

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: P310036

Luminaire Tested: **24FCZ2-40HE-UNV-L82765-RDP-CP250-W2A-U-5000K**

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: P310036
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-CP250-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB SHEET
Light Source: (336) 5000K 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: 2393.0 lumens
Efficiency: N/A
Efficacy: 76.9 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

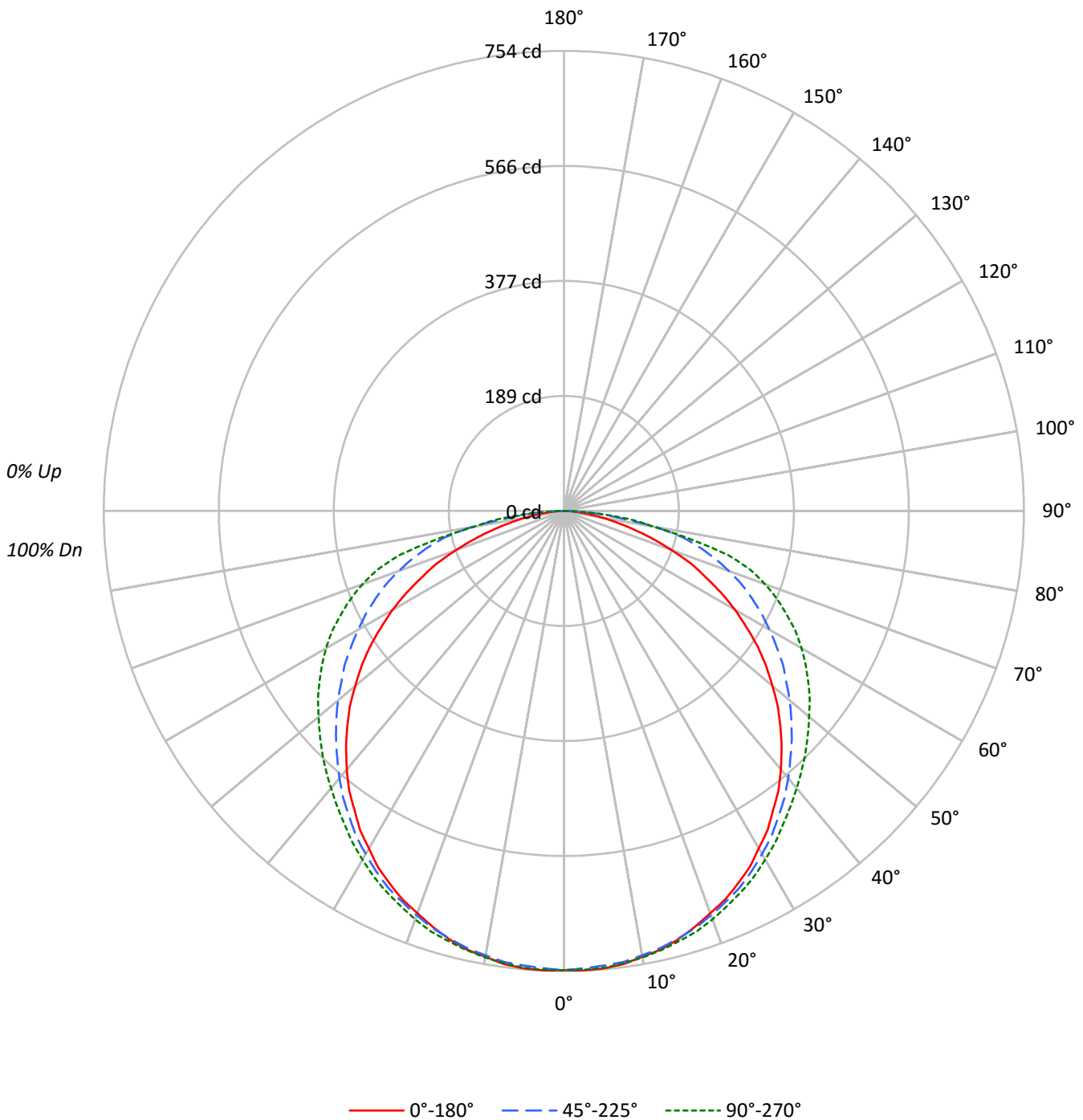
Input Watts (W): 31.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P310036

CATALOG NUMBER: 24FCZ2-40HE-UNV-L82765-RDP-CP250-W2A-U-5000K

Luminous Intensity Polar Plot





TEST NUMBER: P310036

CATALOG NUMBER: 24FCZ2-40HE-UNV-L82765-RDP-CP250-W2A-U-5000K

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°	1012	1012	1012
5°	1016	1010	1015
10°	1013	1010	1015
15°	1012	1010	1017
20°	1004	1010	1020
25°	1001	1011	1022
30°	992	1009	1025
35°	983	1006	1029
40°	971	1005	1042
45°	955	1005	1066
50°	934	1011	1098
55°	910	1027	1147
60°	872	1048	1211
65°	816	1085	1285
70°	742	1135	1382
75°	630	1197	1444
80°	497	1205	1168
85°	366	915	1027



TEST NUMBER: P310036

CATALOG NUMBER: 24FCZ2-40HE-UNV-L82765-RDP-CP250-W2A-U-5000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	71.4	3.0
10°-20°	205.4	8.6
20°-30°	314.2	13.1
30°-40°	384.1	16.0
40°-50°	409.3	17.1
50°-60°	391.4	16.4
60°-70°	331.5	13.9
70°-80°	222.8	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°	591.0	24.7
0°-40°	975.1	40.7
0°-60°	1775.8	74.2
0°-90°	2393.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2393.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	752	752	752	752	752	
5°	752	751	748	751	751	71
15°	726	726	725	731	730	205
25°	674	677	681	687	688	311
35°	598	603	612	624	627	375
45°	502	510	528	551	560	387
55°	388	402	438	472	489	346
65°	256	282	341	386	404	255
75°	121	165	230	269	278	130
85°	24	49	59	64	66	29
90°	0	0	0	0	0	



TEST NUMBER: P310036

CATALOG NUMBER: 24FCZ2-40HE-UNV-L82765-RDP-CP250-W2A-U-5000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	752.5	752.5	752.5	752.5	752.5
2.5°	753.7	753.7	750.2	752.5	752.5
5°	752.5	751.3	747.8	751.3	751.3
7.5°	749.0	747.8	745.4	749.0	747.8
10°	741.8	741.8	739.5	743.0	743.0
12.5°	735.9	734.7	733.5	738.3	737.1
15°	726.4	726.4	725.2	731.2	730.0
17.5°	714.5	715.7	716.9	721.7	722.9
20°	701.5	703.9	705.1	712.2	712.2
22.5°	689.6	690.8	693.2	700.3	700.3
25°	674.2	676.6	681.3	687.2	688.4
27.5°	658.8	659.9	665.9	674.2	675.4
30°	638.6	642.1	649.3	658.8	659.9
32.5°	620.8	624.3	632.6	642.1	644.5
35°	598.2	603.0	612.5	624.3	626.7
37.5°	578.0	581.6	593.5	606.5	610.1
40°	553.1	560.2	572.1	587.5	593.5
42.5°	528.2	535.3	549.6	569.7	576.9
45°	502.1	510.4	528.2	550.7	560.2
47.5°	476.0	485.5	505.6	531.8	542.4
50°	446.3	458.2	483.1	512.8	524.6
52.5°	417.8	432.1	459.4	492.6	508.0
55°	388.1	402.4	438.0	472.4	489.0
57.5°	354.9	373.9	413.1	452.2	470.0
60°	324.0	341.8	389.3	432.1	449.9
62.5°	290.8	314.5	365.6	410.7	428.5
65°	256.4	282.5	340.7	385.8	403.6
67.5°	225.5	254.0	315.7	360.8	378.6
70°	188.7	224.3	288.4	333.5	351.3
72.5°	154.3	193.5	259.9	303.9	320.5
75°	121.1	165.0	230.3	269.4	277.7
77.5°	90.2	136.5	199.4	216.0	210.1
80°	64.1	109.2	155.5	147.2	150.7
82.5°	41.5	83.1	96.1	109.2	112.8
85°	23.7	48.7	59.3	64.1	66.5
87.5°	10.7	17.8	23.7	23.7	22.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)