

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: P314210

Luminaire Tested: **24FCZ2-30-UNV-L83050-S-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: P314210
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-30-UNV-L83050-S-CP250-W2A-U-3000K
Description: 2'X4' 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: 2555.0 lumens
Efficiency: N/A
Efficacy: 109.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

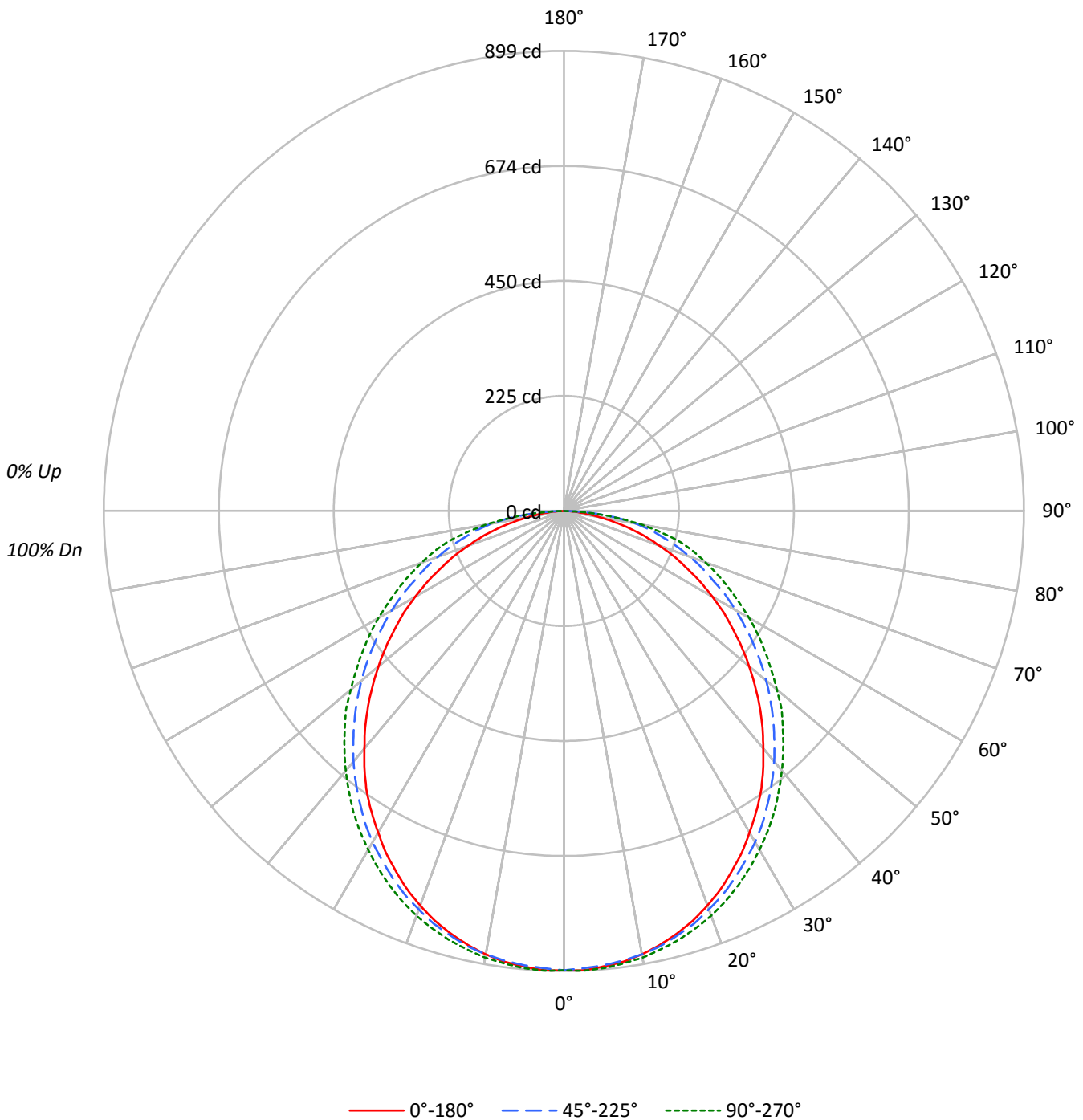
Input Watts (W): 23.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1208	1208	1208
5°	1207	1204	1211
10°	1202	1202	1211
15°	1190	1196	1209
20°	1175	1186	1205
25°	1153	1175	1198
30°	1127	1161	1188
35°	1102	1142	1178
40°	1065	1123	1165
45°	1030	1101	1152
50°	990	1081	1138
55°	946	1060	1127
60°	902	1044	1125
65°	845	1026	1132
70°	782	1031	1162
75°	700	1051	1228
80°	566	1113	1201
85°	426	977	953



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	85.0	3.3
10°-20°	242.8	9.5
20°-30°	365.0	14.3
30°-40°	434.8	17.0
40°-50°	445.0	17.4
50°-60°	400.6	15.7
60°-70°	314.6	12.3
70°-80°	204.2	8.0
80°-90°	63.1	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°	692.8	27.1
0°-40°	1127.5	44.1
0°-60°	1973.1	77.2
0°-90°	2555.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2555.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	898	898	898	898	898	
5°	894	895	891	896	897	85
15°	855	857	859	866	868	241
25°	777	783	791	804	807	358
35°	671	679	696	713	717	419
45°	541	554	579	601	605	417
55°	403	421	452	476	480	362
65°	265	286	322	349	356	264
75°	135	161	202	230	236	143
85°	28	51	63	62	62	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	897.6	897.6	897.6	897.6	897.6
2.5°	898.4	898.4	894.3	898.4	899.2
5°	893.5	895.2	891.1	896.0	896.8
7.5°	888.7	888.7	886.2	891.1	891.9
10°	879.7	880.5	879.7	885.4	886.2
12.5°	868.4	870.0	870.8	876.5	877.3
15°	854.6	857.0	858.6	865.9	867.6
17.5°	839.2	841.6	845.6	853.8	855.4
20°	820.5	823.7	828.6	839.2	841.6
22.5°	800.2	803.4	811.6	821.3	825.4
25°	776.7	783.2	791.3	804.3	806.7
27.5°	753.1	758.8	769.4	783.2	786.4
30°	725.5	734.5	747.4	761.2	764.5
32.5°	698.8	707.7	723.1	737.7	741.8
35°	671.2	679.3	695.5	712.6	717.4
37.5°	639.5	650.1	667.9	685.0	689.8
40°	606.2	619.2	639.5	657.4	663.0
42.5°	574.6	588.4	608.7	628.1	634.6
45°	541.3	554.3	578.6	600.6	605.4
47.5°	507.2	521.8	547.8	569.7	577.8
50°	473.1	488.6	516.2	538.9	543.7
52.5°	439.1	455.3	484.5	508.8	511.3
55°	403.3	421.2	452.0	475.6	480.4
57.5°	370.9	386.3	419.6	443.9	449.6
60°	335.2	352.2	387.9	410.7	418.0
62.5°	301.1	318.9	356.3	379.0	385.5
65°	265.4	285.7	322.2	349.0	355.5
67.5°	234.5	254.0	293.0	318.9	325.4
70°	198.8	220.7	262.1	288.9	295.4
72.5°	168.0	190.7	232.1	258.1	267.8
75°	134.7	160.7	202.1	229.7	236.2
77.5°	102.3	132.3	174.5	195.6	195.6
80°	73.0	104.7	143.6	153.4	155.0
82.5°	47.9	78.7	106.3	105.5	105.5
85°	27.6	51.1	63.3	61.7	61.7
87.5°	10.6	21.1	22.7	22.7	21.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)