

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: P314293

Luminaire Tested: **24FCZ2-40-UNV-L83050-S-CA08-W2A-U-4500K**

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: P314293
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-40-UNV-L83050-S-CA08-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.08" ACRYLIC SHEET
Light Source: (168) 4500K 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

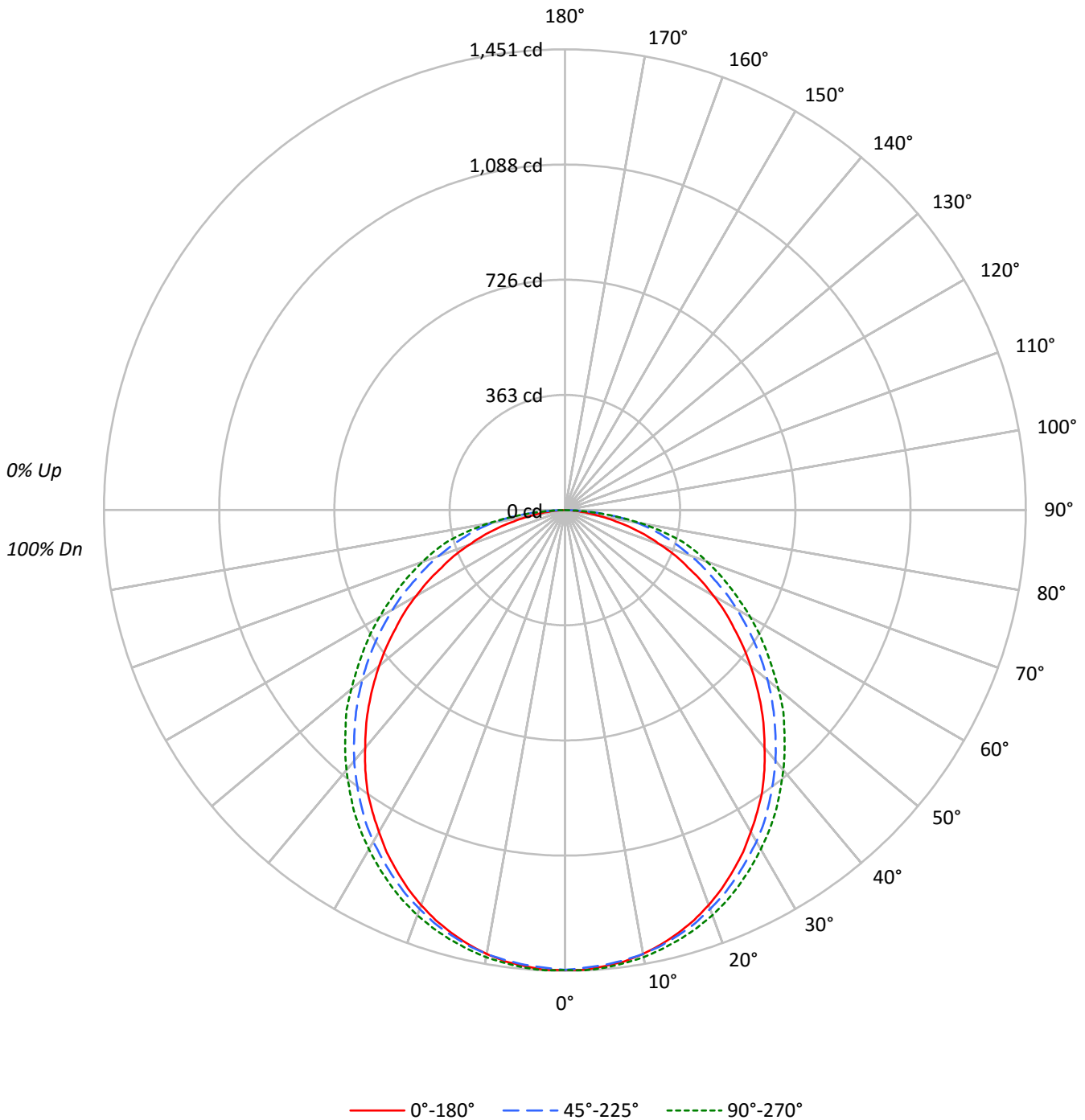
Lumens per Lamp: N/A
Luminaire Lumens: 4122.0 lumens
Efficiency: N/A
Efficacy: 120.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 34.3
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	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1948	1948	1948
5°	1947	1942	1954
10°	1939	1939	1953
15°	1920	1930	1950
20°	1895	1914	1944
25°	1860	1895	1932
30°	1819	1874	1916
35°	1779	1843	1901
40°	1718	1812	1879
45°	1662	1776	1858
50°	1598	1743	1836
55°	1526	1711	1818
60°	1455	1684	1815
65°	1363	1655	1826
70°	1262	1664	1875
75°	1130	1695	1981
80°	913	1795	1938
85°	687	1576	1536



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	137.1	3.3
10°-20°	391.7	9.5
20°-30°	588.8	14.3
30°-40°	701.4	17.0
40°-50°	717.9	17.4
50°-60°	646.3	15.7
60°-70°	507.5	12.3
70°-80°	329.4	8.0
80°-90°	101.9	2.5
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°	1117.6	27.1
0°-40°	1819.1	44.1
0°-60°	3183.2	77.2
0°-90°	4122.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4122.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1448	1448	1448	1448	1448	
5°	1442	1444	1438	1446	1447	137
15°	1379	1383	1385	1397	1400	389
25°	1253	1264	1277	1298	1301	577
35°	1083	1096	1122	1150	1157	675
45°	873	894	934	969	977	673
55°	651	680	729	767	775	583
65°	428	461	520	563	574	426
75°	217	259	326	370	381	230
85°	44	82	102	100	100	54
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1448.1	1448.1	1448.1	1448.1	1448.1
2.5°	1449.4	1449.4	1442.8	1449.4	1450.7
5°	1441.5	1444.2	1437.6	1445.5	1446.8
7.5°	1433.7	1433.7	1429.8	1437.6	1438.9
10°	1419.3	1420.6	1419.3	1428.4	1429.8
12.5°	1401.0	1403.6	1404.9	1414.0	1415.4
15°	1378.7	1382.6	1385.2	1397.0	1399.6
17.5°	1353.8	1357.7	1364.3	1377.4	1380.0
20°	1323.7	1328.9	1336.8	1353.8	1357.7
22.5°	1291.0	1296.2	1309.3	1325.0	1331.6
25°	1253.0	1263.5	1276.6	1297.5	1301.4
27.5°	1215.0	1224.2	1241.2	1263.5	1268.7
30°	1170.5	1184.9	1205.9	1228.1	1233.4
32.5°	1127.3	1141.7	1166.6	1190.2	1196.7
35°	1082.8	1095.9	1122.1	1149.6	1157.4
37.5°	1031.7	1048.7	1077.6	1105.0	1112.9
40°	978.0	999.0	1031.7	1060.5	1069.7
42.5°	927.0	949.2	982.0	1013.4	1023.9
45°	873.3	894.3	933.5	968.9	976.7
47.5°	818.3	841.9	883.8	919.1	932.2
50°	763.3	788.2	832.7	869.4	877.2
52.5°	708.3	734.5	781.7	820.9	824.9
55°	650.7	679.5	729.3	767.2	775.1
57.5°	598.3	623.2	676.9	716.2	725.4
60°	540.7	568.2	625.8	662.5	674.3
62.5°	485.8	514.6	574.8	611.4	621.9
65°	428.1	460.9	519.8	563.0	573.5
67.5°	378.4	409.8	472.7	514.6	525.0
70°	320.8	356.1	422.9	466.1	476.6
72.5°	271.0	307.7	374.5	416.4	432.1
75°	217.3	259.2	326.0	370.5	381.0
77.5°	165.0	213.4	281.5	315.5	315.5
80°	117.8	168.9	231.7	247.5	250.1
82.5°	77.2	127.0	171.5	170.2	170.2
85°	44.5	82.5	102.1	99.5	99.5
87.5°	17.0	34.0	36.7	36.7	35.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)