

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: P314213

Luminaire Tested: **24FCZ2-30-UNV-L83050-S-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: P314213
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-4500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 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: 2866.0 lumens
Efficiency: N/A
Efficacy: 117.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.27 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

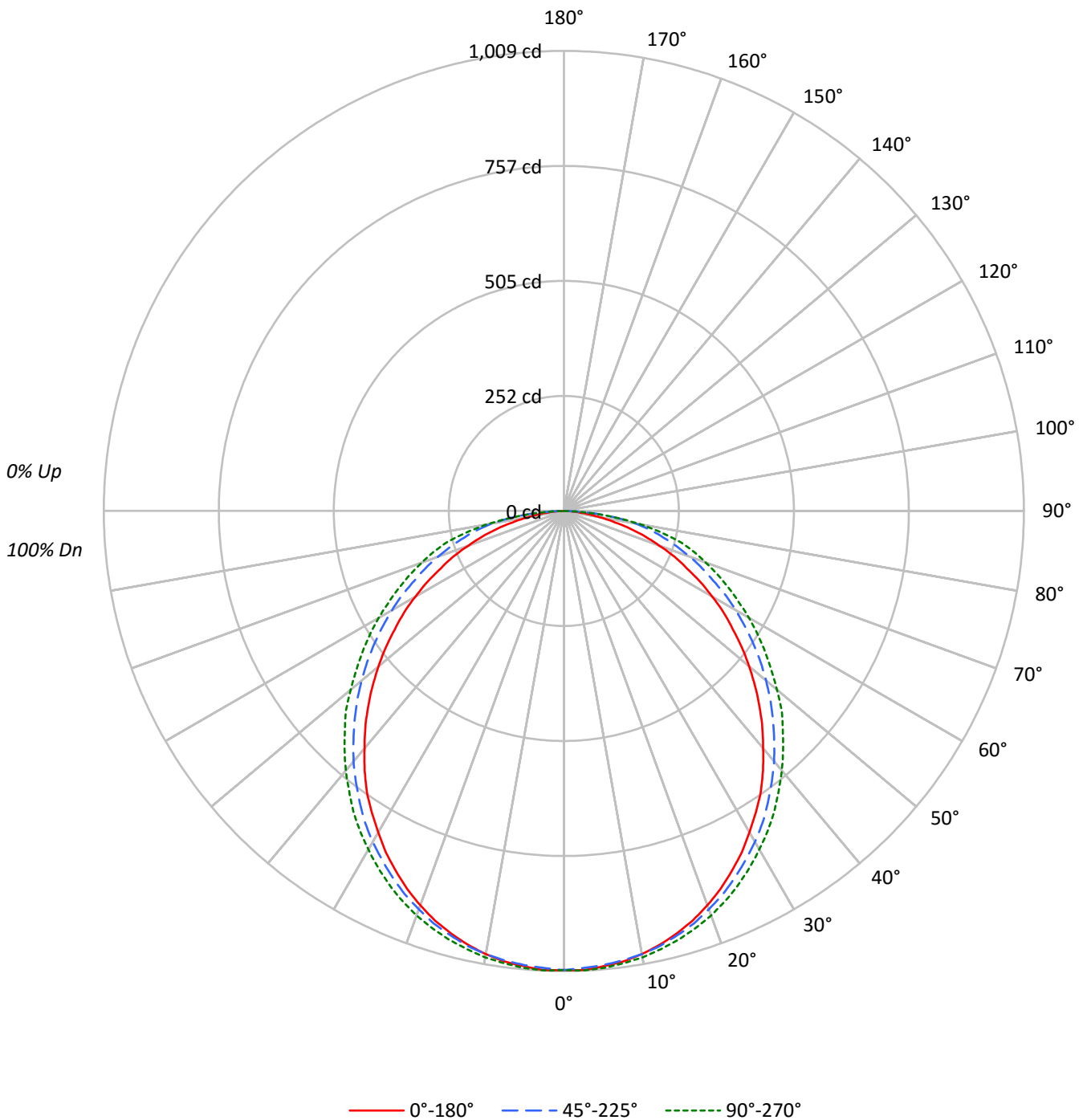
Input Watts (W): 24.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1355	1355	1355
5°	1354	1350	1359
10°	1348	1348	1358
15°	1335	1342	1356
20°	1318	1331	1352
25°	1293	1318	1343
30°	1265	1303	1332
35°	1237	1282	1322
40°	1194	1260	1306
45°	1155	1235	1292
50°	1111	1212	1277
55°	1061	1190	1264
60°	1012	1171	1262
65°	948	1151	1269
70°	877	1157	1304
75°	786	1179	1377
80°	635	1248	1347
85°	479	1096	1068



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	95.3	3.3
10°-20°	272.4	9.5
20°-30°	409.4	14.3
30°-40°	487.7	17.0
40°-50°	499.1	17.4
50°-60°	449.4	15.7
60°-70°	352.9	12.3
70°-80°	229.0	8.0
80°-90°	70.8	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°	777.1	27.1
0°-40°	1264.8	44.1
0°-60°	2213.3	77.2
0°-90°	2866.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2866.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1007	1007	1007	1007	1007	
5°	1002	1004	1000	1005	1006	95
15°	959	961	963	971	973	270
25°	871	878	888	902	905	401
35°	753	762	780	799	805	470
45°	607	622	649	674	679	468
55°	452	472	507	534	539	406
65°	298	320	361	391	399	296
75°	151	180	227	258	265	160
85°	31	57	71	69	69	37
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1006.8	1006.8	1006.8	1006.8	1006.8
2.5°	1007.8	1007.8	1003.2	1007.8	1008.7
5°	1002.3	1004.1	999.6	1005.0	1005.9
7.5°	996.8	996.8	994.1	999.6	1000.5
10°	986.8	987.7	986.8	993.2	994.1
12.5°	974.1	975.9	976.8	983.2	984.1
15°	958.6	961.3	963.1	971.3	973.2
17.5°	941.3	944.0	948.6	957.7	959.5
20°	920.4	924.0	929.5	941.3	944.0
22.5°	897.6	901.2	910.3	921.3	925.8
25°	871.2	878.5	887.6	902.2	904.9
27.5°	844.8	851.2	863.0	878.5	882.1
30°	813.9	823.9	838.4	853.9	857.5
32.5°	783.8	793.8	811.1	827.5	832.1
35°	752.9	762.0	780.2	799.3	804.7
37.5°	717.4	729.2	749.2	768.3	773.8
40°	680.0	694.6	717.4	737.4	743.8
42.5°	644.5	660.0	682.8	704.6	711.9
45°	607.2	621.8	649.1	673.7	679.1
47.5°	569.0	585.4	614.5	639.1	648.2
50°	530.7	548.0	579.0	604.5	609.9
52.5°	492.5	510.7	543.5	570.8	573.5
55°	452.4	472.5	507.1	533.5	538.9
57.5°	416.0	433.3	470.6	498.0	504.3
60°	376.0	395.1	435.1	460.6	468.8
62.5°	337.7	357.8	399.6	425.1	432.4
65°	297.7	320.4	361.4	391.4	398.7
67.5°	263.1	284.9	328.6	357.8	365.0
70°	223.0	247.6	294.0	324.1	331.4
72.5°	188.4	213.9	260.4	289.5	300.4
75°	151.1	180.2	226.7	257.6	264.9
77.5°	114.7	148.4	195.7	219.4	219.4
80°	81.9	117.4	161.1	172.1	173.9
82.5°	53.7	88.3	119.3	118.3	118.3
85°	31.0	57.4	71.0	69.2	69.2
87.5°	11.8	23.7	25.5	25.5	24.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)