

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: P311192

Luminaire Tested: **24FCZ2-30HE-UNV-L82765-S-CP187-W2A-U-2700K**

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: P311192
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: 24FCZ2-30HE-UNV-L82765-S-CP187-W2A-U-2700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.187" POLYCARB SHEET
Light Source: (336) 2700K 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: 2532.0 lumens
Efficiency: N/A
Efficacy: 120.0 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

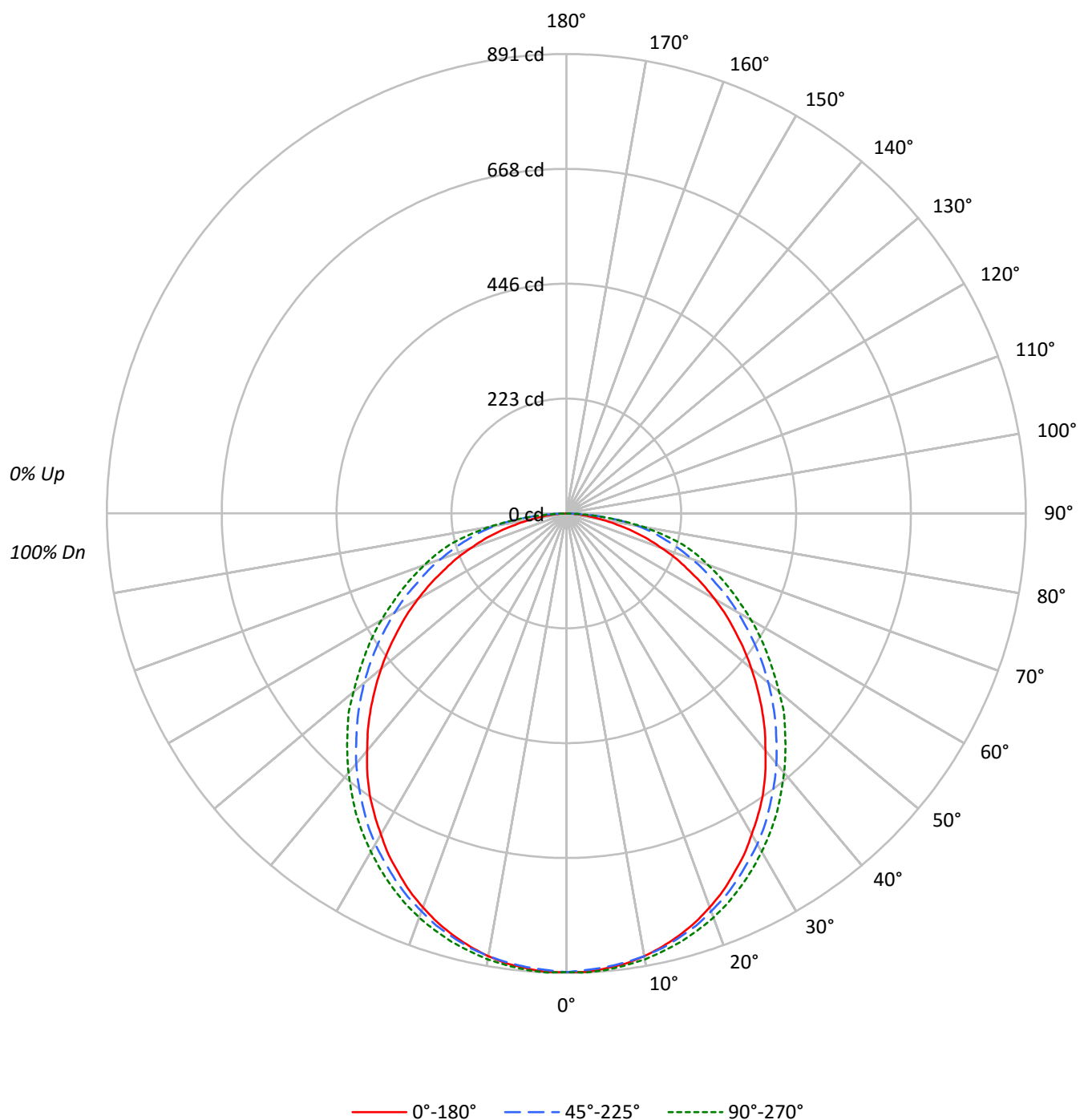
Input Watts (W): 21.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	106	101	97	93	97	93	90		93	90	88		83
2	98	90	83	77	96	88	81	76	84	79	74		81	76	72		69
3	89	79	70	64	87	77	69	63	74	67	62		71	66	61		58
4	82	70	61	54	80	68	60	54	66	59	53		63	57	52		49
5	75	62	53	46	73	61	53	46	59	51	46		57	50	45		42
6	70	56	47	40	68	55	47	40	53	46	40		52	45	40		37
7	64	51	42	36	63	50	42	36	48	41	35		47	40	35		33
8	60	46	38	32	58	46	37	32	44	37	32		43	36	31		29
9	56	43	34	29	55	42	34	29	41	34	28		40	33	28		26
10	53	39	31	26	51	39	31	26	38	31	26		37	30	26		24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1197	1197	1197
5°	1196	1193	1200
10°	1191	1191	1200
15°	1180	1185	1198
20°	1164	1176	1194
25°	1143	1164	1187
30°	1117	1151	1177
35°	1092	1132	1168
40°	1055	1113	1154
45°	1021	1091	1142
50°	982	1071	1128
55°	938	1051	1117
60°	894	1034	1115
65°	837	1017	1122
70°	775	1022	1151
75°	694	1041	1216
80°	561	1103	1190
85°	421	968	943



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	84.2	3.3
10°-20°	240.6	9.5
20°-30°	361.7	14.3
30°-40°	430.8	17.0
40°-50°	441.0	17.4
50°-60°	397.0	15.7
60°-70°	311.8	12.3
70°-80°	202.3	8.0
80°-90°	62.6	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°	686.5	27.1
0°-40°	1117.4	44.1
0°-60°	1955.3	77.2
0°-90°	2532.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2532.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	890	890	890	890	890	
5°	886	887	883	888	889	84
15°	847	849	851	858	860	239
25°	770	776	784	797	799	355
35°	665	673	689	706	711	415
45°	536	549	573	595	600	414
55°	400	417	448	471	476	358
65°	263	283	319	346	352	262
75°	134	159	200	228	234	141
85°	27	51	63	61	61	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	889.5	889.5	889.5	889.5	889.5
2.5°	890.3	890.3	886.3	890.3	891.1
5°	885.5	887.1	883.1	887.9	888.7
7.5°	880.7	880.7	878.2	883.1	883.9
10°	871.8	872.6	871.8	877.4	878.2
12.5°	860.6	862.2	863.0	868.6	869.4
15°	846.9	849.3	850.9	858.1	859.8
17.5°	831.6	834.0	838.0	846.1	847.7
20°	813.1	816.3	821.1	831.6	834.0
22.5°	793.0	796.2	804.3	813.9	817.9
25°	769.7	776.1	784.2	797.0	799.4
27.5°	746.4	752.0	762.4	776.1	779.3
30°	719.0	727.9	740.7	754.4	757.6
32.5°	692.5	701.3	716.6	731.1	735.1
35°	665.1	673.2	689.2	706.1	711.0
37.5°	633.8	644.2	661.9	678.8	683.6
40°	600.8	613.6	633.8	651.4	657.1
42.5°	569.4	583.1	603.2	622.5	628.9
45°	536.4	549.3	573.4	595.2	600.0
47.5°	502.7	517.1	542.9	564.6	572.6
50°	468.9	484.2	511.5	534.0	538.9
52.5°	435.1	451.2	480.1	504.3	506.7
55°	399.7	417.4	448.0	471.3	476.1
57.5°	367.5	382.8	415.8	439.9	445.6
60°	332.2	349.0	384.4	407.0	414.2
62.5°	298.4	316.1	353.1	375.6	382.0
65°	263.0	283.1	319.3	345.8	352.3
67.5°	232.4	251.7	290.3	316.1	322.5
70°	197.0	218.8	259.8	286.3	292.7
72.5°	166.5	189.0	230.0	255.8	265.4
75°	133.5	159.2	200.3	227.6	234.0
77.5°	101.3	131.1	172.9	193.8	193.8
80°	72.4	103.7	142.4	152.0	153.6
82.5°	47.5	78.0	105.4	104.6	104.6
85°	27.3	50.7	62.7	61.1	61.1
87.5°	10.5	20.9	22.5	22.5	21.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)