

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: P311202

Luminaire Tested: **24FCZ2-30HE-UNV-L82765-S-CP250-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: P311202
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-CP250-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.250" 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: 2584.0 lumens
Efficiency: N/A
Efficacy: 123.0 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

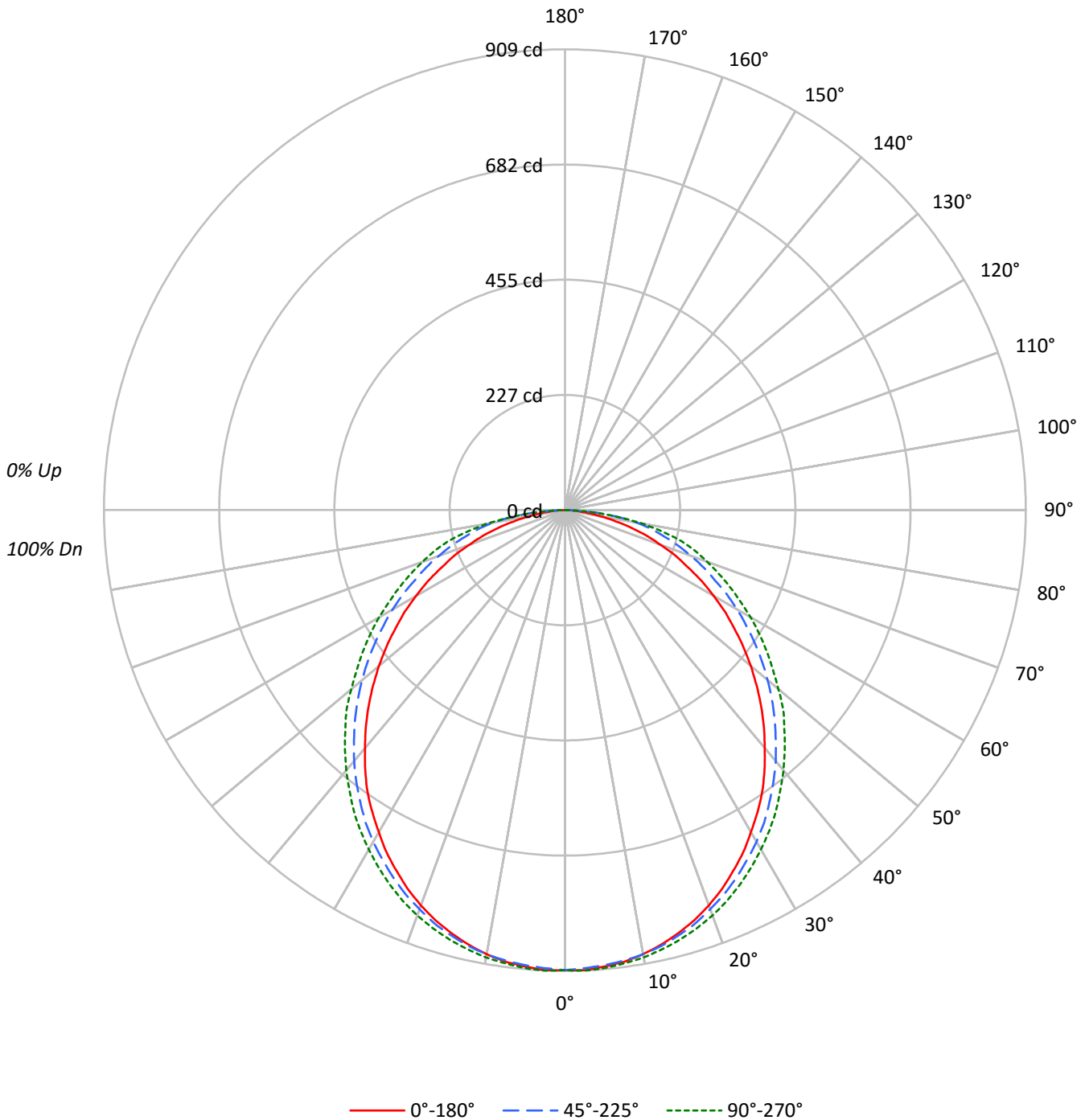
Input Watts (W): 21
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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CATALOG NUMBER: 24FC22-30HE-UNV-L82765-S-CP250-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°	1221	1221	1221
5°	1221	1217	1225
10°	1216	1216	1225
15°	1204	1210	1222
20°	1188	1200	1219
25°	1166	1188	1211
30°	1140	1174	1201
35°	1115	1155	1192
40°	1077	1136	1178
45°	1042	1114	1165
50°	1002	1093	1151
55°	957	1072	1140
60°	912	1056	1137
65°	855	1037	1145
70°	791	1043	1175
75°	708	1063	1241
80°	573	1126	1215
85°	431	988	963



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	85.9	3.3
10°-20°	245.6	9.5
20°-30°	369.1	14.3
30°-40°	439.7	17.0
40°-50°	450.0	17.4
50°-60°	405.1	15.7
60°-70°	318.2	12.3
70°-80°	206.5	8.0
80°-90°	63.9	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°	700.6	27.1
0°-40°	1140.3	44.1
0°-60°	1995.5	77.2
0°-90°	2584.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2584.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	908	908	908	908	908	
5°	904	905	901	906	907	86
15°	864	867	868	876	877	244
25°	786	792	800	813	816	362
35°	679	687	703	721	726	423
45°	548	561	585	607	612	422
55°	408	426	457	481	486	366
65°	268	289	326	353	360	267
75°	136	162	204	232	239	144
85°	28	52	64	62	62	34
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	907.8	907.8	907.8	907.8	907.8
2.5°	908.6	908.6	904.5	908.6	909.4
5°	903.7	905.3	901.2	906.1	907.0
7.5°	898.7	898.7	896.3	901.2	902.0
10°	889.7	890.5	889.7	895.5	896.3
12.5°	878.2	879.9	880.7	886.4	887.3
15°	864.3	866.7	868.4	875.8	877.4
17.5°	848.7	851.1	855.2	863.5	865.1
20°	829.8	833.1	838.0	848.7	851.1
22.5°	809.3	812.6	820.8	830.6	834.7
25°	785.5	792.0	800.3	813.4	815.8
27.5°	761.7	767.4	778.1	792.0	795.3
30°	733.8	742.8	755.9	769.9	773.2
32.5°	706.7	715.7	731.3	746.1	750.2
35°	678.8	687.0	703.4	720.6	725.6
37.5°	646.8	657.4	675.5	692.7	697.7
40°	613.1	626.3	646.8	664.8	670.6
42.5°	581.1	595.1	615.6	635.3	641.8
45°	547.5	560.6	585.2	607.4	612.3
47.5°	513.0	527.8	554.0	576.2	584.4
50°	478.5	494.1	522.0	545.0	549.9
52.5°	444.0	460.5	490.0	514.6	517.1
55°	407.9	426.0	457.2	481.0	485.9
57.5°	375.1	390.7	424.3	449.0	454.7
60°	339.0	356.2	392.3	415.3	422.7
62.5°	304.5	322.6	360.3	383.3	389.9
65°	268.4	288.9	325.8	352.9	359.5
67.5°	237.2	256.9	296.3	322.6	329.1
70°	201.1	223.3	265.1	292.2	298.8
72.5°	169.9	192.9	234.7	261.0	270.9
75°	136.2	162.5	204.4	232.3	238.8
77.5°	103.4	133.8	176.5	197.8	197.8
80°	73.9	105.9	145.3	155.1	156.8
82.5°	48.4	79.6	107.5	106.7	106.7
85°	27.9	51.7	64.0	62.4	62.4
87.5°	10.7	21.3	23.0	23.0	22.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)