

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: P310020

Luminaire Tested: **24FCZ2-40HE-UNV-L82765-RDP-CP125-W2A-U-5700K**

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: P310020  
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-5700K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" POLYCARB SHEET  
Light Source: (336) 5700K 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**

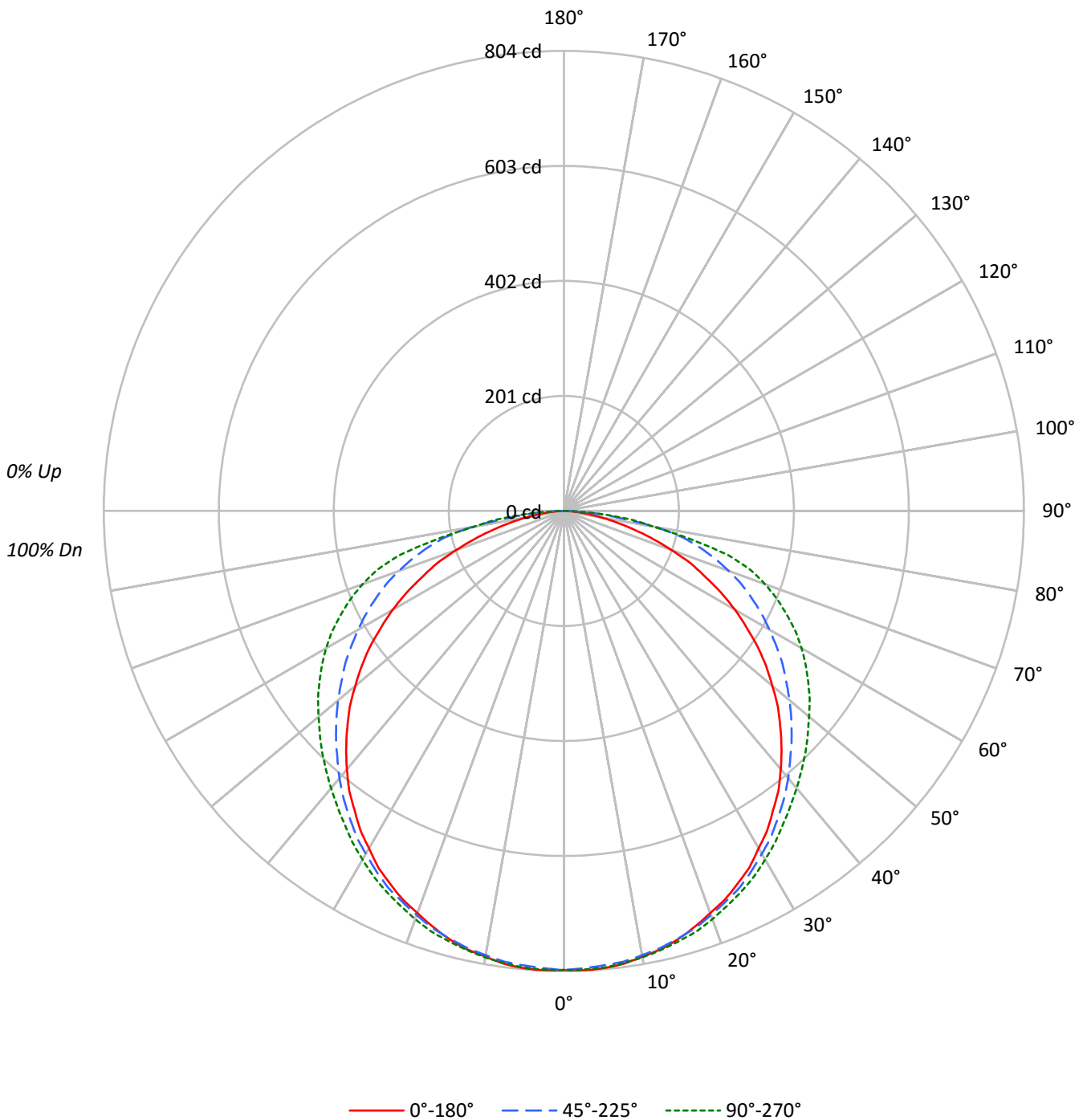
Lumens per Lamp: N/A  
Luminaire Lumens: 2551.0 lumens  
Efficiency: N/A  
Efficacy: 81.5 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 31.3  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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°	1079	1079	1079
5°	1083	1077	1082
10°	1080	1077	1082
15°	1079	1077	1084
20°	1071	1076	1087
25°	1067	1078	1090
30°	1058	1075	1093
35°	1047	1072	1097
40°	1036	1071	1111
45°	1018	1071	1136
50°	996	1078	1171
55°	971	1095	1223
60°	929	1117	1291
65°	870	1156	1370
70°	792	1210	1473
75°	671	1276	1539
80°	529	1285	1245
85°	391	977	1095



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	76.1	3.0
10°-20°	219.0	8.6
20°-30°	334.9	13.1
30°-40°	409.4	16.0
40°-50°	436.4	17.1
50°-60°	417.2	16.4
60°-70°	353.4	13.9
70°-80°	237.5	9.3
80°-90°	67.0	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°	630.0	24.7
0°-40°	1039.4	40.7
0°-60°	1893.0	74.2
0°-90°	2551.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2551.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	802	802	802	802	802	
5°	802	801	797	801	801	76
15°	774	774	773	779	778	218
25°	719	721	726	733	734	331
35°	638	643	653	666	668	399
45°	535	544	563	587	597	413
55°	414	429	467	504	521	369
65°	273	301	363	411	430	271
75°	129	176	246	287	296	138
85°	25	52	63	68	71	31
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	802.2	802.2	802.2	802.2	802.2
2.5°	803.5	803.5	799.7	802.2	802.2
5°	802.2	801.0	797.2	801.0	801.0
7.5°	798.4	797.2	794.6	798.4	797.2
10°	790.8	790.8	788.3	792.1	792.1
12.5°	784.5	783.2	782.0	787.0	785.8
15°	774.4	774.4	773.1	779.4	778.2
17.5°	761.7	763.0	764.3	769.3	770.6
20°	747.8	750.3	751.6	759.2	759.2
22.5°	735.2	736.4	739.0	746.5	746.5
25°	718.7	721.2	726.3	732.6	733.9
27.5°	702.3	703.5	709.8	718.7	720.0
30°	680.7	684.5	692.1	702.3	703.5
32.5°	661.8	665.6	674.4	684.5	687.1
35°	637.7	642.8	652.9	665.6	668.1
37.5°	616.2	620.0	632.7	646.6	650.4
40°	589.6	597.2	609.9	626.3	632.7
42.5°	563.1	570.7	585.8	607.4	614.9
45°	535.2	544.1	563.1	587.1	597.2
47.5°	507.4	517.5	539.0	566.9	578.3
50°	475.8	488.4	515.0	546.6	559.3
52.5°	445.4	460.6	489.7	525.1	541.6
55°	413.8	428.9	466.9	503.6	521.3
57.5°	378.3	398.6	440.3	482.1	501.1
60°	345.4	364.4	415.0	460.6	479.6
62.5°	310.0	335.3	389.7	437.8	456.8
65°	273.3	301.1	363.1	411.2	430.2
67.5°	240.4	270.8	336.6	384.7	403.6
70°	201.2	239.1	307.5	355.6	374.5
72.5°	164.5	206.2	277.1	323.9	341.6
75°	129.1	175.9	245.5	287.2	296.1
77.5°	96.2	145.5	212.6	230.3	224.0
80°	68.3	116.4	165.8	156.9	160.7
82.5°	44.3	88.6	102.5	116.4	120.2
85°	25.3	51.9	63.3	68.3	70.9
87.5°	11.4	19.0	25.3	25.3	24.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)