

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: P314031

Luminaire Tested: **24FCZ2-50-UNV-L83050-CP187-W2A-U-3500K**

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: P314031
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: 24FCZ2-50-UNV-L83050-CP187-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.187" POLYCARB SHEET
Light Source: (168) 3500K 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: 4279.0 lumens
Efficiency: N/A
Efficacy: 100.2 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

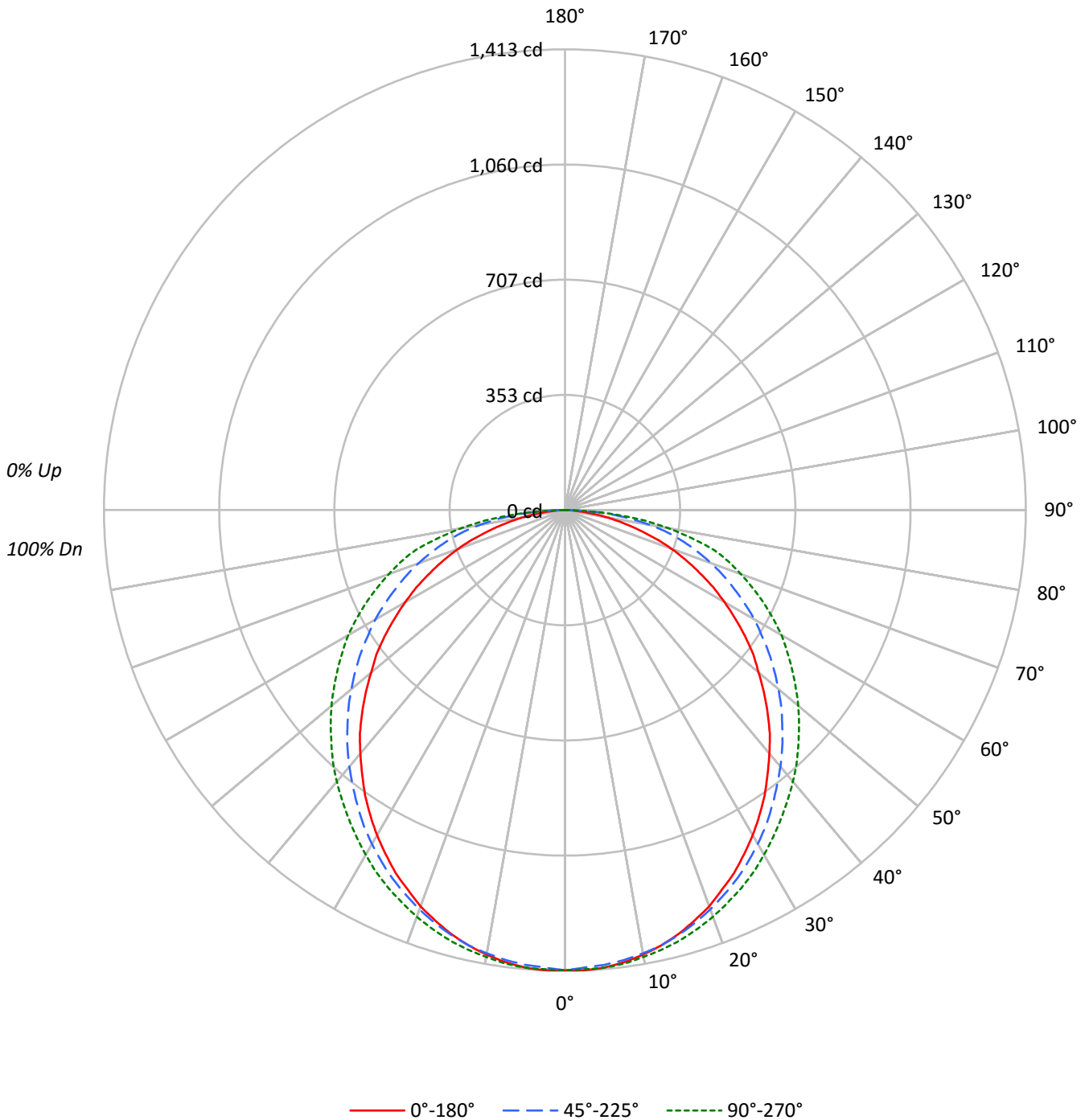
Input Watts (W): 42.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1899	1899	1899
5°	1902	1891	1902
10°	1891	1885	1901
15°	1875	1879	1902
20°	1852	1866	1901
25°	1823	1853	1899
30°	1789	1837	1897
35°	1754	1819	1898
40°	1713	1805	1910
45°	1672	1794	1926
50°	1623	1789	1955
55°	1582	1792	1995
60°	1520	1807	2063
65°	1451	1826	2138
70°	1374	1882	2257
75°	1225	1963	2465
80°	1045	2079	2519
85°	746	2061	2411



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	133.6	3.1
10°-20°	381.9	8.9
20°-30°	576.8	13.5
30°-40°	695.2	16.2
40°-50°	729.8	17.1
50°-60°	682.8	16.0
60°-70°	563.8	13.2
70°-80°	384.2	9.0
80°-90°	131.0	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°	1092.2	25.5
0°-40°	1787.4	41.8
0°-60°	3199.9	74.8
0°-90°	4279.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4279.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1411	1411	1411	1411	1411	
5°	1408	1407	1400	1408	1408	134
15°	1346	1347	1349	1363	1366	379
25°	1228	1234	1248	1272	1279	565
35°	1068	1079	1107	1144	1156	667
45°	879	897	943	994	1012	678
55°	674	701	764	826	850	602
65°	456	494	574	646	672	452
75°	236	290	378	449	474	251
85°	48	95	134	150	156	60
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1411.2	1411.2	1411.2	1411.2	1411.2
2.5°	1412.6	1411.2	1404.1	1411.2	1409.8
5°	1408.3	1406.9	1399.8	1408.3	1408.3
7.5°	1398.4	1398.4	1391.3	1401.2	1402.7
10°	1384.2	1384.2	1379.9	1391.3	1391.3
12.5°	1367.2	1367.2	1367.2	1378.5	1379.9
15°	1345.9	1347.3	1348.7	1362.9	1365.7
17.5°	1320.3	1323.2	1327.4	1344.5	1347.3
20°	1293.3	1296.2	1303.3	1323.2	1327.4
22.5°	1259.3	1266.4	1276.3	1299.0	1303.3
25°	1228.0	1233.7	1247.9	1272.0	1279.1
27.5°	1189.7	1198.2	1216.7	1242.2	1252.2
30°	1151.4	1159.9	1182.6	1212.4	1220.9
32.5°	1110.2	1123.0	1147.1	1178.3	1188.3
35°	1067.6	1079.0	1107.4	1144.3	1155.6
37.5°	1020.8	1036.4	1067.6	1107.4	1121.6
40°	975.3	992.4	1027.9	1070.5	1087.5
42.5°	929.9	946.9	986.7	1035.0	1052.0
45°	878.8	897.2	942.7	993.8	1012.2
47.5°	827.7	850.4	900.1	954.0	973.9
50°	775.2	800.7	854.7	911.4	934.2
52.5°	728.3	752.4	809.2	870.3	891.6
55°	674.4	701.3	763.8	826.3	850.4
57.5°	619.0	648.8	715.5	783.7	807.8
60°	565.0	597.7	671.5	739.7	766.6
62.5°	512.5	545.2	621.8	692.8	719.8
65°	455.7	494.1	573.6	646.0	671.5
67.5°	401.8	442.9	526.7	597.7	623.2
70°	349.2	389.0	478.4	548.0	573.6
72.5°	292.5	337.9	427.3	499.7	526.7
75°	235.7	289.6	377.6	448.6	474.2
77.5°	183.1	238.5	326.5	384.7	397.5
80°	134.9	191.7	268.3	309.5	325.1
82.5°	86.6	143.4	204.4	234.2	247.0
85°	48.3	95.1	133.5	150.5	156.2
87.5°	19.9	41.2	53.9	61.0	61.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)