

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: P310833

Luminaire Tested: **24FCZ2-45-UNV-L82765-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: P310833
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: 24FCZ2-45-UNV-L82765-CP187-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.187" POLYCARB SHEET
Light Source: (168) 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: 3661.0 lumens
Efficiency: N/A
Efficacy: 98.2 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

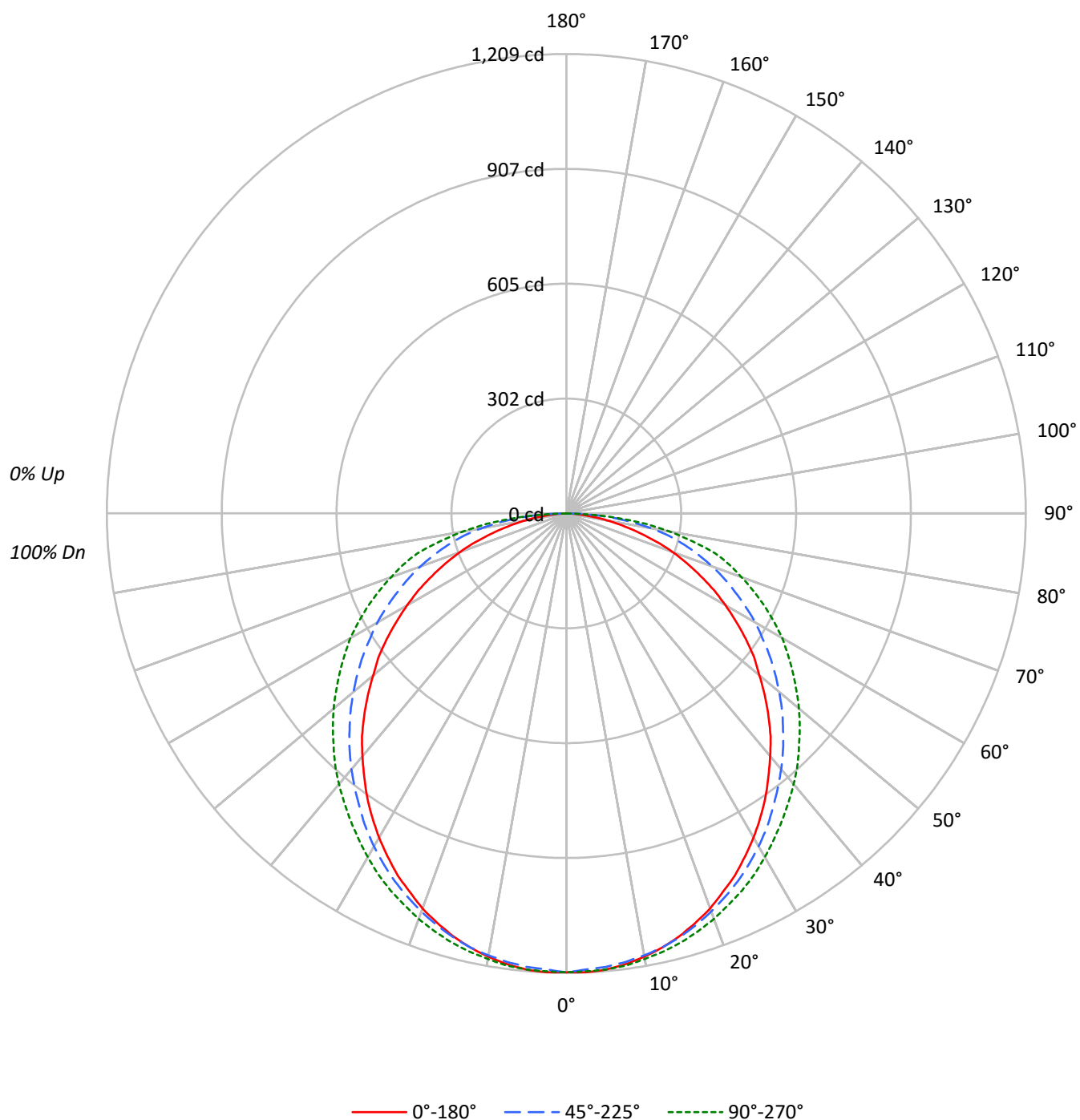
Input Watts (W): 37.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	92	89		92	89	87		82
2	98	89	81	75	95	87	80	74	83	78	73		80	75	71		67
3	89	77	69	62	86	76	68	61	73	66	60		70	64	59		56
4	81	68	59	52	79	67	58	52	64	57	51		62	56	50		47
5	74	61	52	45	72	60	51	44	58	50	44		56	49	43		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	64	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	37	31	57	45	36	30	43	36	30		42	35	30		28
9	55	41	33	27	54	41	33	27	40	32	27		39	32	27		25
10	52	38	30	25	50	38	30	25	37	30	25		36	29	25		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1625	1625	1625
5°	1627	1618	1627
10°	1618	1613	1626
15°	1604	1607	1628
20°	1584	1597	1626
25°	1560	1585	1625
30°	1530	1572	1623
35°	1500	1556	1624
40°	1466	1545	1634
45°	1431	1535	1648
50°	1388	1531	1673
55°	1354	1533	1707
60°	1301	1546	1765
65°	1241	1562	1829
70°	1175	1610	1930
75°	1048	1680	2109
80°	894	1779	2156
85°	638	1763	2062



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	114.3	3.1
10°-20°	326.7	8.9
20°-30°	493.5	13.5
30°-40°	594.8	16.2
40°-50°	624.4	17.1
50°-60°	584.2	16.0
60°-70°	482.4	13.2
70°-80°	328.7	9.0
80°-90°	112.1	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°	934.5	25.5
0°-40°	1529.2	41.8
0°-60°	2737.8	74.8
0°-90°	3661.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3661.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1207	1207	1207	1207	1207	
5°	1205	1204	1198	1205	1205	114
15°	1152	1153	1154	1166	1168	325
25°	1051	1056	1068	1088	1094	483
35°	913	923	947	979	989	571
45°	752	768	806	850	866	580
55°	577	600	654	707	728	515
65°	390	423	491	553	574	387
75°	202	248	323	384	406	215
85°	41	81	114	129	134	52
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1207.4	1207.4	1207.4	1207.4	1207.4
2.5°	1208.6	1207.4	1201.3	1207.4	1206.2
5°	1204.9	1203.7	1197.6	1204.9	1204.9
7.5°	1196.4	1196.4	1190.4	1198.9	1200.1
10°	1184.3	1184.3	1180.6	1190.4	1190.4
12.5°	1169.7	1169.7	1169.7	1179.4	1180.6
15°	1151.5	1152.7	1153.9	1166.1	1168.5
17.5°	1129.6	1132.1	1135.7	1150.3	1152.7
20°	1106.5	1109.0	1115.1	1132.1	1135.7
22.5°	1077.4	1083.5	1092.0	1111.4	1115.1
25°	1050.7	1055.5	1067.7	1088.3	1094.4
27.5°	1017.9	1025.2	1041.0	1062.8	1071.3
30°	985.1	992.4	1011.8	1037.3	1044.6
32.5°	949.9	960.8	981.4	1008.2	1016.7
35°	913.4	923.1	947.4	979.0	988.7
37.5°	873.3	886.7	913.4	947.4	959.6
40°	834.5	849.0	879.4	915.8	930.4
42.5°	795.6	810.2	844.2	885.5	900.1
45°	751.9	767.7	806.5	850.3	866.0
47.5°	708.1	727.6	770.1	816.2	833.3
50°	663.2	685.1	731.2	779.8	799.2
52.5°	623.1	643.8	692.4	744.6	762.8
55°	577.0	600.0	653.5	706.9	727.6
57.5°	529.6	555.1	612.2	670.5	691.1
60°	483.4	511.4	574.5	632.8	655.9
62.5°	438.5	466.4	532.0	592.8	615.8
65°	389.9	422.7	490.7	552.7	574.5
67.5°	343.7	379.0	450.6	511.4	533.2
70°	298.8	332.8	409.3	468.9	490.7
72.5°	250.2	289.1	365.6	427.6	450.6
75°	201.6	247.8	323.1	383.8	405.7
77.5°	156.7	204.1	279.4	329.2	340.1
80°	115.4	164.0	229.6	264.8	278.2
82.5°	74.1	122.7	174.9	200.4	211.3
85°	41.3	81.4	114.2	128.8	133.6
87.5°	17.0	35.2	46.2	52.2	52.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)