

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: P314180

Luminaire Tested: **24FCZ2-30HE-UNV-L83050-S-CP187-W2A-U-3000K**

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: P314180
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-L83050-S-CP187-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.187" POLYCARB SHEET
Light Source: (336) 3000K 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: 2608.0 lumens
Efficiency: N/A
Efficacy: 123.6 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

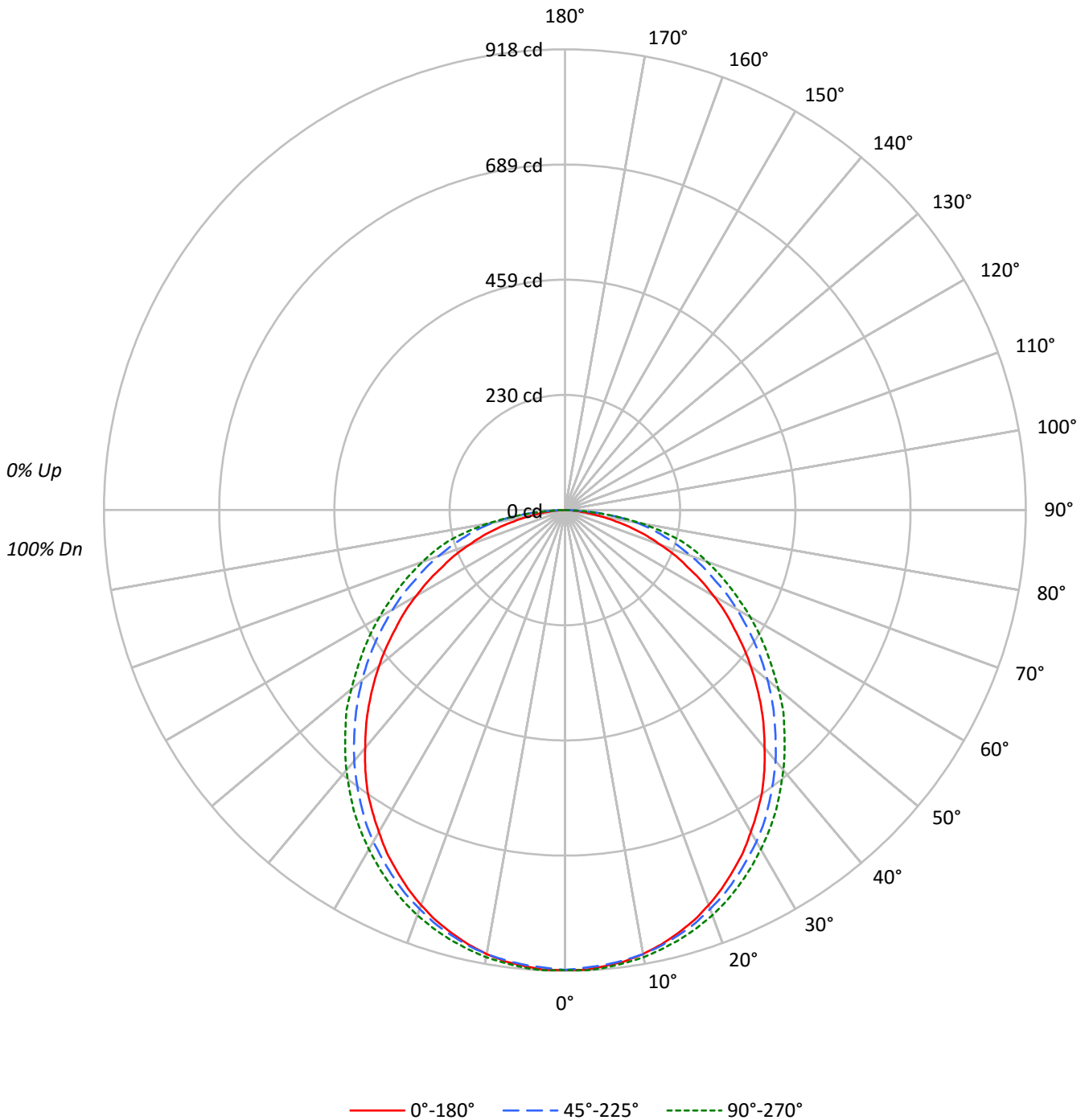
Input Watts (W): 21.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P314180

CATALOG NUMBER: 24FCZ2-30HE-UNV-L83050-S-CP187-W2A-U-3000K

Luminous Intensity Polar Plot





TEST NUMBER: P314180

CATALOG NUMBER: 24FC22-30HE-UNV-L83050-S-CP187-W2A-U-3000K

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°	1233	1233	1233
5°	1232	1229	1236
10°	1227	1227	1236
15°	1215	1221	1234
20°	1199	1211	1230
25°	1177	1199	1222
30°	1151	1185	1212
35°	1125	1166	1203
40°	1087	1147	1189
45°	1051	1124	1176
50°	1011	1103	1162
55°	966	1082	1150
60°	921	1066	1148
65°	862	1047	1155
70°	799	1053	1186
75°	715	1072	1253
80°	578	1136	1226
85°	435	997	973



TEST NUMBER: P314180

CATALOG NUMBER: 24FCZ2-30HE-UNV-L83050-S-CP187-W2A-U-3000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.7	3.3
10°-20°	247.8	9.5
20°-30°	372.6	14.3
30°-40°	443.8	17.0
40°-50°	454.2	17.4
50°-60°	408.9	15.7
60°-70°	321.1	12.3
70°-80°	208.4	8.0
80°-90°	64.5	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°	707.1	27.1
0°-40°	1150.9	44.1
0°-60°	2014.0	77.2
0°-90°	2608.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2608.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	916	916	916	916	916	
5°	912	914	910	915	915	87
15°	872	875	876	884	886	246
25°	793	799	808	821	823	365
35°	685	693	710	727	732	427
45°	552	566	591	613	618	426
55°	412	430	461	485	490	369
65°	271	292	329	356	363	270
75°	138	164	206	234	241	146
85°	28	52	65	63	63	34
90°	0	0	0	0	0	



TEST NUMBER: P314180

CATALOG NUMBER: 24FCZ2-30HE-UNV-L83050-S-CP187-W2A-U-3000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	916.2	916.2	916.2	916.2	916.2
2.5°	917.0	917.0	912.9	917.0	917.9
5°	912.1	913.7	909.6	914.6	915.4
7.5°	907.1	907.1	904.6	909.6	910.4
10°	898.0	898.8	898.0	903.8	904.6
12.5°	886.4	888.0	888.9	894.7	895.5
15°	872.3	874.8	876.4	883.9	885.6
17.5°	856.6	859.0	863.2	871.5	873.1
20°	837.5	840.8	845.8	856.6	859.0
22.5°	816.8	820.1	828.4	838.3	842.5
25°	792.8	799.4	807.7	820.9	823.4
27.5°	768.8	774.6	785.3	799.4	802.7
30°	740.6	749.7	763.0	777.0	780.4
32.5°	713.3	722.4	738.1	753.0	757.2
35°	685.1	693.4	709.9	727.3	732.3
37.5°	652.8	663.5	681.8	699.2	704.1
40°	618.8	632.1	652.8	671.0	676.8
42.5°	586.5	600.6	621.3	641.2	647.8
45°	552.5	565.8	590.6	613.0	618.0
47.5°	517.7	532.7	559.2	581.5	589.8
50°	483.0	498.7	526.9	550.1	555.0
52.5°	448.2	464.7	494.6	519.4	521.9
55°	411.7	429.9	461.4	485.4	490.4
57.5°	378.6	394.3	428.3	453.1	458.9
60°	342.1	359.5	396.0	419.2	426.6
62.5°	307.3	325.6	363.7	386.9	393.5
65°	270.9	291.6	328.9	356.2	362.8
67.5°	239.4	259.3	299.1	325.6	332.2
70°	203.0	225.3	267.6	294.9	301.5
72.5°	171.5	194.7	236.9	263.4	273.4
75°	137.5	164.0	206.3	234.4	241.1
77.5°	104.4	135.0	178.1	199.6	199.6
80°	74.6	106.9	146.6	156.6	158.2
82.5°	48.9	80.4	108.5	107.7	107.7
85°	28.2	52.2	64.6	63.0	63.0
87.5°	10.8	21.5	23.2	23.2	22.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)