

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: P310810

Luminaire Tested: **24FCZ2-45-UNV-L82765-CA08-W2A-U-5000K**

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: P310810
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-CA08-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.08" ACRYLIC SHEET
Light Source: (168) 5000K 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: 4266.0 lumens
Efficiency: N/A
Efficacy: 110.8 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

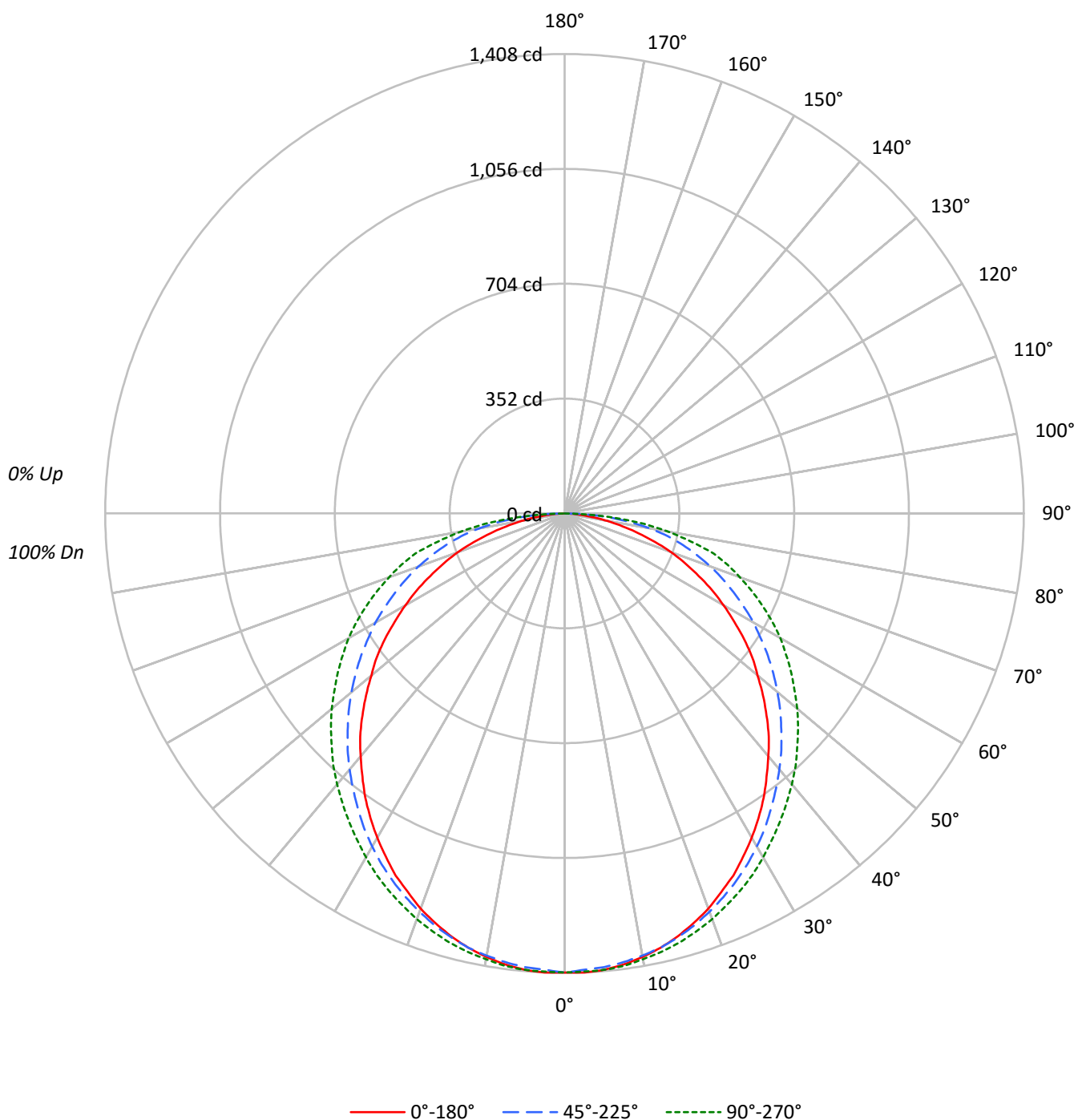
Input Watts (W): 38.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	50	30	10
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°	1893	1893	1893
5°	1896	1885	1896
10°	1885	1880	1895
15°	1869	1873	1897
20°	1846	1860	1895
25°	1818	1847	1893
30°	1783	1832	1891
35°	1748	1813	1892
40°	1708	1800	1904
45°	1667	1788	1920
50°	1618	1784	1949
55°	1577	1786	1989
60°	1516	1802	2057
65°	1446	1820	2131
70°	1370	1876	2249
75°	1222	1957	2457
80°	1042	2073	2511
85°	743	2053	2404



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	133.1	3.1
10°-20°	380.7	8.9
20°-30°	575.0	13.5
30°-40°	693.1	16.2
40°-50°	727.6	17.1
50°-60°	680.7	16.0
60°-70°	562.1	13.2
70°-80°	383.0	9.0
80°-90°	130.6	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°	1088.9	25.5
0°-40°	1781.9	41.8
0°-60°	3190.2	74.8
0°-90°	4266.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4266.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1407	1407	1407	1407	1407	
5°	1404	1403	1396	1404	1404	133
15°	1342	1343	1345	1359	1362	378
25°	1224	1230	1244	1268	1275	563
35°	1064	1076	1104	1141	1152	665
45°	876	894	940	991	1009	676
55°	672	699	762	824	848	600
65°	454	493	572	644	670	451
75°	235	289	376	447	473	251
85°	48	95	133	150	156	60
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1406.9	1406.9	1406.9	1406.9	1406.9
2.5°	1408.3	1406.9	1399.8	1406.9	1405.5
5°	1404.1	1402.6	1395.6	1404.1	1404.1
7.5°	1394.2	1394.2	1387.1	1397.0	1398.4
10°	1380.0	1380.0	1375.8	1387.1	1387.1
12.5°	1363.0	1363.0	1363.0	1374.3	1375.8
15°	1341.8	1343.2	1344.6	1358.8	1361.6
17.5°	1316.3	1319.1	1323.4	1340.4	1343.2
20°	1289.4	1292.2	1299.3	1319.1	1323.4
22.5°	1255.4	1262.5	1272.4	1295.1	1299.3
25°	1224.3	1230.0	1244.1	1268.2	1275.3
27.5°	1186.1	1194.6	1213.0	1238.5	1248.4
30°	1147.9	1156.4	1179.0	1208.7	1217.2
32.5°	1106.8	1119.6	1143.6	1174.8	1184.7
35°	1064.4	1075.7	1104.0	1140.8	1152.1
37.5°	1017.7	1033.2	1064.4	1104.0	1118.2
40°	972.4	989.4	1024.7	1067.2	1084.2
42.5°	927.1	944.1	983.7	1031.8	1048.8
45°	876.1	894.5	939.8	990.8	1009.2
47.5°	825.2	847.8	897.4	951.1	971.0
50°	772.8	798.3	852.1	908.7	931.3
52.5°	726.1	750.2	806.8	867.6	888.9
55°	672.3	699.2	761.5	823.8	847.8
57.5°	617.1	646.8	713.4	781.3	805.4
60°	563.3	595.9	669.5	737.4	764.3
62.5°	511.0	543.5	619.9	690.7	717.6
65°	454.3	492.6	571.8	644.0	669.5
67.5°	400.6	441.6	525.1	595.9	621.4
70°	348.2	387.8	477.0	546.3	571.8
72.5°	291.6	336.9	426.0	498.2	525.1
75°	235.0	288.7	376.5	447.3	472.7
77.5°	182.6	237.8	325.5	383.6	396.3
80°	134.5	191.1	267.5	308.6	324.1
82.5°	86.3	143.0	203.8	233.5	246.3
85°	48.1	94.8	133.0	150.0	155.7
87.5°	19.8	41.0	53.8	60.9	60.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)