

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: P313063

Luminaire Tested: **24FCZ2-30HE-UNV-L83050-HRP-CP250-W2A-U-4500K**

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: P313063
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-30HE-UNV-L83050-HRP-CP250-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
POLYCARB SHEET
Light Source: (336) 4500K 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: 2145.0 lumens
Efficiency: N/A
Efficacy: 97.1 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

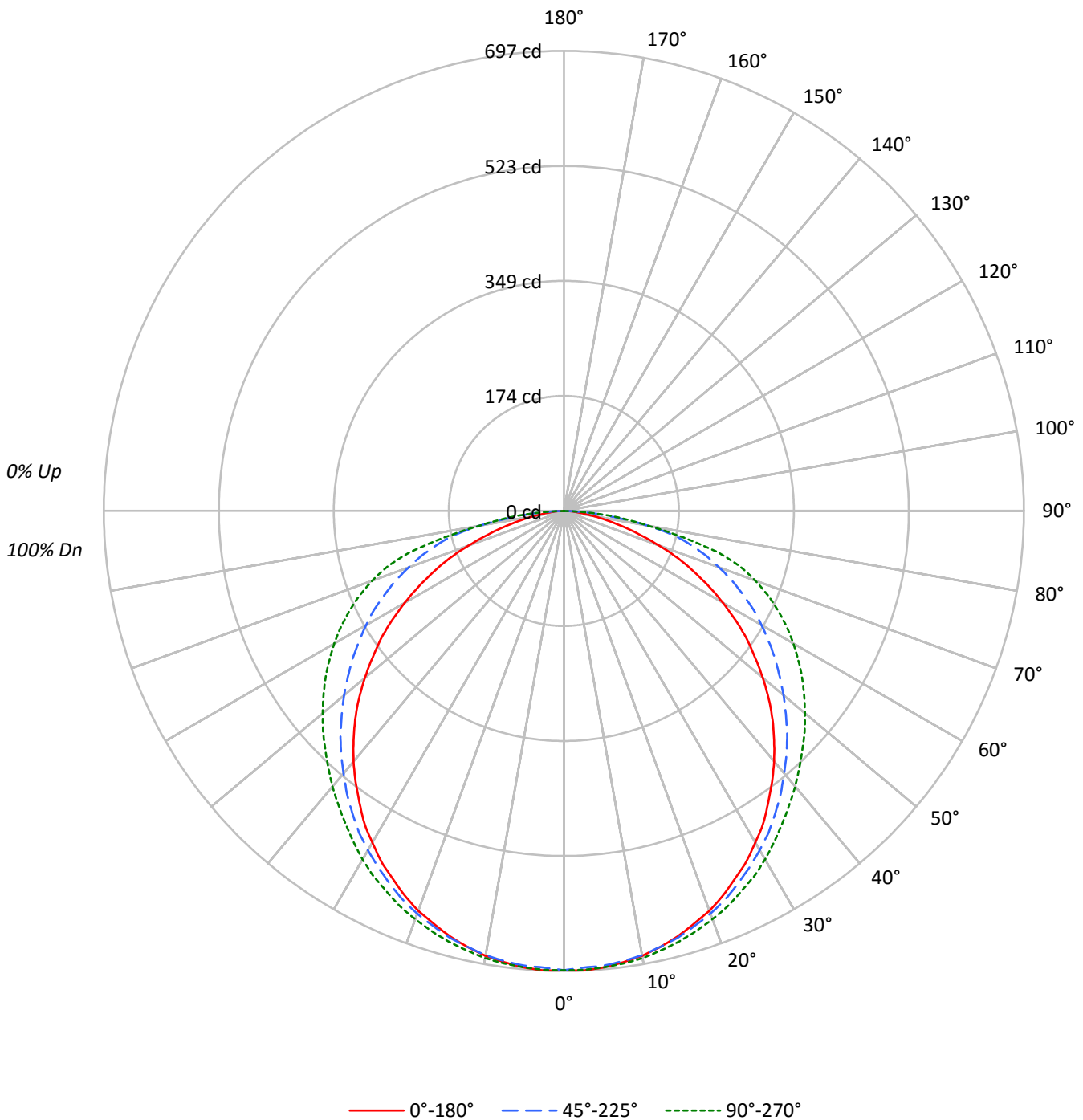
Input Watts (W): 22.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	101	96	93	96	93	90	92	90	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	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	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	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	24	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	936	936	936
5°	938	934	938
10°	935	934	940
15°	929	932	941
20°	923	930	942
25°	912	925	944
30°	901	922	947
35°	886	918	948
40°	871	912	957
45°	851	911	972
50°	823	910	998
55°	794	916	1034
60°	749	930	1080
65°	692	952	1141
70°	604	985	1215
75°	490	1037	1256
80°	362	1016	1016
85°	278	749	846



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	65.9	3.1
10°-20°	189.3	8.8
20°-30°	288.2	13.4
30°-40°	350.0	16.3
40°-50°	369.7	17.2
50°-60°	348.9	16.3
60°-70°	290.1	13.5
70°-80°	190.8	8.9
80°-90°	52.0	2.4
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°	543.5	25.3
0°-40°	893.4	41.7
0°-60°	1612.0	75.2
0°-90°	2145.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2145.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	696	696	696	696	696	
5°	694	694	692	694	694	66
15°	667	668	669	675	675	188
25°	614	618	623	634	636	283
35°	540	546	559	573	577	338
45°	447	456	479	502	511	344
55°	338	353	391	427	441	302
65°	217	242	299	343	358	215
75°	94	137	199	236	242	102
85°	18	40	48	54	55	22
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	695.9	695.9	695.9	695.9	695.9
2.5°	696.8	695.9	692.4	695.9	695.9
5°	694.2	694.2	691.5	694.2	694.2
7.5°	689.7	689.7	687.9	691.5	691.5
10°	684.3	684.3	683.4	687.9	687.9
12.5°	676.2	677.1	676.2	681.6	681.6
15°	667.2	668.1	669.0	675.3	675.3
17.5°	655.5	657.3	659.1	666.3	667.2
20°	644.8	645.7	649.3	657.3	658.2
22.5°	630.4	633.1	637.6	645.7	648.4
25°	614.2	617.8	623.2	634.0	635.8
27.5°	599.0	601.7	608.8	620.5	624.1
30°	580.1	584.6	593.6	605.2	609.7
32.5°	562.1	566.6	577.4	590.0	593.6
35°	539.7	546.0	558.6	572.9	577.4
37.5°	518.1	524.4	539.7	555.9	561.2
40°	495.7	502.9	519.0	537.9	545.1
42.5°	471.4	481.3	499.3	519.9	528.0
45°	447.2	456.2	478.6	502.0	511.0
47.5°	421.2	431.9	456.2	484.0	494.8
50°	393.3	406.8	434.6	465.2	476.8
52.5°	365.5	380.8	412.2	446.3	458.9
55°	338.5	352.9	390.6	427.4	440.9
57.5°	308.9	326.9	368.2	407.7	421.2
60°	278.4	298.1	345.7	387.0	401.4
62.5°	247.8	270.3	324.2	365.5	380.8
65°	217.3	242.5	299.0	343.0	358.3
67.5°	187.7	215.5	275.7	319.7	335.0
70°	153.6	188.6	250.5	293.6	308.9
72.5°	122.1	162.5	226.3	266.7	280.2
75°	94.3	137.4	199.4	236.2	241.6
77.5°	69.1	112.2	171.5	184.1	185.0
80°	46.7	89.8	131.1	129.3	131.1
82.5°	30.5	67.3	82.6	92.5	93.4
85°	18.0	39.5	48.5	53.9	54.8
87.5°	9.0	13.5	17.1	18.0	19.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)