

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: P312950

Luminaire Tested: **22FCZ2-29HE-UNV-L83050-S-CP125-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: P312950
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-L83050-S-CP125-W2A-U-3000K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.125" 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: 2500.0 lumens
Efficiency: N/A
Efficacy: 111.6 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

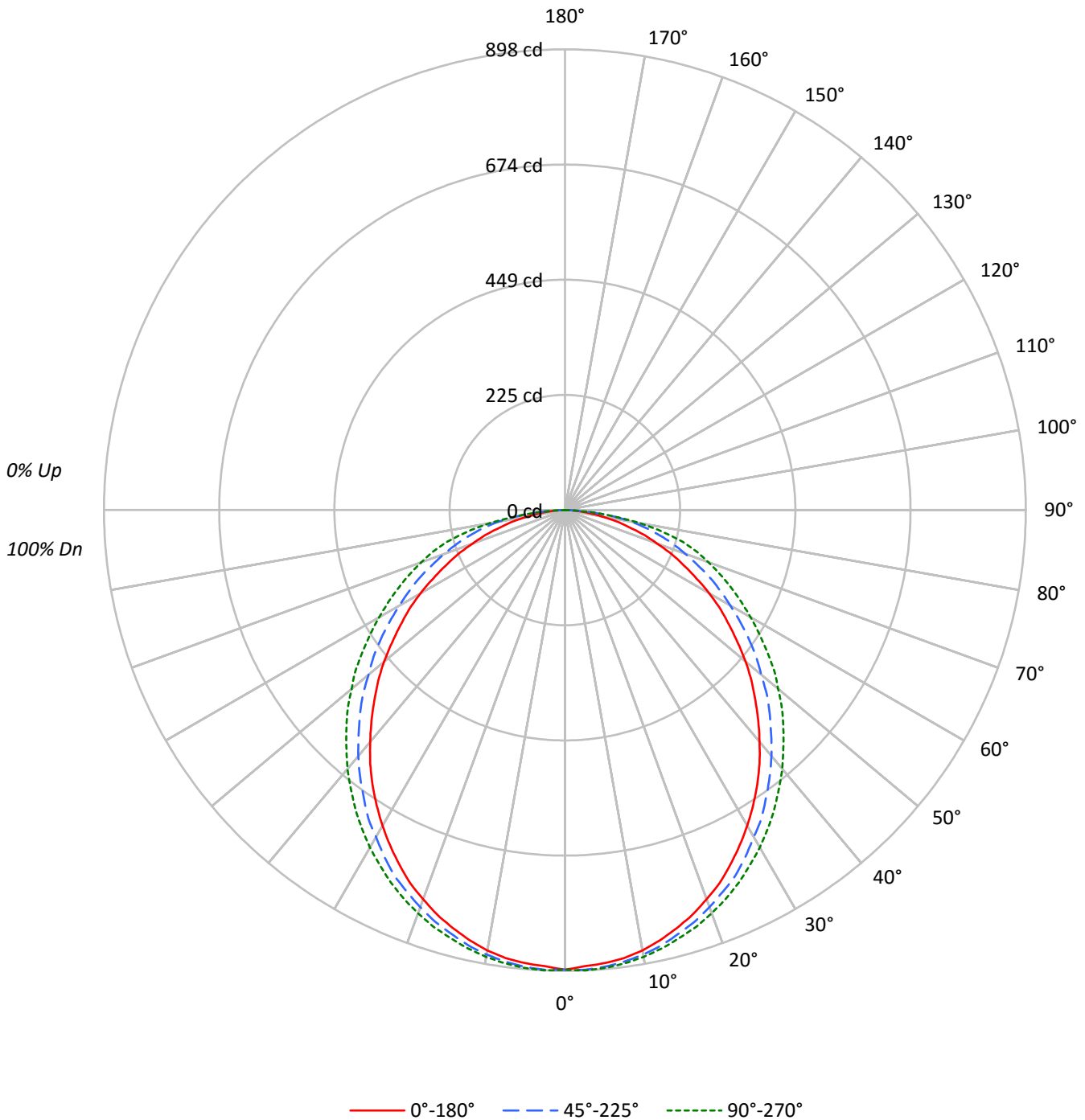
Input Watts (W): 22.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	2411	2411	2411
5°	2395	2414	2420
10°	2381	2403	2416
15°	2349	2382	2405
20°	2312	2358	2395
25°	2265	2334	2379
30°	2207	2287	2360
35°	2146	2245	2337
40°	2073	2200	2315
45°	1998	2149	2291
50°	1924	2090	2271
55°	1833	2052	2255
60°	1751	2003	2248
65°	1634	1990	2273
70°	1505	1973	2340
75°	1358	2001	2462
80°	1175	2061	2314
85°	973	1729	1729



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	84.7	3.4
10°-20°	241.1	9.6
20°-30°	360.7	14.4
30°-40°	427.2	17.1
40°-50°	435.4	17.4
50°-60°	390.2	15.6
60°-70°	305.5	12.2
70°-80°	197.0	7.9
80°-90°	58.2	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°	686.5	27.5
0°-40°	1113.7	44.5
0°-60°	1939.3	77.6
0°-90°	2500.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2500.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	896	896	896	896	896	
5°	886	889	894	895	896	84
15°	843	848	855	862	863	238
25°	763	770	786	797	801	351
35°	653	661	684	704	712	408
45°	525	537	565	594	602	405
55°	391	404	437	468	481	350
65°	257	272	313	343	357	255
75°	131	150	192	225	237	140
85°	32	43	56	56	56	37
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	895.8	895.8	895.8	895.8	895.8
2.5°	890.0	892.3	897.0	898.2	898.2
5°	886.5	888.8	893.5	894.7	895.8
7.5°	880.7	881.8	887.7	890.0	891.2
10°	871.3	873.7	879.5	883.0	884.2
12.5°	858.5	862.0	869.0	873.7	874.8
15°	843.3	848.0	855.0	862.0	863.2
17.5°	827.0	831.7	841.0	849.2	851.5
20°	807.2	813.0	823.5	832.8	836.3
22.5°	787.3	792.0	804.8	816.5	820.0
25°	762.9	769.9	786.2	796.7	801.3
27.5°	737.2	745.4	761.7	775.7	780.4
30°	710.4	718.5	736.0	753.5	759.4
32.5°	682.4	691.7	712.7	730.2	736.0
35°	653.2	661.4	683.5	704.5	711.5
37.5°	622.9	629.9	655.5	677.7	684.7
40°	590.2	599.6	626.4	652.0	659.0
42.5°	557.6	568.1	594.9	622.9	629.9
45°	524.9	536.6	564.6	593.7	601.9
47.5°	493.4	502.7	534.2	562.2	573.9
50°	459.6	468.9	499.2	530.7	542.4
52.5°	424.6	437.4	470.1	500.4	514.4
55°	390.8	403.6	437.4	467.7	480.6
57.5°	359.3	369.8	404.8	436.2	449.1
60°	325.4	334.8	372.1	405.9	417.6
62.5°	289.3	303.3	341.8	373.3	387.3
65°	256.6	271.8	312.6	342.9	356.9
67.5°	226.3	240.3	279.9	312.6	327.8
70°	191.3	210.0	250.8	283.4	297.4
72.5°	163.3	179.6	221.6	254.3	269.4
75°	130.6	150.5	192.5	225.1	236.8
77.5°	103.8	123.6	163.3	189.0	194.8
80°	75.8	95.6	133.0	145.8	149.3
82.5°	51.3	70.0	95.6	99.1	100.3
85°	31.5	43.2	56.0	56.0	56.0
87.5°	15.2	17.5	19.8	18.7	18.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)