

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: P314209

Luminaire Tested: **24FCZ2-30-UNV-L83050-S-CP187-W2A-U-5000K**

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: P314209
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-CP187-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.187" POLYCARB SHEET
Light Source: (168) 5000K 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: 2890.0 lumens
Efficiency: N/A
Efficacy: 118.0 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

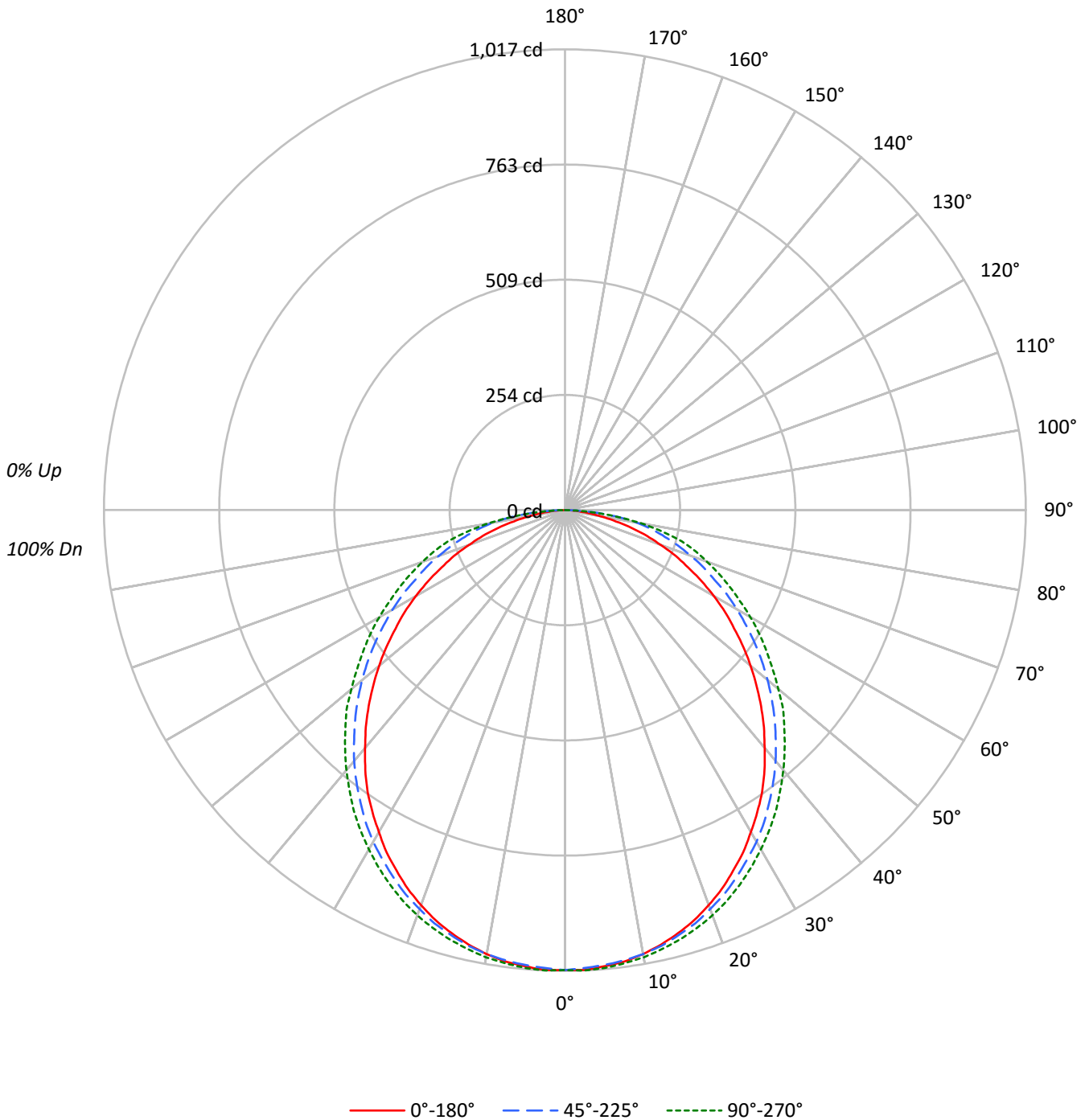
Input Watts (W): 24.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1366	1366	1366
5°	1365	1361	1370
10°	1360	1360	1370
15°	1346	1353	1367
20°	1329	1342	1363
25°	1304	1329	1355
30°	1275	1314	1343
35°	1247	1292	1333
40°	1204	1271	1317
45°	1165	1245	1303
50°	1120	1222	1287
55°	1070	1199	1275
60°	1020	1181	1272
65°	956	1160	1280
70°	885	1166	1314
75°	792	1188	1389
80°	640	1259	1358
85°	482	1105	1078



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	96.1	3.3
10°-20°	274.6	9.5
20°-30°	412.8	14.3
30°-40°	491.8	17.0
40°-50°	503.3	17.4
50°-60°	453.1	15.7
60°-70°	355.8	12.3
70°-80°	230.9	8.0
80°-90°	71.4	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°	783.6	27.1
0°-40°	1275.4	44.1
0°-60°	2231.8	77.2
0°-90°	2890.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2890.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1015	1015	1015	1015	1015	
5°	1011	1012	1008	1013	1014	96
15°	967	969	971	980	981	273
25°	878	886	895	910	912	405
35°	759	768	787	806	812	474
45°	612	627	654	679	685	472
55°	456	476	511	538	543	409
65°	300	323	364	395	402	299
75°	152	182	229	260	267	161
85°	31	58	72	70	70	38
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1015.3	1015.3	1015.3	1015.3	1015.3
2.5°	1016.2	1016.2	1011.6	1016.2	1017.1
5°	1010.7	1012.5	1007.9	1013.4	1014.4
7.5°	1005.2	1005.2	1002.4	1007.9	1008.9
10°	995.1	996.0	995.1	1001.5	1002.4
12.5°	982.2	984.1	985.0	991.4	992.3
15°	966.6	969.4	971.2	979.5	981.3
17.5°	949.2	951.9	956.5	965.7	967.5
20°	928.1	931.7	937.2	949.2	951.9
22.5°	905.1	908.8	918.0	929.0	933.6
25°	878.5	885.8	895.0	909.7	912.5
27.5°	851.9	858.3	870.2	885.8	889.5
30°	820.7	830.8	845.5	861.1	864.7
32.5°	790.4	800.5	817.9	834.4	839.0
35°	759.2	768.3	786.7	806.0	811.5
37.5°	723.4	735.3	755.5	774.8	780.3
40°	685.7	700.4	723.4	743.6	750.0
42.5°	649.9	665.5	688.5	710.5	717.9
45°	612.3	627.0	654.5	679.3	684.8
47.5°	573.7	590.3	619.6	644.4	653.6
50°	535.2	552.6	583.8	609.5	615.0
52.5°	496.6	515.0	548.0	575.6	578.3
55°	456.2	476.4	511.3	537.9	543.4
57.5°	419.5	437.0	474.6	502.1	508.6
60°	379.1	398.4	438.8	464.5	472.8
62.5°	340.6	360.8	403.0	428.7	436.0
65°	300.2	323.1	364.4	394.7	402.1
67.5°	265.3	287.3	331.4	360.8	368.1
70°	224.9	249.7	296.5	326.8	334.1
72.5°	190.0	215.7	262.5	291.9	302.9
75°	152.4	181.8	228.6	259.8	267.1
77.5°	115.7	149.6	197.4	221.2	221.2
80°	82.6	118.4	162.5	173.5	175.3
82.5°	54.2	89.0	120.3	119.3	119.3
85°	31.2	57.8	71.6	69.8	69.8
87.5°	11.9	23.9	25.7	25.7	24.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)