

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: P310212

Luminaire Tested: **24FCZ2-50HE-UNV-L82765-RDP-CP250-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: P310212
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-50HE-UNV-L82765-RDP-CP250-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB SHEET
Light Source: (336) 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: 2708.0 lumens
Efficiency: N/A
Efficacy: 71.1 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

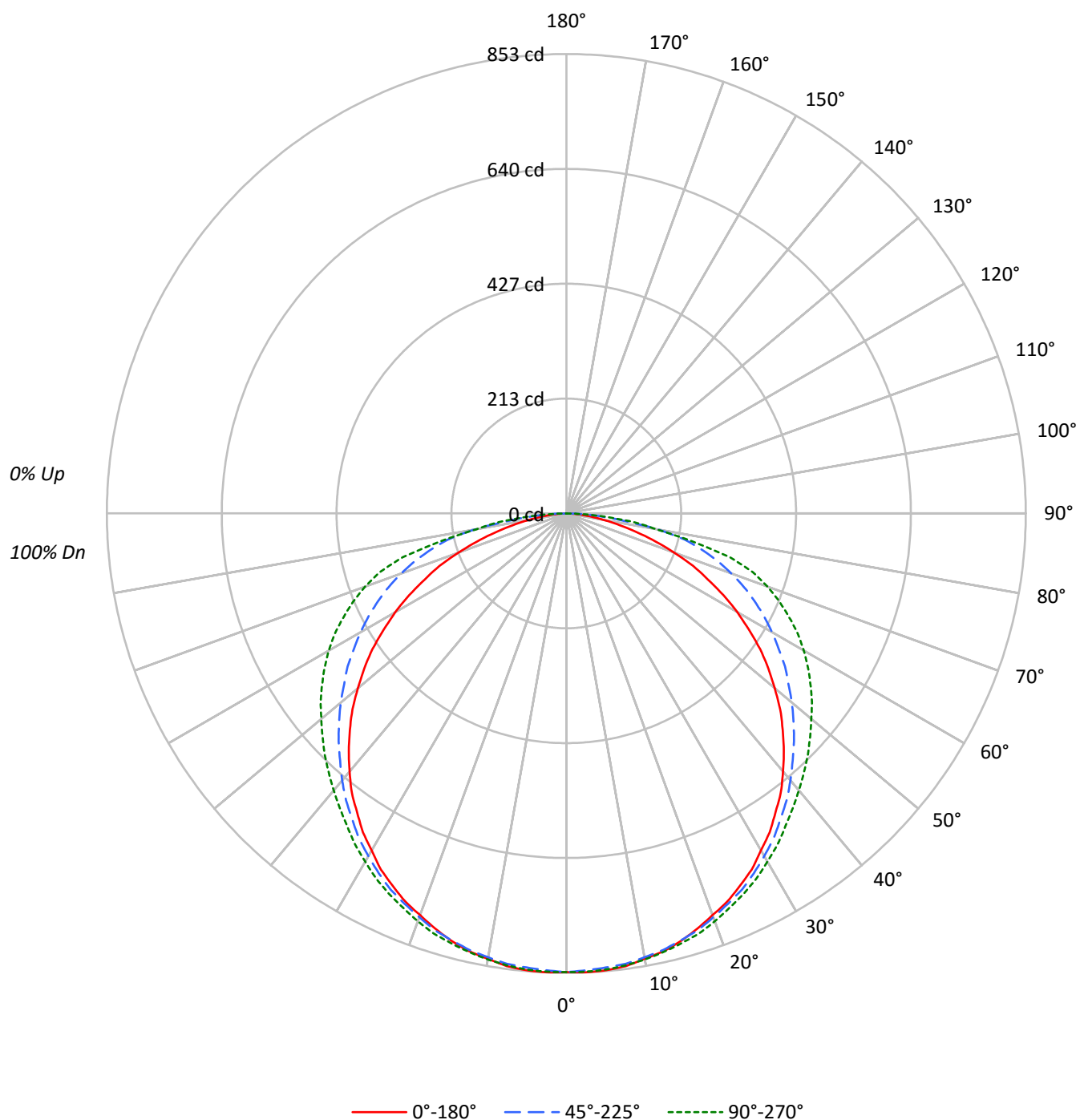
Input Watts (W): 38.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
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	89	92	89	87	88	86	84	82		
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67		
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56		
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47		
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40		
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35		
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31		
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27		
9	55	41	33	27	53	40	32	27	39	32	27	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°	1146	1146	1146
5°	1150	1143	1148
10°	1147	1143	1149
15°	1145	1143	1151
20°	1137	1142	1154
25°	1133	1145	1157
30°	1123	1141	1160
35°	1112	1138	1165
40°	1099	1137	1180
45°	1081	1137	1206
50°	1057	1144	1243
55°	1030	1163	1298
60°	987	1186	1370
65°	924	1227	1454
70°	840	1284	1564
75°	712	1355	1634
80°	562	1364	1322
85°	415	1037	1161



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	80.8	3.0
10°-20°	232.5	8.6
20°-30°	355.5	13.1
30°-40°	434.6	16.0
40°-50°	463.2	17.1
50°-60°	442.9	16.4
60°-70°	375.2	13.9
70°-80°	252.2	9.3
80°-90°	71.1	2.6
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°	668.8	24.7
0°-40°	1103.4	40.7
0°-60°	2009.5	74.2
0°-90°	2708.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2708.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	852	852	852	852	852	
5°	852	850	846	850	850	81
15°	822	822	821	827	826	232
25°	763	766	771	778	779	352
35°	677	682	693	706	709	424
45°	568	578	598	623	634	438
55°	439	455	496	535	553	391
65°	290	320	386	436	457	288
75°	137	187	261	305	314	147
85°	27	55	67	72	75	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	851.6	851.6	851.6	851.6	851.6
2.5°	852.9	852.9	848.9	851.6	851.6
5°	851.6	850.2	846.2	850.2	850.2
7.5°	847.6	846.2	843.5	847.6	846.2
10°	839.5	839.5	836.8	840.8	840.8
12.5°	832.8	831.4	830.1	835.5	834.1
15°	822.0	822.0	820.7	827.4	826.1
17.5°	808.6	809.9	811.3	816.7	818.0
20°	793.8	796.5	797.9	805.9	805.9
22.5°	780.4	781.7	784.4	792.5	792.5
25°	762.9	765.6	771.0	777.7	779.1
27.5°	745.5	746.8	753.5	762.9	764.3
30°	722.6	726.7	734.7	745.5	746.8
32.5°	702.5	706.5	715.9	726.7	729.4
35°	677.0	682.3	693.1	706.5	709.2
37.5°	654.1	658.2	671.6	686.4	690.4
40°	625.9	634.0	647.4	664.9	671.6
42.5°	597.7	605.8	621.9	644.7	652.8
45°	568.2	577.6	597.7	623.2	634.0
47.5°	538.6	549.4	572.2	601.8	613.8
50°	505.0	518.5	546.7	580.3	593.7
52.5°	472.8	488.9	519.8	557.4	574.9
55°	439.2	455.3	495.6	534.6	553.4
57.5°	401.6	423.1	467.4	511.8	531.9
60°	366.7	386.8	440.6	488.9	509.1
62.5°	329.1	355.9	413.7	464.7	484.9
65°	290.1	319.7	385.5	436.5	456.7
67.5°	255.2	287.4	357.3	408.3	428.5
70°	213.6	253.9	326.4	377.4	397.6
72.5°	174.6	218.9	294.2	343.9	362.7
75°	137.0	186.7	260.6	304.9	314.3
77.5°	102.1	154.5	225.7	244.5	237.7
80°	72.5	123.6	176.0	166.6	170.6
82.5°	47.0	94.0	108.8	123.6	127.6
85°	26.9	55.1	67.2	72.5	75.2
87.5°	12.1	20.1	26.9	26.9	25.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)