

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: P312638

Luminaire Tested: **22FCZ2-24HE-UNV-L83050-RDP-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: P312638  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-24)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 22FCZ2-24HE-UNV-L83050-RDP-CP250-W2A-U-4500K  
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB SHEET  
Light Source: (168) 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**

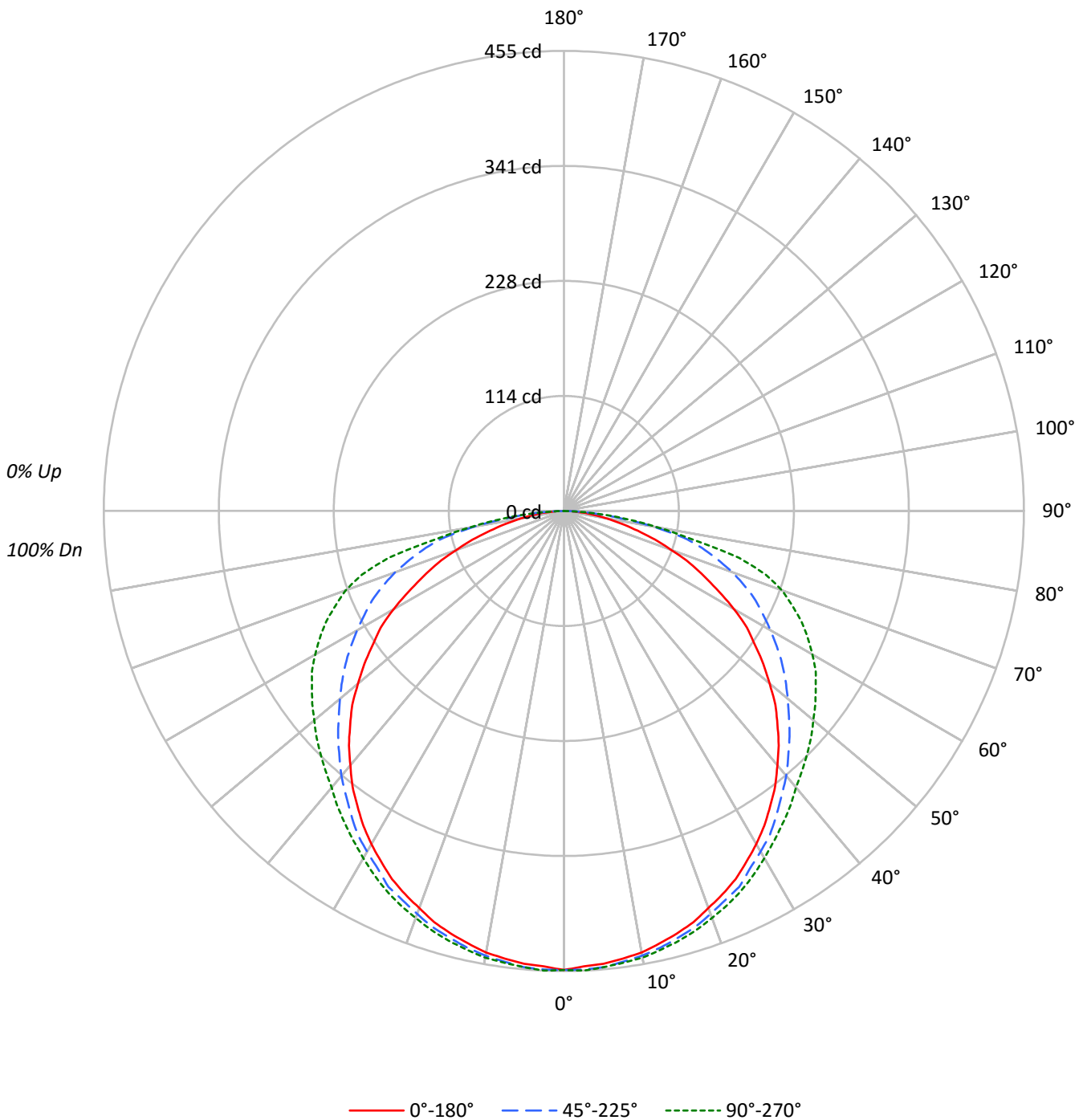
Lumens per Lamp: N/A  
Luminaire Lumens: 1445.0 lumens  
Efficiency: N/A  
Efficacy: 73.0 lumens/watt  
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 19.8  
Input Voltage (V): NR  
Input Current (Ain): NR  
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	100	96	92	96	92	89	92	89	86	88	86	84	82
2	97	88	81	75	95	86	80	74	83	77	72	80	75	71	76	72	69	67
3	88	77	68	61	86	75	67	61	72	65	60	70	64	59	67	62	58	55
4	80	68	59	51	78	66	58	51	64	56	50	61	55	50	59	54	49	47
5	74	60	51	44	72	59	50	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	44	38	51	43	38	50	43	37	48	42	37	35
7	63	49	40	33	61	48	39	33	47	39	33	45	38	33	44	37	33	31
8	59	45	36	30	57	44	35	30	43	35	29	41	34	29	40	34	29	27
9	55	41	32	27	53	40	32	27	39	32	26	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	1221	1221	1221
5°	1214	1223	1223
10°	1211	1220	1226
15°	1205	1217	1226
20°	1196	1214	1227
25°	1193	1218	1231
30°	1183	1209	1232
35°	1170	1205	1240
40°	1154	1202	1255
45°	1137	1201	1295
50°	1112	1210	1348
55°	1082	1237	1426
60°	1047	1270	1527
65°	975	1333	1652
70°	895	1397	1806
75°	785	1470	1867
80°	676	1401	1466
85°	590	1019	1115



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	42.9	3.0
10°-20°	123.3	8.5
20°-30°	188.1	13.0
30°-40°	229.6	15.9
40°-50°	245.6	17.0
50°-60°	237.0	16.4
60°-70°	204.0	14.1
70°-80°	138.0	9.6
80°-90°	36.4	2.5
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°	354.3	24.5
0°-40°	583.9	40.4
0°-60°	1066.5	73.8
0°-90°	1445.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1445.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	454	454	454	454	454	
5°	450	451	453	453	453	43
15°	433	434	437	439	440	122
25°	402	404	410	412	415	185
35°	356	359	367	374	377	223
45°	299	304	316	332	340	231
55°	231	238	264	290	304	207
65°	153	168	209	242	259	152
75°	76	100	141	170	180	81
85°	19	27	33	34	36	22
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	453.9	453.9	453.9	453.9	453.9
2.5°	450.7	451.8	453.9	453.9	455.0
5°	449.6	450.7	452.8	452.8	452.8
7.5°	446.5	447.5	449.6	450.7	450.7
10°	443.3	444.3	446.5	447.5	448.6
12.5°	438.0	439.0	442.2	444.3	444.3
15°	432.6	433.7	436.9	439.0	440.1
17.5°	426.3	428.4	431.6	433.7	434.8
20°	417.8	419.9	424.1	427.3	428.4
22.5°	410.3	412.4	416.7	419.9	422.0
25°	401.8	403.9	410.3	412.4	414.6
27.5°	391.2	393.3	398.6	402.9	406.1
30°	380.6	382.7	389.1	394.4	396.5
32.5°	368.9	372.0	379.5	383.7	386.9
35°	356.1	359.3	366.7	374.2	377.4
37.5°	343.3	346.5	354.0	363.5	367.8
40°	328.5	332.7	342.3	355.0	357.2
42.5°	314.6	320.0	328.5	343.3	348.7
45°	298.7	304.0	315.7	331.7	340.2
47.5°	283.8	289.1	301.9	321.0	331.7
50°	265.7	273.2	289.1	311.5	322.1
52.5°	248.7	255.1	276.4	300.8	313.6
55°	230.7	238.1	263.6	290.2	304.0
57.5°	214.7	221.1	249.8	279.6	295.5
60°	194.5	203.0	236.0	267.9	283.8
62.5°	173.3	186.0	222.2	255.1	272.1
65°	153.1	168.0	209.4	242.4	259.4
67.5°	135.0	150.9	193.5	228.5	244.5
70°	113.7	133.9	177.5	211.5	229.6
72.5°	94.6	116.9	159.4	193.5	209.4
75°	75.5	99.9	141.4	170.1	179.6
77.5°	58.5	81.9	121.2	129.7	130.7
80°	43.6	64.8	90.4	91.4	94.6
82.5°	29.8	45.7	58.5	63.8	64.8
85°	19.1	26.6	33.0	34.0	36.1
87.5°	8.5	9.6	11.7	10.6	10.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)