

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: P313905

Luminaire Tested: **24FCZ2-40HE-UNV-L83050-CP187-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: P313905  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-15)  
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-L83050-CP187-W2A-U-3000K  
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.187" POLYCARB SHEET  
Light Source: (336) 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**

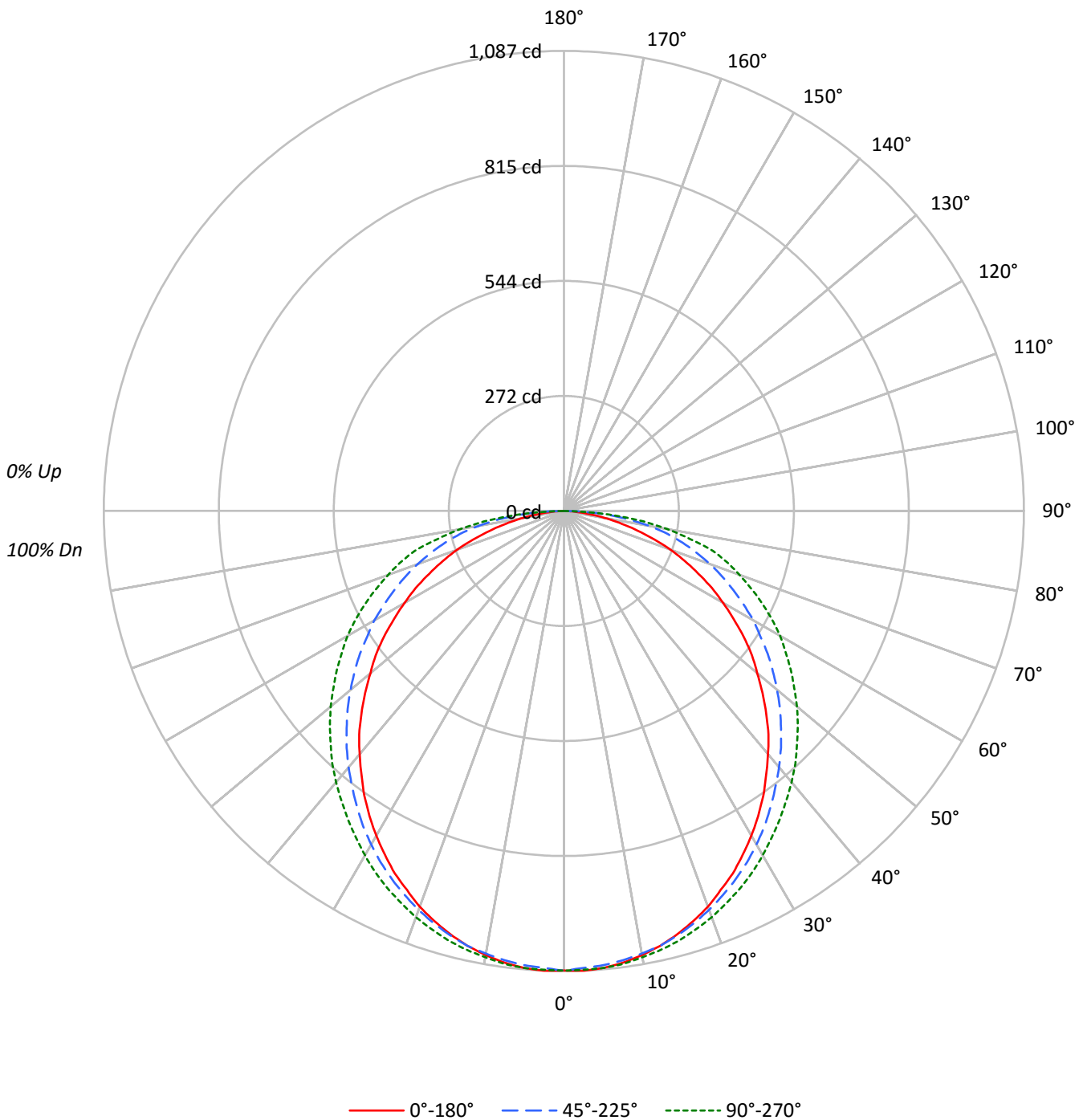
Lumens per Lamp: N/A  
Luminaire Lumens: 3293.0 lumens  
Efficiency: N/A  
Efficacy: 108.7 lumens/watt  
Spacing Criteria (0/90/45): 1.22 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 30.3  
Input Voltage (V): NR  
Input Current (A<sub>in</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	92	89	92	89	87	88	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	37	31	57	45	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	25	35	29	24	23

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	1461	1461	1461
5°	1464	1455	1464
10°	1455	1451	1463
15°	1443	1446	1464
20°	1425	1436	1463
25°	1403	1426	1461
30°	1377	1414	1460
35°	1350	1400	1461
40°	1318	1389	1470
45°	1287	1380	1482
50°	1249	1377	1505
55°	1217	1379	1535
60°	1170	1391	1588
65°	1117	1405	1645
70°	1057	1448	1736
75°	943	1511	1897
80°	804	1600	1939
85°	573	1585	1856



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	102.8	3.1
10°-20°	293.9	8.9
20°-30°	443.9	13.5
30°-40°	535.0	16.2
40°-50°	561.6	17.1
50°-60°	525.4	16.0
60°-70°	433.9	13.2
70°-80°	295.7	9.0
80°-90°	100.8	3.1
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°	840.5	25.5
0°-40°	1375.5	41.8
0°-60°	2462.6	74.8
0°-90°	3293.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3293.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1086	1086	1086	1086	1086	
5°	1084	1083	1077	1084	1084	103
15°	1036	1037	1038	1049	1051	292
25°	945	949	960	979	984	435
35°	822	830	852	881	889	513
45°	676	690	726	765	779	522
55°	519	540	588	636	654	463
65°	351	380	441	497	517	348
75°	181	223	291	345	365	193
85°	37	73	103	116	120	46
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1086.0	1086.0	1086.0	1086.0	1086.0
2.5°	1087.1	1086.0	1080.5	1086.0	1084.9
5°	1083.8	1082.7	1077.3	1083.8	1083.8
7.5°	1076.2	1076.2	1070.7	1078.4	1079.4
10°	1065.2	1065.2	1062.0	1070.7	1070.7
12.5°	1052.1	1052.1	1052.1	1060.9	1062.0
15°	1035.7	1036.8	1037.9	1048.9	1051.0
17.5°	1016.1	1018.3	1021.5	1034.7	1036.8
20°	995.3	997.5	1003.0	1018.3	1021.5
22.5°	969.1	974.6	982.2	999.7	1003.0
25°	945.1	949.4	960.4	978.9	984.4
27.5°	915.6	922.1	936.3	956.0	963.6
30°	886.1	892.6	910.1	933.0	939.6
32.5°	854.4	864.2	882.8	906.8	914.5
35°	821.6	830.3	852.2	880.6	889.3
37.5°	785.5	797.6	821.6	852.2	863.1
40°	750.6	763.7	791.0	823.8	836.9
42.5°	715.6	728.7	759.3	796.5	809.6
45°	676.3	690.5	725.5	764.8	779.0
47.5°	637.0	654.4	692.7	734.2	749.5
50°	596.5	616.2	657.7	701.4	718.9
52.5°	560.5	579.1	622.8	669.7	686.1
55°	519.0	539.7	587.8	635.9	654.4
57.5°	476.4	499.3	550.6	603.1	621.7
60°	434.8	460.0	516.8	569.2	590.0
62.5°	394.4	419.5	478.5	533.2	553.9
65°	350.7	380.2	441.4	497.1	516.8
67.5°	309.2	340.9	405.3	460.0	479.6
70°	268.8	299.4	368.2	421.7	441.4
72.5°	225.1	260.0	328.9	384.6	405.3
75°	181.4	222.9	290.6	345.2	364.9
77.5°	140.9	183.5	251.3	296.1	305.9
80°	103.8	147.5	206.5	238.2	250.2
82.5°	66.6	110.3	157.3	180.3	190.1
85°	37.1	73.2	102.7	115.8	120.2
87.5°	15.3	31.7	41.5	47.0	47.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)