

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: P313895

Luminaire Tested: **24FCZ2-40HE-UNV-L83050-CA125-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: P313895
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-CA125-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" ACRYLIC 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: 3506.0 lumens
Efficiency: N/A
Efficacy: 115.7 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

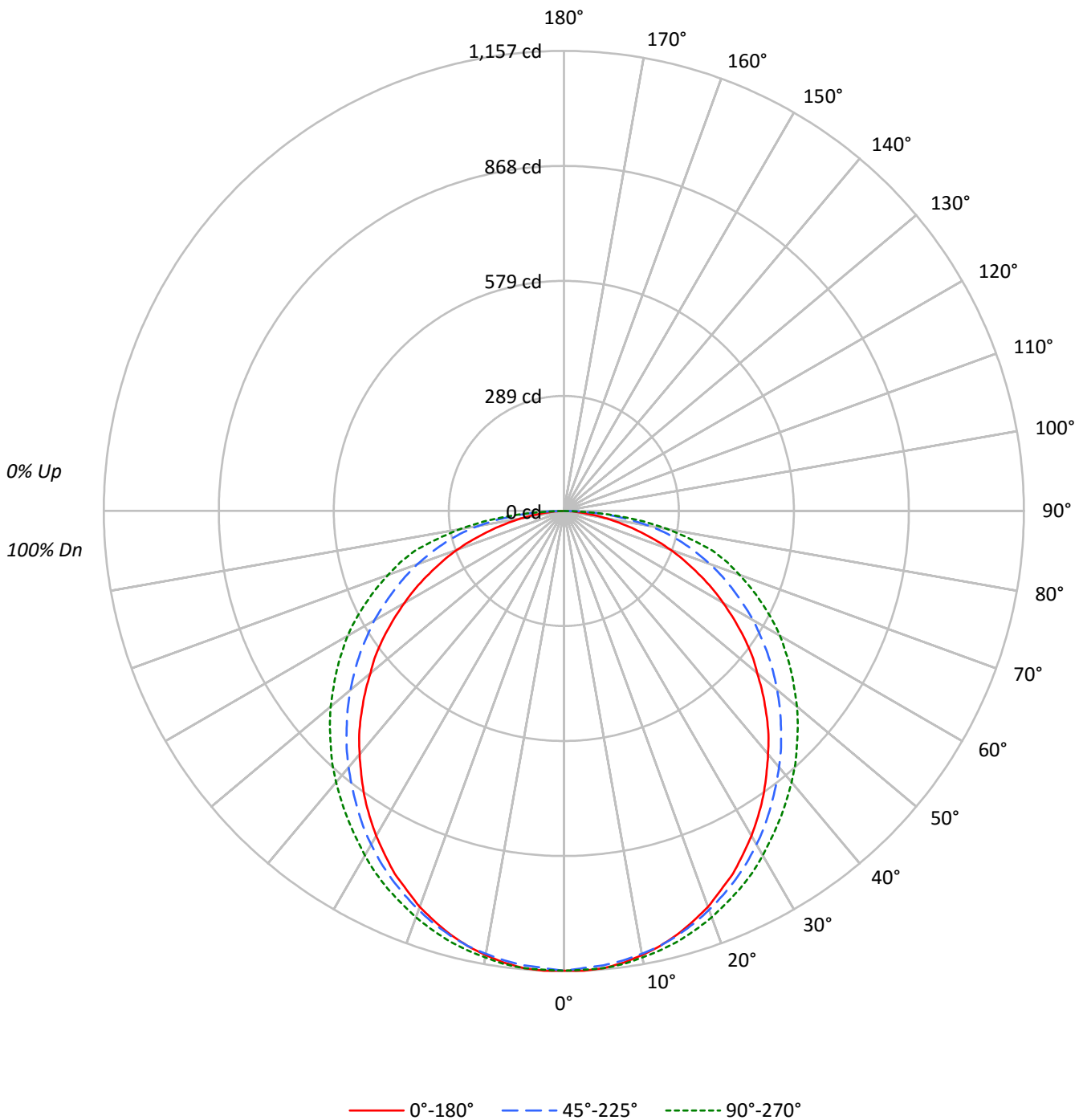
Input Watts (W): 30.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1556	1556	1556
5°	1558	1549	1558
10°	1549	1545	1558
15°	1536	1539	1559
20°	1517	1529	1557
25°	1494	1518	1556
30°	1466	1505	1554
35°	1437	1490	1555
40°	1404	1479	1565
45°	1370	1470	1578
50°	1329	1466	1602
55°	1296	1468	1635
60°	1246	1481	1690
65°	1189	1496	1752
70°	1126	1542	1849
75°	1004	1608	2020
80°	856	1704	2064
85°	610	1687	1976



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	109.4	3.1
10°-20°	312.9	8.9
20°-30°	472.6	13.5
30°-40°	569.6	16.2
40°-50°	598.0	17.1
50°-60°	559.4	16.0
60°-70°	462.0	13.2
70°-80°	314.8	9.0
80°-90°	107.4	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°	894.9	25.5
0°-40°	1464.5	41.8
0°-60°	2621.9	74.8
0°-90°	3506.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3506.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1156	1156	1156	1156	1156	
5°	1154	1153	1147	1154	1154	109
15°	1103	1104	1105	1117	1119	311
25°	1006	1011	1022	1042	1048	463
35°	875	884	907	938	947	547
45°	720	735	772	814	829	555
55°	552	575	626	677	697	493
65°	373	405	470	529	550	370
75°	193	237	309	368	388	206
85°	40	78	109	123	128	50
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1156.2	1156.2	1156.2	1156.2	1156.2
2.5°	1157.4	1156.2	1150.4	1156.2	1155.1
5°	1153.9	1152.8	1146.9	1153.9	1153.9
7.5°	1145.8	1145.8	1140.0	1148.1	1149.3
10°	1134.1	1134.1	1130.7	1140.0	1140.0
12.5°	1120.2	1120.2	1120.2	1129.5	1130.7
15°	1102.7	1103.9	1105.1	1116.7	1119.0
17.5°	1081.8	1084.1	1087.6	1101.6	1103.9
20°	1059.7	1062.0	1067.8	1084.1	1087.6
22.5°	1031.8	1037.6	1045.7	1064.4	1067.8
25°	1006.2	1010.8	1022.5	1042.3	1048.1
27.5°	974.8	981.8	996.9	1017.8	1026.0
30°	943.4	950.4	969.0	993.4	1000.4
32.5°	909.6	920.1	939.9	965.5	973.6
35°	874.7	884.1	907.3	937.6	946.9
37.5°	836.4	849.2	874.7	907.3	918.9
40°	799.1	813.1	842.2	877.1	891.0
42.5°	761.9	775.9	808.4	848.0	862.0
45°	720.0	735.2	772.4	814.3	829.4
47.5°	678.2	696.8	737.5	781.7	798.0
50°	635.1	656.1	700.3	746.8	765.4
52.5°	596.7	616.5	663.0	713.1	730.5
55°	552.5	574.6	625.8	677.0	696.8
57.5°	507.2	531.6	586.3	642.1	661.9
60°	463.0	489.7	550.2	606.0	628.1
62.5°	419.9	446.7	509.5	567.7	589.8
65°	373.4	404.8	469.9	529.3	550.2
67.5°	329.2	362.9	431.6	489.7	510.7
70°	286.2	318.7	392.0	449.0	469.9
72.5°	239.6	276.8	350.1	409.5	431.6
75°	193.1	237.3	309.4	367.6	388.5
77.5°	150.1	195.4	267.5	315.2	325.7
80°	110.5	157.0	219.9	253.6	266.4
82.5°	71.0	117.5	167.5	191.9	202.4
85°	39.5	77.9	109.3	123.3	128.0
87.5°	16.3	33.7	44.2	50.0	50.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)