

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: P309001

Luminaire Tested: **22FCZ2-29HE-UNV-L82765-S-CP250-W2A-U-5000K**

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: P309001
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-23)
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-S-CP250-W2A-U-5000K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.250" 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: 2588.0 lumens
Efficiency: N/A
Efficacy: 113.0 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

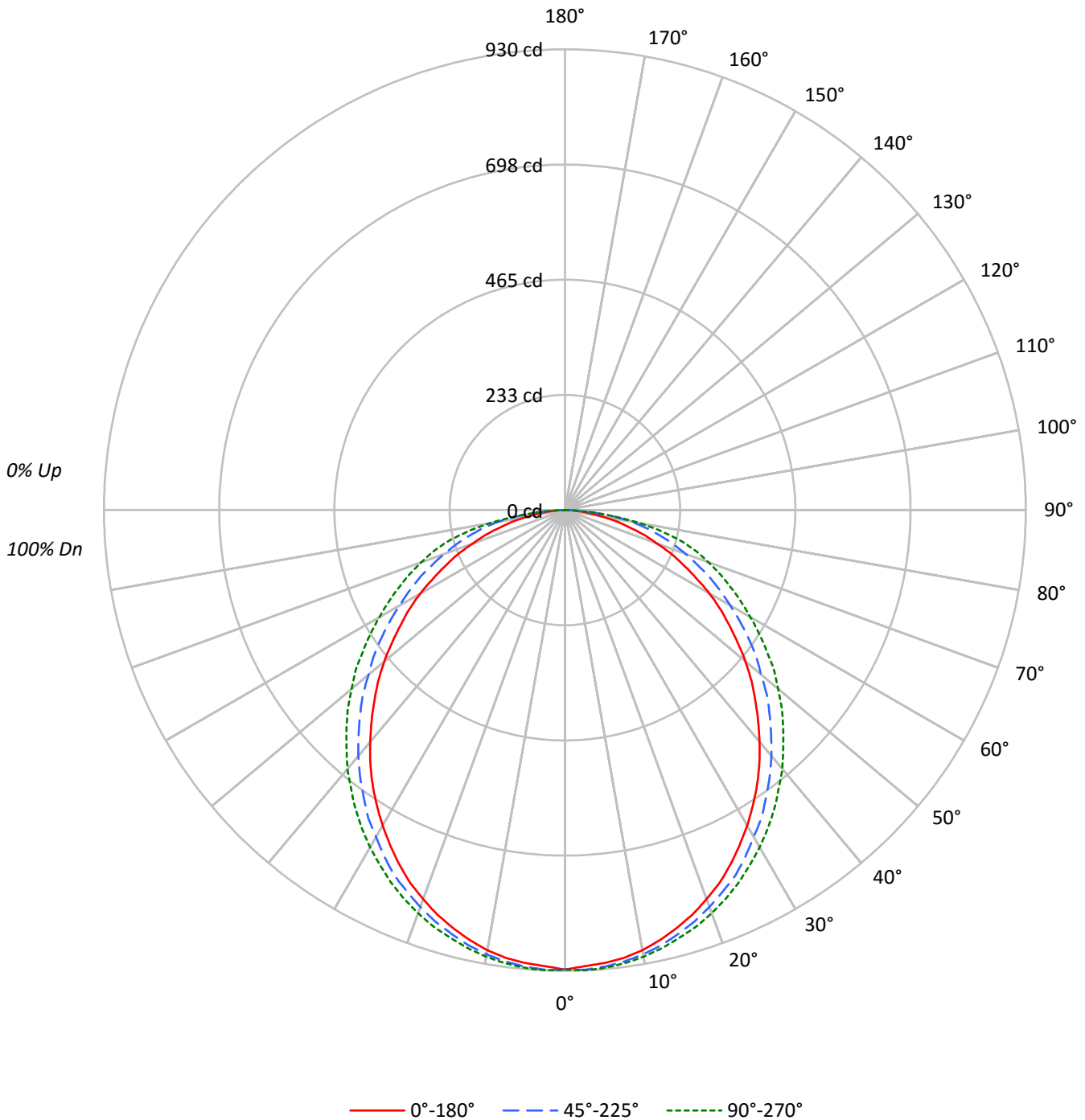
Input Watts (W): 22.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	61	56	52	49
5	75	62	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	40	32	26	51	39	31	26	38	31	26	37	31	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2496	2496	2496
5°	2479	2498	2505
10°	2465	2488	2501
15°	2432	2466	2489
20°	2393	2441	2479
25°	2345	2417	2463
30°	2285	2367	2443
35°	2221	2325	2420
40°	2146	2278	2396
45°	2068	2224	2371
50°	1992	2164	2351
55°	1898	2124	2334
60°	1813	2073	2327
65°	1692	2060	2353
70°	1558	2043	2423
75°	1406	2071	2548
80°	1216	2134	2396
85°	1007	1791	1791



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	87.7	3.4
10°-20°	249.6	9.6
20°-30°	373.4	14.4
30°-40°	442.2	17.1
40°-50°	450.7	17.4
50°-60°	403.9	15.6
60°-70°	316.3	12.2
70°-80°	203.9	7.9
80°-90°	60.2	2.3
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°	710.7	27.5
0°-40°	1152.9	44.5
0°-60°	2007.6	77.6
0°-90°	2588.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2588.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	927	927	927	927	927	
5°	918	920	925	926	927	87
15°	873	878	885	892	894	246
25°	790	797	814	825	830	364
35°	676	685	708	729	737	423
45°	543	556	584	615	623	420
55°	404	418	453	484	498	363
65°	266	281	324	355	370	264
75°	135	156	199	233	245	145
85°	33	45	58	58	58	38
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	927.4	927.4	927.4	927.4	927.4
2.5°	921.3	923.7	928.6	929.8	929.8
5°	917.7	920.1	924.9	926.2	927.4
7.5°	911.7	912.9	918.9	921.3	922.5
10°	902.0	904.4	910.5	914.1	915.3
12.5°	888.7	892.3	899.6	904.4	905.6
15°	873.0	877.9	885.1	892.3	893.6
17.5°	856.1	860.9	870.6	879.1	881.5
20°	835.6	841.6	852.5	862.2	865.8
22.5°	815.1	819.9	833.2	845.3	848.9
25°	789.7	797.0	813.9	824.7	829.6
27.5°	763.1	771.6	788.5	803.0	807.8
30°	735.4	743.8	761.9	780.0	786.1
32.5°	706.4	716.0	737.8	755.9	761.9
35°	676.2	684.7	707.6	729.3	736.6
37.5°	644.8	652.1	678.6	701.6	708.8
40°	611.0	620.7	648.4	675.0	682.2
42.5°	577.2	588.1	615.8	644.8	652.1
45°	543.4	555.5	584.4	614.6	623.1
47.5°	510.8	520.4	553.0	582.0	594.1
50°	475.8	485.4	516.8	549.4	561.5
52.5°	439.5	452.8	486.6	518.0	532.5
55°	404.5	417.8	452.8	484.2	497.5
57.5°	371.9	382.8	419.0	451.6	464.9
60°	336.9	346.6	385.2	420.2	432.3
62.5°	299.5	314.0	353.8	386.4	400.9
65°	265.7	281.3	323.6	355.0	369.5
67.5°	234.3	248.7	289.8	323.6	339.3
70°	198.0	217.4	259.6	293.4	307.9
72.5°	169.1	186.0	229.4	263.2	278.9
75°	135.2	155.8	199.2	233.0	245.1
77.5°	107.5	128.0	169.1	195.6	201.7
80°	78.5	99.0	137.7	150.9	154.6
82.5°	53.1	72.5	99.0	102.6	103.8
85°	32.6	44.7	58.0	58.0	58.0
87.5°	15.7	18.1	20.5	19.3	19.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)