

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: P309384

Luminaire Tested: **24FCZ2-40-UNV-L82765-HRP-CP125-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: P309384
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-40-UNV-L82765-HRP-CP125-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" POLYCARB SHEET
Light Source: (168) 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: 2590.0 lumens
Efficiency: N/A
Efficacy: 79.7 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

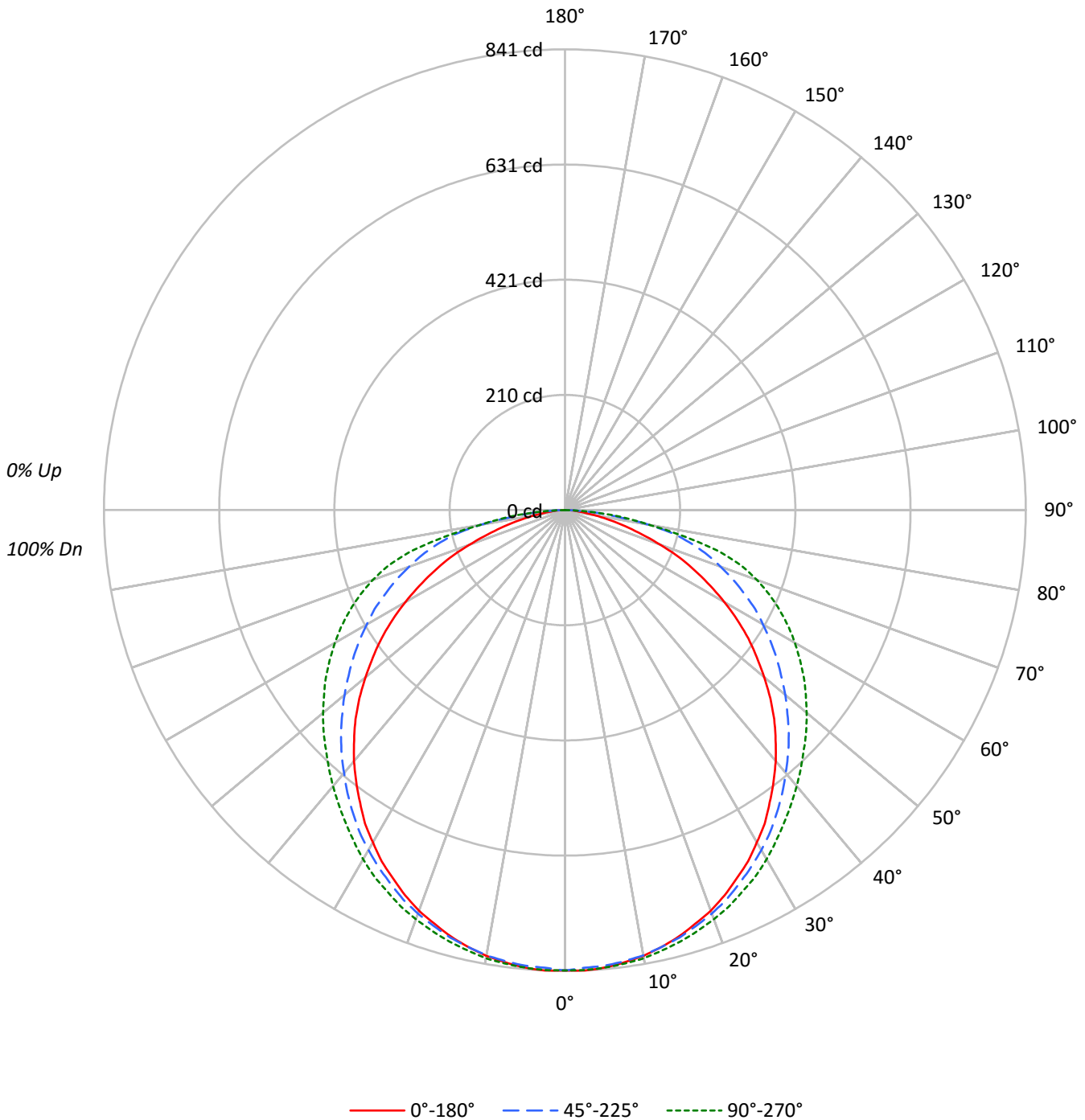
Input Watts (W): 32.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	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	24	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1131	1131	1131
5°	1132	1128	1132
10°	1129	1127	1135
15°	1122	1125	1136
20°	1115	1122	1138
25°	1101	1117	1140
30°	1088	1113	1144
35°	1070	1108	1145
40°	1051	1101	1156
45°	1028	1100	1174
50°	994	1099	1205
55°	959	1107	1249
60°	904	1123	1304
65°	835	1150	1377
70°	729	1190	1467
75°	592	1251	1516
80°	437	1227	1227
85°	335	905	1020



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	79.6	3.1
10°-20°	228.6	8.8
20°-30°	348.0	13.4
30°-40°	422.6	16.3
40°-50°	446.4	17.2
50°-60°	421.3	16.3
60°-70°	350.3	13.5
70°-80°	230.4	8.9
80°-90°	62.8	2.4
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°	656.2	25.3
0°-40°	1078.8	41.7
0°-60°	1946.5	75.2
0°-90°	2590.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2590.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	840	840	840	840	840	
5°	838	838	835	838	838	80
15°	806	807	808	815	815	227
25°	742	746	752	766	768	342
35°	652	659	674	692	697	408
45°	540	551	578	606	617	416
55°	409	426	472	516	532	364
65°	262	293	361	414	433	259
75°	114	166	241	285	292	123
85°	22	48	59	65	66	27
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	840.3	840.3	840.3	840.3	840.3
2.5°	841.4	840.3	836.0	840.3	840.3
5°	838.2	838.2	834.9	838.2	838.2
7.5°	832.7	832.7	830.6	834.9	834.9
10°	826.2	826.2	825.1	830.6	830.6
12.5°	816.5	817.6	816.5	823.0	823.0
15°	805.6	806.7	807.8	815.4	815.4
17.5°	791.5	793.7	795.9	804.5	805.6
20°	778.5	779.6	783.9	793.7	794.8
22.5°	761.2	764.4	769.8	779.6	782.9
25°	741.7	746.0	752.5	765.5	767.7
27.5°	723.2	726.5	735.2	749.2	753.6
30°	700.5	705.9	716.7	730.8	736.2
32.5°	678.8	684.2	697.2	712.4	716.7
35°	651.7	659.3	674.4	691.8	697.2
37.5°	625.6	633.2	651.7	671.2	677.7
40°	598.5	607.2	626.7	649.5	658.2
42.5°	569.3	581.2	602.9	627.8	637.6
45°	540.0	550.8	577.9	606.1	617.0
47.5°	508.5	521.5	550.8	584.4	597.4
50°	474.9	491.2	524.8	561.7	575.8
52.5°	441.3	459.7	497.7	538.9	554.1
55°	408.8	426.1	471.7	516.1	532.4
57.5°	373.0	394.7	444.6	492.3	508.5
60°	336.1	360.0	417.5	467.3	484.7
62.5°	299.3	326.4	391.4	441.3	459.7
65°	262.4	292.8	361.1	414.2	432.6
67.5°	226.6	260.2	332.9	386.0	404.4
70°	185.4	227.7	302.5	354.6	373.0
72.5°	147.5	196.3	273.2	322.0	338.3
75°	113.9	165.9	240.7	285.2	291.7
77.5°	83.5	135.5	207.1	222.3	223.4
80°	56.4	108.4	158.3	156.1	158.3
82.5°	36.9	81.3	99.8	111.7	112.8
85°	21.7	47.7	58.6	65.1	66.1
87.5°	10.8	16.3	20.6	21.7	23.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)