644.0	669.7	680.7
40°	580.3	591.3	617.0	646.4	658.7
42.5°	557.1	562.0	591.3	623.2	635.4
45°	530.1	533.8	564.4	598.7	613.4
47.5°	490.9	504.4	537.5	575.4	590.1
50°	460.3	475.0	509.3	549.7	565.6
52.5°	434.6	444.4	482.4	522.8	541.1
55°	406.5	413.8	453.0	495.8	515.4
57.5°	372.2	385.7	424.8	468.9	488.5
60°	334.2	351.4	394.2	442.0	461.6
62.5°	309.7	319.5	366.1	413.8	435.8
65°	274.2	286.5	335.5	384.4	407.7
67.5°	244.9	257.1	307.3	356.3	379.5
70°	213.0	225.3	277.9	326.9	350.1
72.5°	176.3	193.4	248.5	297.5	322.0
75°	146.9	162.8	216.7	265.7	285.3
77.5°	113.9	134.7	184.9	225.3	240.0
80°	84.5	105.3	150.6	180.0	193.4
82.5°	57.5	78.4	112.6	134.7	142.0
85°	34.3	49.0	72.2	84.5	83.3
87.5°	15.9	20.8	29.4	29.4	28.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)