

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: P310082

Luminaire Tested: **24FCZ2-40-UNV-L82765-RDP-CP250-W2A-U-5500K**

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: P310082
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: 24FCZ2-40-UNV-L82765-RDP-CP250-W2A-U-5500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB SHEET
Light Source: (168) 5500K 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: 2402.0 lumens
Efficiency: N/A
Efficacy: 71.5 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

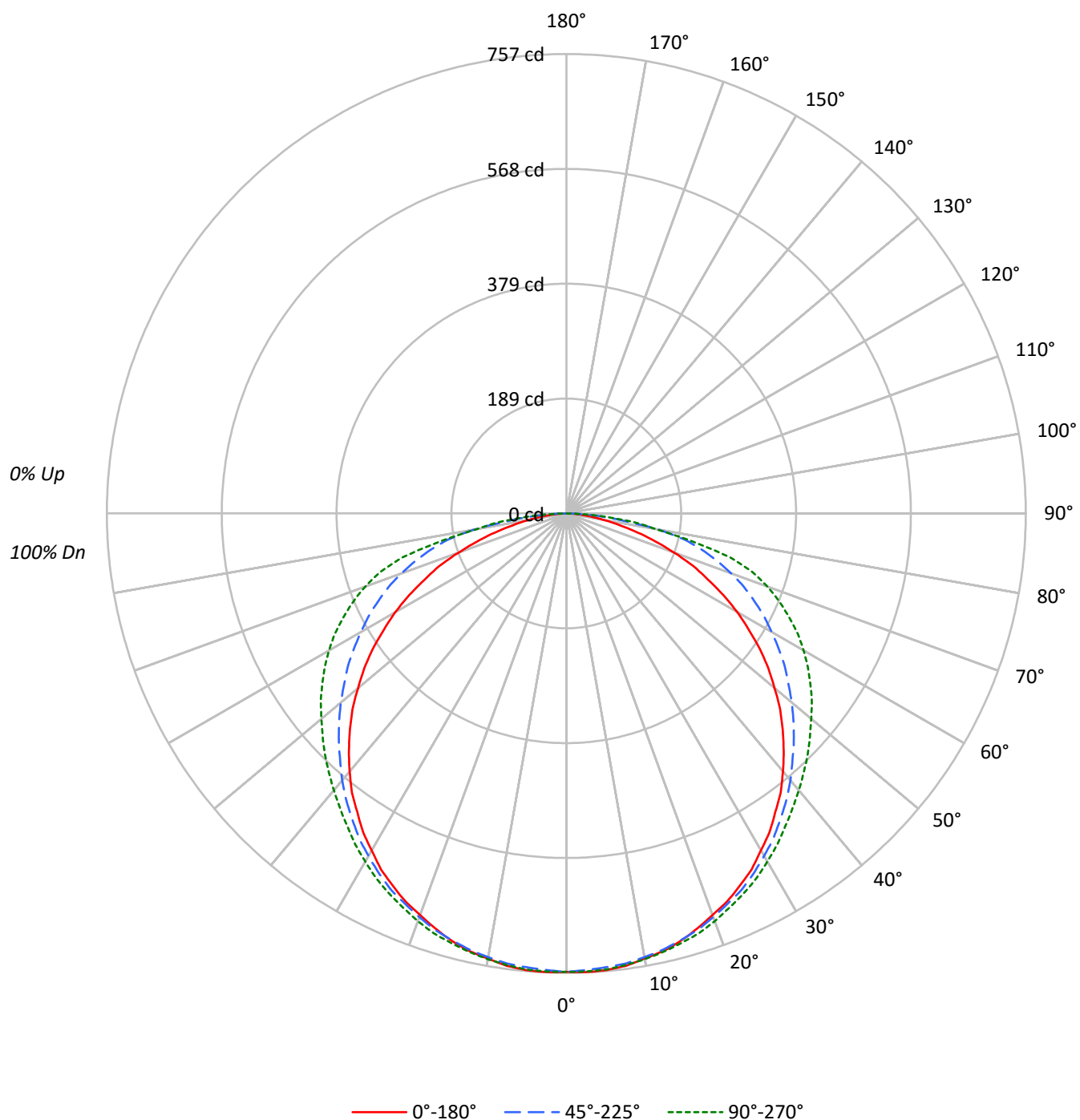
Input Watts (W): 33.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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					0
RW	70	50	30	10	70	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			100
1	108	103	98	94	105	100	96	92		96	93	89			92	89	87			82
2	97	89	81	75	95	87	80	74		83	77	72			80	75	71			67
3	88	77	68	62	86	76	68	61		72	66	60			70	64	59			56
4	81	68	59	52	78	67	58	51		64	57	51			62	55	50			47
5	74	60	51	44	72	59	51	44		57	49	43			55	48	43			40
6	68	54	45	38	66	53	45	38		51	44	38			50	43	37			35
7	63	49	40	34	61	48	40	34		47	39	33			45	38	33			31
8	59	45	36	30	57	44	36	30		43	35	30			41	34	29			27
9	55	41	33	27	53	40	32	27		39	32	27			38	31	26			24
10	51	38	30	24	50	37	29	24		36	29	24			35	29	24			22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1016	1016	1016
5°	1020	1014	1019
10°	1017	1014	1019
15°	1016	1014	1021
20°	1008	1013	1024
25°	1005	1015	1026
30°	996	1013	1029
35°	986	1010	1033
40°	975	1009	1046
45°	959	1009	1070
50°	938	1015	1102
55°	914	1031	1152
60°	875	1052	1215
65°	819	1089	1290
70°	745	1139	1388
75°	632	1201	1449
80°	498	1210	1172
85°	367	920	1030



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	71.7	3.0
10°-20°	206.2	8.6
20°-30°	315.3	13.1
30°-40°	385.5	16.0
40°-50°	410.9	17.1
50°-60°	392.8	16.4
60°-70°	332.8	13.9
70°-80°	223.7	9.3
80°-90°	63.1	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°	593.2	24.7
0°-40°	978.7	40.7
0°-60°	1782.5	74.2
0°-90°	2402.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2402.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	755	755	755	755	755	
5°	755	754	751	754	754	72
15°	729	729	728	734	733	206
25°	677	679	684	690	691	312
35°	600	605	615	627	629	376
45°	504	512	530	553	562	389
55°	390	404	440	474	491	347
65°	257	284	342	387	405	255
75°	122	166	231	270	279	130
85°	24	49	60	64	67	29
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	755.4	755.4	755.4	755.4	755.4
2.5°	756.6	756.6	753.0	755.4	755.4
5°	755.4	754.2	750.6	754.2	754.2
7.5°	751.8	750.6	748.2	751.8	750.6
10°	744.6	744.6	742.3	745.8	745.8
12.5°	738.7	737.5	736.3	741.1	739.9
15°	729.1	729.1	728.0	733.9	732.7
17.5°	717.2	718.4	719.6	724.4	725.6
20°	704.1	706.5	707.7	714.9	714.9
22.5°	692.2	693.4	695.8	702.9	702.9
25°	676.7	679.1	683.9	689.8	691.0
27.5°	661.2	662.4	668.4	676.7	677.9
30°	641.0	644.6	651.7	661.2	662.4
32.5°	623.1	626.7	635.0	644.6	646.9
35°	600.5	605.2	614.8	626.7	629.1
37.5°	580.2	583.8	595.7	608.8	612.4
40°	555.2	562.4	574.3	589.8	595.7
42.5°	530.2	537.3	551.6	571.9	579.0
45°	504.0	512.3	530.2	552.8	562.4
47.5°	477.8	487.3	507.5	533.8	544.5
50°	448.0	459.9	484.9	514.7	526.6
52.5°	419.4	433.7	461.1	494.4	509.9
55°	389.6	403.9	439.6	474.2	490.9
57.5°	356.2	375.3	414.6	453.9	471.8
60°	325.3	343.1	390.8	433.7	451.5
62.5°	291.9	315.7	367.0	412.2	430.1
65°	257.3	283.6	341.9	387.2	405.1
67.5°	226.4	255.0	316.9	362.2	380.1
70°	189.4	225.2	289.5	334.8	352.7
72.5°	154.9	194.2	260.9	305.0	321.7
75°	121.5	165.6	231.1	270.5	278.8
77.5°	90.5	137.0	200.2	216.8	210.9
80°	64.3	109.6	156.1	147.7	151.3
82.5°	41.7	83.4	96.5	109.6	113.2
85°	23.8	48.8	59.6	64.3	66.7
87.5°	10.7	17.9	23.8	23.8	22.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)