

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: P308718

Luminaire Tested: **22FCZ2-29HE-UNV-L82765-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: P308718
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-L82765-CP187-W2A-U-3000K
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS, 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: 2268.0 lumens
Efficiency: N/A
Efficacy: 102.2 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

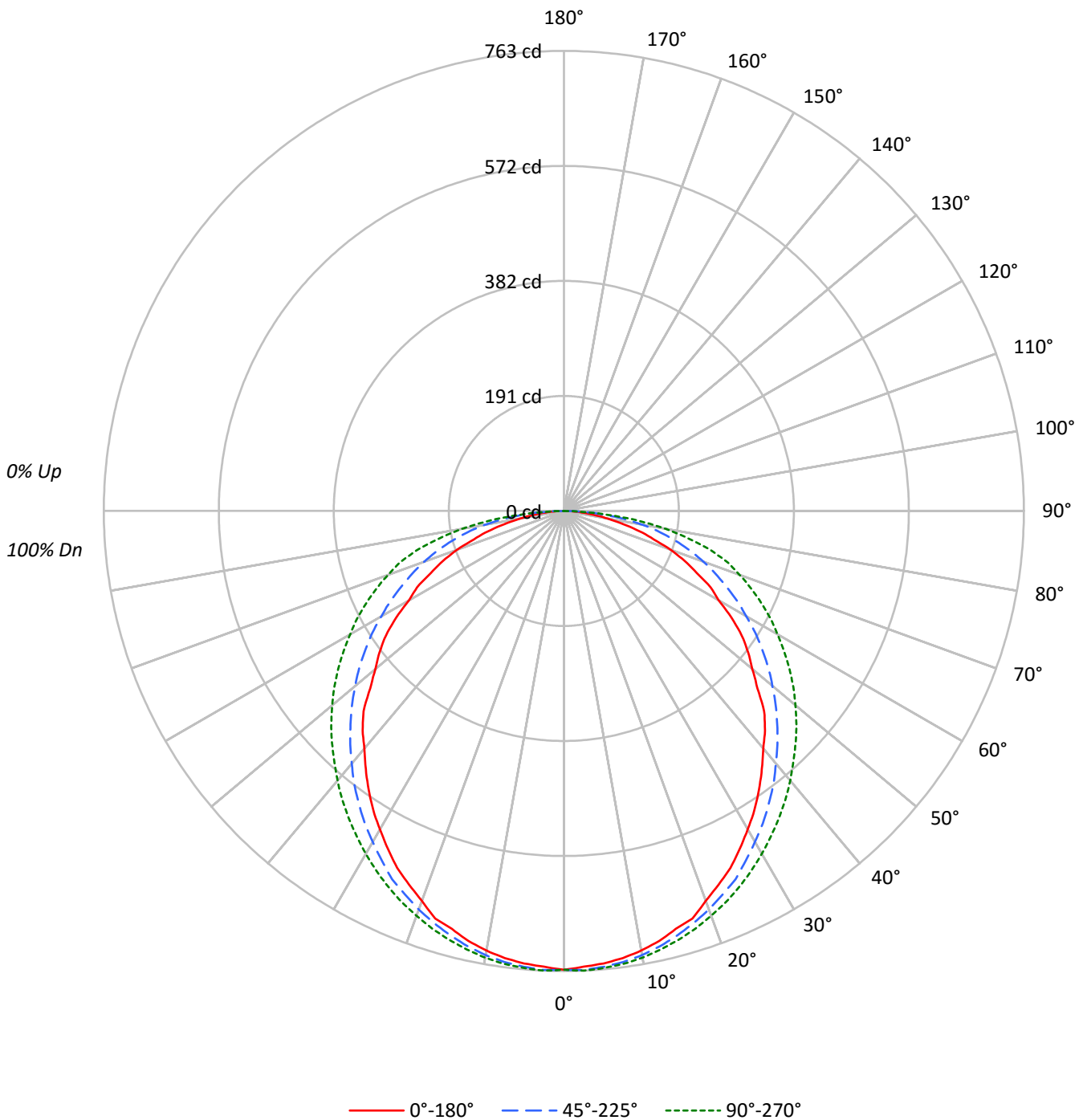
Input Watts (W): 22.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2048	2048	2048
5°	2035	2050	2055
10°	2023	2044	2055
15°	1999	2029	2050
20°	1971	2014	2046
25°	1940	2002	2043
30°	1895	1970	2041
35°	1854	1947	2043
40°	1807	1922	2051
45°	1789	1904	2069
50°	1708	1891	2099
55°	1691	1884	2144
60°	1595	1881	2202
65°	1549	1894	2302
70°	1486	1939	2443
75°	1355	1997	2629
80°	1161	2069	2658
85°	939	1976	2279



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.0	3.2
10°-20°	205.4	9.1
20°-30°	309.1	13.6
30°-40°	371.0	16.4
40°-50°	387.8	17.1
50°-60°	361.4	15.9
60°-70°	296.4	13.1
70°-80°	199.7	8.8
80°-90°	65.1	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°	586.6	25.9
0°-40°	957.6	42.2
0°-60°	1706.8	75.3
0°-90°	2268.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2268.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	761	761	761	761	761	
5°	753	756	759	760	761	72
15°	718	722	728	735	736	203
25°	654	658	674	684	688	300
35°	564	572	593	613	622	353
45°	470	473	500	531	544	359
55°	360	367	402	440	457	319
65°	243	254	297	341	362	242
75°	130	144	192	236	253	137
85°	30	43	64	75	74	36
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	760.9	760.9	760.9	760.9	760.9
2.5°	756.6	758.8	762.0	763.1	763.1
5°	753.3	755.5	758.8	759.8	760.9
7.5°	747.9	750.1	754.4	756.6	757.7
10°	740.3	742.5	747.9	751.2	752.2
12.5°	730.5	732.7	739.2	743.6	744.7
15°	717.5	721.9	728.4	734.9	736.0
17.5°	708.8	707.7	716.4	724.0	726.2
20°	688.2	693.6	703.4	712.1	714.3
22.5°	670.8	675.2	688.2	698.0	702.3
25°	653.5	657.8	674.1	683.9	688.2
27.5°	631.8	638.3	653.5	667.6	673.0
30°	610.0	616.6	633.9	650.2	656.7
32.5°	588.3	595.9	614.4	631.8	639.4
35°	564.5	572.1	592.7	613.3	622.0
37.5°	539.5	549.3	571.0	593.8	603.5
40°	514.5	524.3	547.1	573.1	584.0
42.5°	493.9	498.2	524.3	552.5	563.4
45°	470.0	473.3	500.4	530.8	543.8
47.5°	435.3	447.2	476.5	510.2	523.2
50°	408.1	421.2	451.6	487.4	501.5
52.5°	385.4	394.0	427.7	463.5	479.8
55°	360.4	366.9	401.6	439.6	457.0
57.5°	330.0	341.9	376.7	415.7	433.1
60°	296.3	311.5	349.5	391.9	409.2
62.5°	274.6	283.3	324.6	366.9	386.4
65°	243.2	254.0	297.4	340.8	361.5
67.5°	217.1	228.0	272.5	315.9	336.5
70°	188.9	199.7	246.4	289.8	310.5
72.5°	156.3	171.5	220.4	263.8	285.5
75°	130.3	144.4	192.1	235.6	252.9
77.5°	101.0	119.4	163.9	199.7	212.8
80°	74.9	93.4	133.5	159.6	171.5
82.5°	51.0	69.5	99.9	119.4	125.9
85°	30.4	43.4	64.0	74.9	73.8
87.5°	14.1	18.5	26.1	26.1	25.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)