

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: P310492

Luminaire Tested: **24FCZ2-30HE-UNV-L82765-CA08-W2A-U-3500K**

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: P310492
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-15)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-30HE-UNV-L82765-CA08-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.08" ACRYLIC SHEET
Light Source: (336) 3500K 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: 2741.0 lumens
Efficiency: N/A
Efficacy: 129.3 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

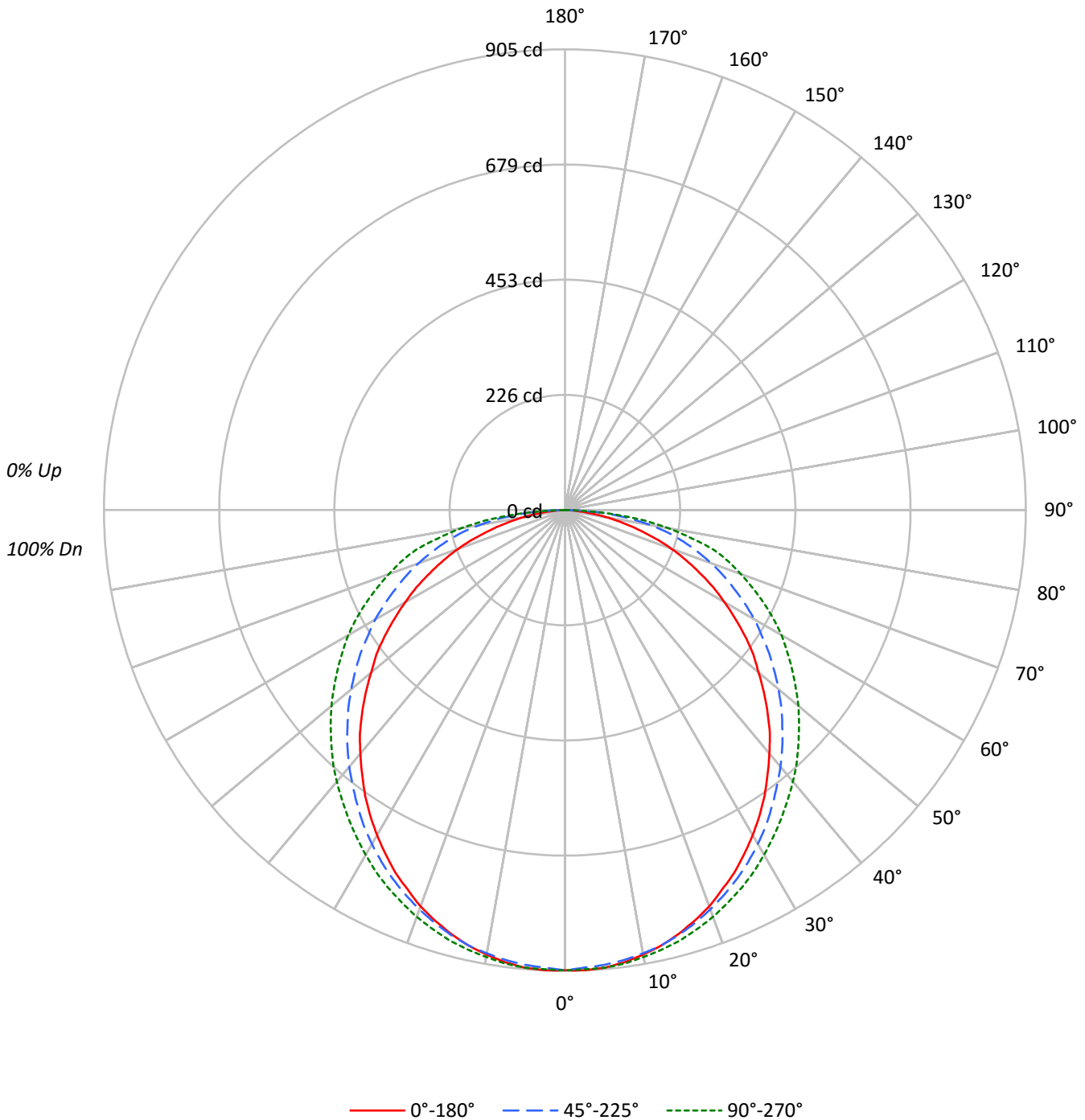
Input Watts (W): 21.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	98	94	105	100	96	92	96	92	89	92	89	87	88	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	37	31	57	45	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1216	1216	1216
5°	1218	1211	1218
10°	1211	1208	1218
15°	1201	1203	1219
20°	1186	1195	1217
25°	1168	1187	1216
30°	1146	1177	1215
35°	1123	1165	1216
40°	1097	1156	1224
45°	1071	1149	1234
50°	1039	1146	1253
55°	1013	1148	1278
60°	974	1158	1322
65°	929	1170	1370
70°	880	1206	1445
75°	785	1258	1579
80°	669	1332	1614
85°	477	1320	1544



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	85.5	3.1
10°-20°	244.6	8.9
20°-30°	369.5	13.5
30°-40°	445.3	16.2
40°-50°	467.5	17.1
50°-60°	437.4	16.0
60°-70°	361.2	13.2
70°-80°	246.1	9.0
80°-90°	83.9	3.1
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°	699.6	25.5
0°-40°	1144.9	41.8
0°-60°	2049.8	74.8
0°-90°	2741.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2741.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	904	904	904	904	904	
5°	902	901	897	902	902	86
15°	862	863	864	873	875	243
25°	787	790	799	815	819	362
35°	684	691	709	733	740	427
45°	563	575	604	637	648	434
55°	432	449	489	529	545	386
65°	292	316	367	414	430	290
75°	151	186	242	287	304	161
85°	31	61	86	96	100	39
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	904.0	904.0	904.0	904.0	904.0
2.5°	904.9	904.0	899.4	904.0	903.0
5°	902.1	901.2	896.7	902.1	902.1
7.5°	895.8	895.8	891.2	897.6	898.5
10°	886.7	886.7	884.0	891.2	891.2
12.5°	875.8	875.8	875.8	883.0	884.0
15°	862.1	863.0	863.9	873.0	874.9
17.5°	845.8	847.6	850.3	861.2	863.0
20°	828.5	830.3	834.8	847.6	850.3
22.5°	806.7	811.2	817.6	832.1	834.8
25°	786.6	790.3	799.4	814.8	819.4
27.5°	762.1	767.5	779.4	795.7	802.1
30°	737.5	743.0	757.5	776.6	782.1
32.5°	711.2	719.3	734.8	754.8	761.2
35°	683.9	691.2	709.3	733.0	740.3
37.5°	653.9	663.9	683.9	709.3	718.4
40°	624.8	635.7	658.4	685.7	696.6
42.5°	595.7	606.6	632.0	663.0	673.9
45°	562.9	574.7	603.9	636.6	648.4
47.5°	530.2	544.7	576.6	611.1	623.9
50°	496.5	512.9	547.5	583.8	598.4
52.5°	466.5	482.0	518.4	557.5	571.1
55°	432.0	449.3	489.3	529.3	544.7
57.5°	396.5	415.6	458.3	502.0	517.5
60°	361.9	382.9	430.2	473.8	491.1
62.5°	328.3	349.2	398.3	443.8	461.1
65°	291.9	316.5	367.4	413.8	430.2
67.5°	257.4	283.7	337.4	382.9	399.2
70°	223.7	249.2	306.5	351.0	367.4
72.5°	187.3	216.4	273.7	320.1	337.4
75°	151.0	185.5	241.9	287.4	303.7
77.5°	117.3	152.8	209.2	246.5	254.6
80°	86.4	122.8	171.9	198.3	208.3
82.5°	55.5	91.9	131.0	150.1	158.2
85°	30.9	60.9	85.5	96.4	100.0
87.5°	12.7	26.4	34.6	39.1	39.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)