

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: P310524

Luminaire Tested: **24FCZ2-30HE-UNV-L82765-CP187-W2A-U-5700K**

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: P310524
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-CP187-W2A-U-5700K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.187" POLYCARB SHEET
Light Source: (336) 5700K 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: 2738.0 lumens
Efficiency: N/A
Efficacy: 126.2 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

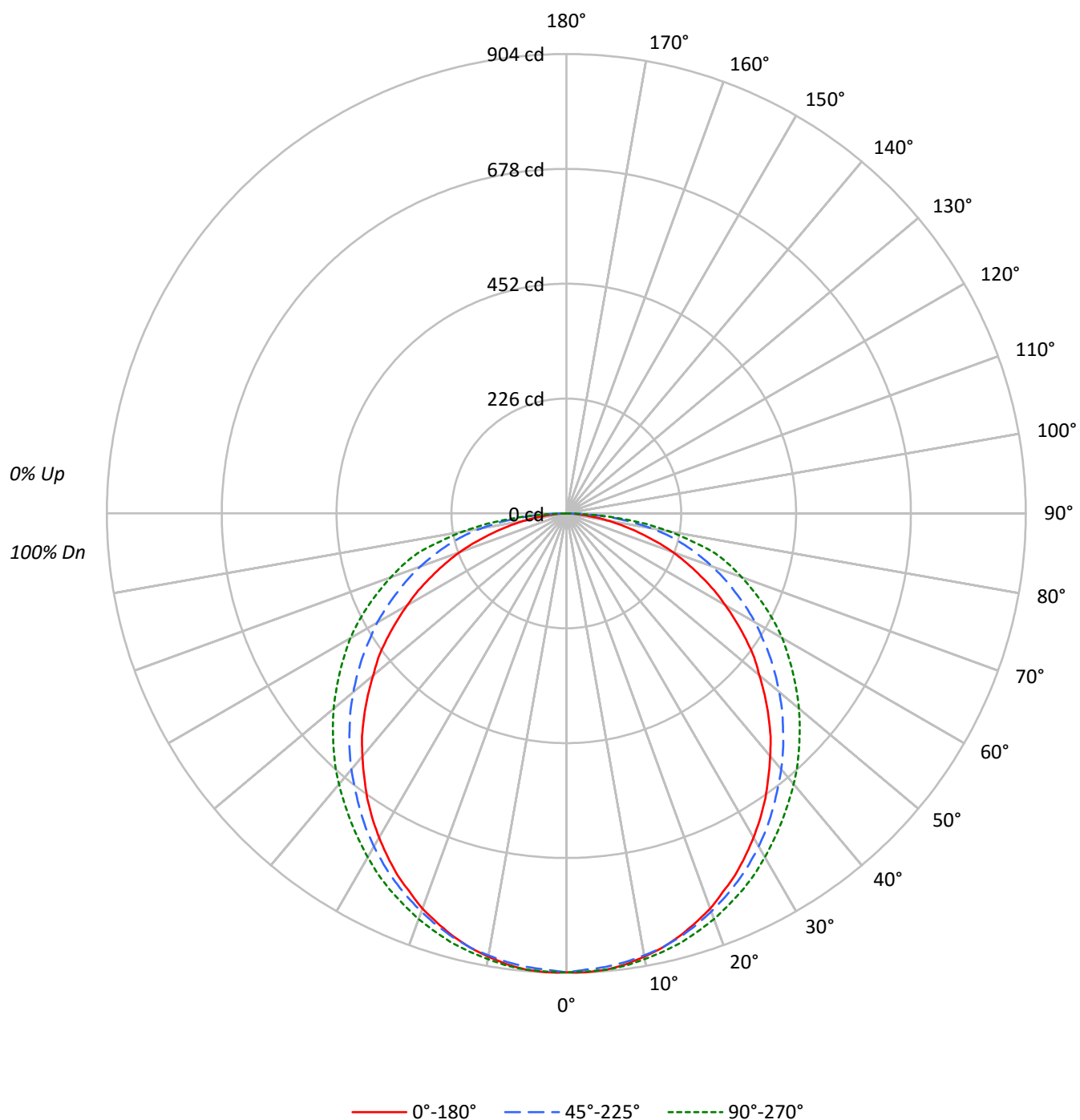
Input Watts (W): 21.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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		0
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		100
1	108	103	98	94	105	100	96	92	96	92	89		92	89	87		82
2	98	89	81	75	95	87	80	74	83	78	73		80	75	71		67
3	89	77	69	62	86	76	68	61	73	66	60		70	64	59		56
4	81	68	59	52	79	67	58	52	64	57	51		62	56	50		47
5	74	61	52	45	72	60	51	44	58	50	44		56	49	43		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	64	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	37	31	57	45	36	30	43	36	30		42	35	30		28
9	55	41	33	27	54	41	33	27	40	32	27		39	32	27		25
10	52	38	30	25	50	38	30	25	37	30	25		36	29	25		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1215	1215	1215
5°	1217	1210	1217
10°	1210	1206	1216
15°	1200	1202	1217
20°	1185	1194	1216
25°	1167	1185	1215
30°	1145	1176	1214
35°	1122	1164	1215
40°	1096	1155	1222
45°	1070	1148	1232
50°	1038	1145	1251
55°	1012	1146	1276
60°	973	1156	1320
65°	928	1168	1368
70°	879	1204	1444
75°	784	1256	1577
80°	669	1330	1612
85°	477	1318	1542



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	85.5	3.1
10°-20°	244.4	8.9
20°-30°	369.1	13.5
30°-40°	444.8	16.2
40°-50°	467.0	17.1
50°-60°	436.9	16.0
60°-70°	360.8	13.2
70°-80°	245.8	9.0
80°-90°	83.8	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°	698.9	25.5
0°-40°	1143.7	41.8
0°-60°	2047.5	74.8
0°-90°	2738.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2738.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	903	903	903	903	903	
5°	901	900	896	901	901	86
15°	861	862	863	872	874	243
25°	786	789	798	814	818	362
35°	683	690	709	732	740	427
45°	562	574	603	636	648	434
55°	432	449	489	529	544	385
65°	292	316	367	413	430	289
75°	151	185	242	287	303	161
85°	31	61	85	96	100	39
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	903.0	903.0	903.0	903.0	903.0
2.5°	903.9	903.0	898.4	903.0	902.1
5°	901.2	900.2	895.7	901.2	901.2
7.5°	894.8	894.8	890.3	896.6	897.5
10°	885.7	885.7	883.0	890.3	890.3
12.5°	874.8	874.8	874.8	882.1	883.0
15°	861.2	862.1	863.0	872.1	873.9
17.5°	844.8	846.6	849.4	860.3	862.1
20°	827.6	829.4	833.9	846.6	849.4
22.5°	805.8	810.3	816.7	831.2	833.9
25°	785.8	789.4	798.5	813.9	818.5
27.5°	761.3	766.7	778.5	794.9	801.2
30°	736.7	742.2	756.7	775.8	781.2
32.5°	710.4	718.6	734.0	754.0	760.3
35°	683.1	690.4	708.6	732.2	739.5
37.5°	653.2	663.1	683.1	708.6	717.7
40°	624.1	635.0	657.7	684.9	695.8
42.5°	595.0	605.9	631.4	662.2	673.1
45°	562.3	574.1	603.2	635.9	647.7
47.5°	529.6	544.1	575.9	610.5	623.2
50°	496.0	512.3	546.9	583.2	597.7
52.5°	466.0	481.5	517.8	556.9	570.5
55°	431.5	448.8	488.7	528.7	544.1
57.5°	396.1	415.1	457.8	501.4	516.9
60°	361.6	382.4	429.7	473.3	490.5
62.5°	327.9	348.8	397.9	443.3	460.6
65°	291.6	316.1	367.0	413.3	429.7
67.5°	257.1	283.4	337.0	382.4	398.8
70°	223.5	248.9	306.1	350.6	367.0
72.5°	187.1	216.2	273.4	319.8	337.0
75°	150.8	185.3	241.6	287.1	303.4
77.5°	117.2	152.6	208.9	246.2	254.4
80°	86.3	122.6	171.7	198.0	208.0
82.5°	55.4	91.8	130.8	149.9	158.1
85°	30.9	60.9	85.4	96.3	99.9
87.5°	12.7	26.3	34.5	39.1	39.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)