

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: P310015

Luminaire Tested: **24FCZ2-40HE-UNV-L82765-RDP-CP125-W2A-U-3500K**

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: P310015
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-40HE-UNV-L82765-RDP-CP125-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" POLYCARB SHEET
Light Source: (336) 3500K 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: 2390.0 lumens
Efficiency: N/A
Efficacy: 78.4 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

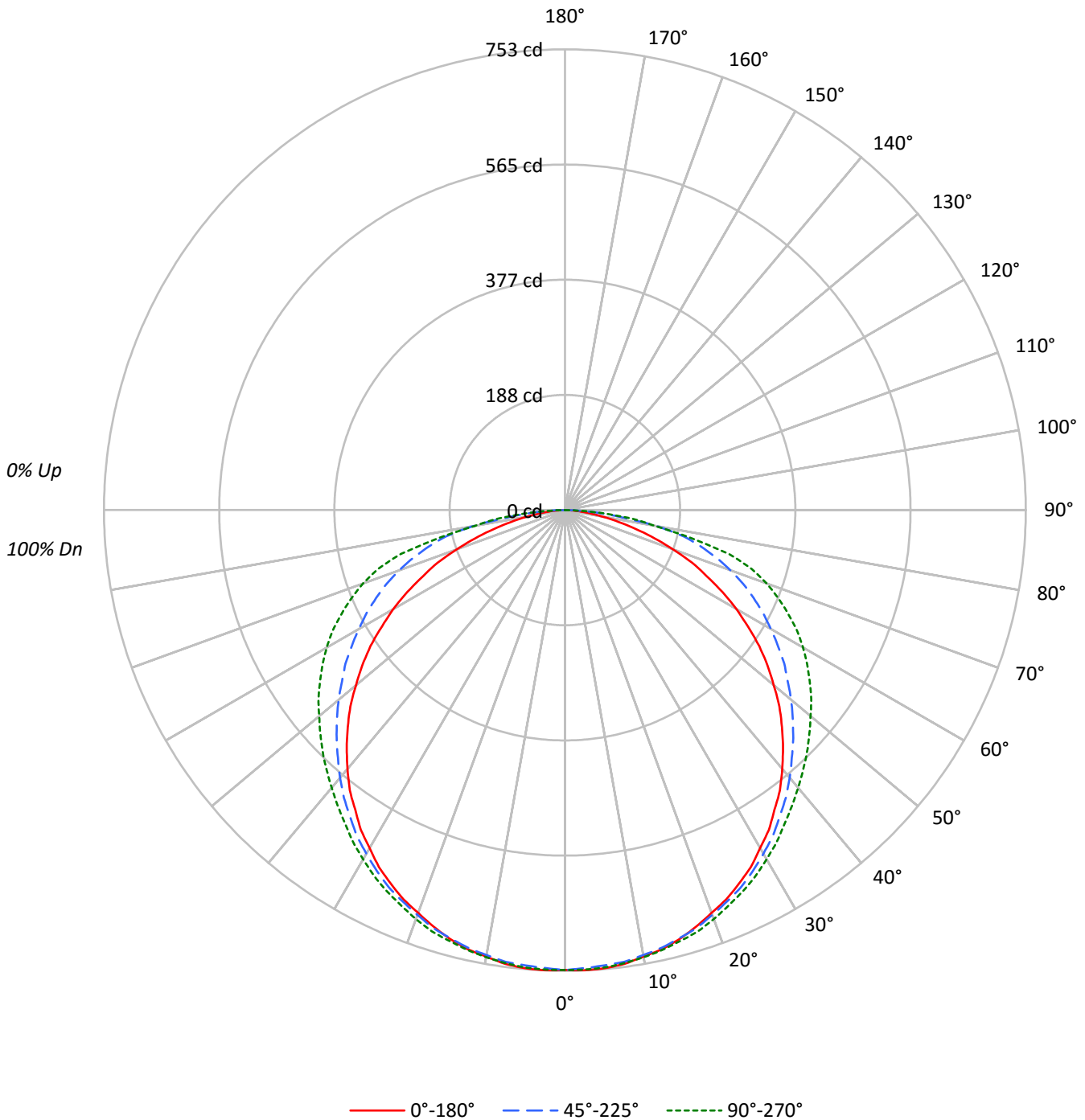
Input Watts (W): 30.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	100	96	92	96	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1011	1011	1011
5°	1015	1009	1014
10°	1012	1009	1014
15°	1011	1009	1016
20°	1003	1008	1018
25°	1000	1010	1021
30°	991	1008	1024
35°	981	1005	1028
40°	970	1004	1041
45°	954	1004	1065
50°	933	1010	1097
55°	909	1026	1146
60°	871	1046	1209
65°	815	1083	1283
70°	742	1133	1380
75°	629	1196	1442
80°	496	1203	1167
85°	366	915	1025



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	71.3	3.0
10°-20°	205.2	8.6
20°-30°	313.8	13.1
30°-40°	383.6	16.0
40°-50°	408.8	17.1
50°-60°	390.9	16.4
60°-70°	331.1	13.9
70°-80°	222.6	9.3
80°-90°	62.8	2.6
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°	590.2	24.7
0°-40°	973.8	40.7
0°-60°	1773.5	74.2
0°-90°	2390.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2390.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	752	752	752	752	752	
5°	752	750	747	750	750	71
15°	726	726	724	730	729	205
25°	673	676	680	686	688	310
35°	598	602	612	624	626	374
45°	502	510	528	550	560	387
55°	388	402	437	472	488	345
65°	256	282	340	385	403	254
75°	121	165	230	269	277	129
85°	24	49	59	64	66	29
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	751.6	751.6	751.6	751.6	751.6
2.5°	752.8	752.8	749.2	751.6	751.6
5°	751.6	750.4	746.8	750.4	750.4
7.5°	748.0	746.8	744.5	748.0	746.8
10°	740.9	740.9	738.5	742.1	742.1
12.5°	735.0	733.8	732.6	737.4	736.2
15°	725.5	725.5	724.3	730.2	729.1
17.5°	713.7	714.8	716.0	720.8	722.0
20°	700.6	703.0	704.2	711.3	711.3
22.5°	688.8	689.9	692.3	699.4	699.4
25°	673.3	675.7	680.5	686.4	687.6
27.5°	657.9	659.1	665.0	673.3	674.5
30°	637.8	641.3	648.5	657.9	659.1
32.5°	620.0	623.6	631.9	641.3	643.7
35°	597.5	602.2	611.7	623.6	625.9
37.5°	577.3	580.9	592.7	605.8	609.3
40°	552.4	559.5	571.4	586.8	592.7
42.5°	527.5	534.6	548.9	569.0	576.1
45°	501.5	509.8	527.5	550.1	559.5
47.5°	475.4	484.9	505.0	531.1	541.8
50°	445.7	457.6	482.5	512.1	524.0
52.5°	417.3	431.5	458.8	492.0	507.4
55°	387.6	401.9	437.4	471.8	488.4
57.5°	354.5	373.4	412.5	451.7	469.4
60°	323.6	341.4	388.8	431.5	449.3
62.5°	290.4	314.1	365.1	410.2	428.0
65°	256.1	282.1	340.2	385.3	403.1
67.5°	225.2	253.7	315.3	360.4	378.2
70°	188.5	224.1	288.1	333.1	350.9
72.5°	154.1	193.2	259.6	303.5	320.1
75°	120.9	164.8	230.0	269.1	277.4
77.5°	90.1	136.3	199.2	215.8	209.8
80°	64.0	109.1	155.3	147.0	150.6
82.5°	41.5	83.0	96.0	109.1	112.6
85°	23.7	48.6	59.3	64.0	66.4
87.5°	10.7	17.8	23.7	23.7	22.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)