

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: P314023

Luminaire Tested: **24FCZ2-50-UNV-L83050-CA125-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: P314023
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-CA125-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" 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

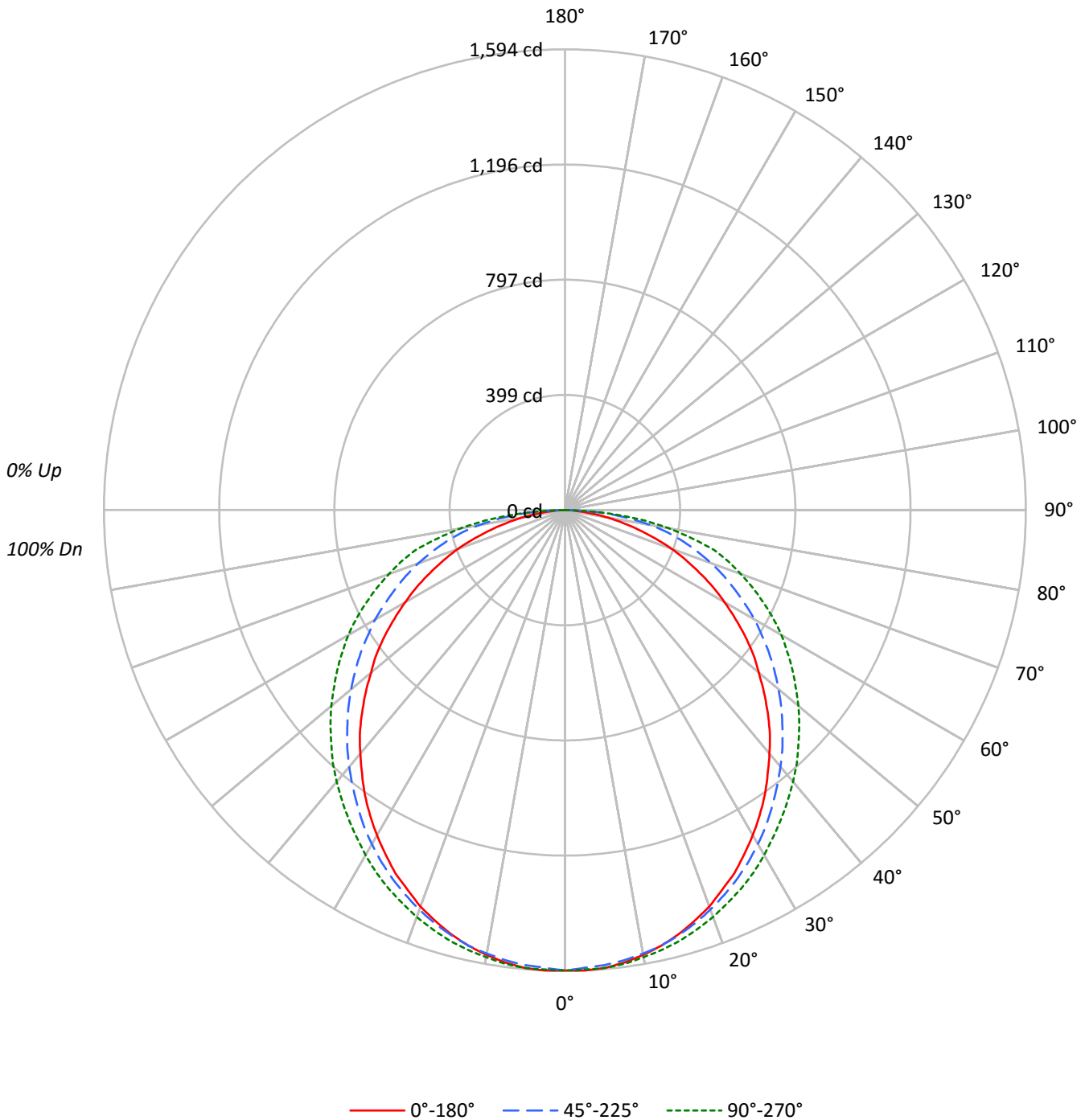
Lumens per Lamp: N/A
Luminaire Lumens: 4830.0 lumens
Efficiency: N/A
Efficacy: 107.8 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 44.8
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	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					100			
1	108	103	98	94	105	100	96	92	96	92	89	92	89	87	88	86	84	82					82			
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67					67			
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56					56			
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47					47			
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41					41			
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36					36			
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31					31			
8	59	45	37	31	57	45	36	30	43	36	30	42	35	30	41	34	30	28					28			
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25					25			
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23					23			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2143	2143	2143
5°	2147	2134	2147
10°	2135	2128	2146
15°	2116	2121	2147
20°	2090	2106	2145
25°	2058	2091	2144
30°	2019	2074	2141
35°	1979	2053	2143
40°	1934	2038	2156
45°	1888	2025	2174
50°	1832	2019	2207
55°	1786	2022	2252
60°	1716	2040	2329
65°	1638	2061	2413
70°	1551	2124	2547
75°	1383	2216	2782
80°	1179	2347	2844
85°	841	2325	2722



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	150.7	3.1
10°-20°	431.0	8.9
20°-30°	651.1	13.5
30°-40°	784.7	16.2
40°-50°	823.8	17.1
50°-60°	770.7	16.0
60°-70°	636.4	13.2
70°-80°	433.7	9.0
80°-90°	147.9	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°	1232.8	25.5
0°-40°	2017.5	41.8
0°-60°	3612.0	74.8
0°-90°	4830.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4830.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1593	1593	1593	1593	1593	
5°	1590	1588	1580	1590	1590	151
15°	1519	1521	1522	1538	1542	428
25°	1386	1393	1409	1436	1444	638
35°	1205	1218	1250	1292	1304	753
45°	992	1013	1064	1122	1143	765
55°	761	792	862	933	960	679
65°	514	558	647	729	758	510
75°	266	327	426	506	535	284
85°	54	107	151	170	176	68
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1592.9	1592.9	1592.9	1592.9	1592.9
2.5°	1594.5	1592.9	1584.9	1592.9	1591.3
5°	1589.7	1588.1	1580.1	1589.7	1589.7
7.5°	1578.5	1578.5	1570.5	1581.7	1583.3
10°	1562.4	1562.4	1557.6	1570.5	1570.5
12.5°	1543.2	1543.2	1543.2	1556.0	1557.6
15°	1519.2	1520.8	1522.4	1538.4	1541.6
17.5°	1490.3	1493.5	1498.3	1517.6	1520.8
20°	1459.9	1463.1	1471.1	1493.5	1498.3
22.5°	1421.4	1429.4	1440.7	1466.3	1471.1
25°	1386.2	1392.6	1408.6	1435.8	1443.9
27.5°	1342.9	1352.5	1373.3	1402.2	1413.4
30°	1299.6	1309.2	1334.9	1368.5	1378.2
32.5°	1253.2	1267.6	1294.8	1330.1	1341.3
35°	1205.1	1217.9	1250.0	1291.6	1304.4
37.5°	1152.2	1169.8	1205.1	1250.0	1266.0
40°	1100.9	1120.2	1160.2	1208.3	1227.5
42.5°	1049.6	1068.9	1113.7	1168.2	1187.5
45°	992.0	1012.8	1064.1	1121.8	1142.6
47.5°	934.3	959.9	1016.0	1076.9	1099.3
50°	875.0	903.8	964.7	1028.8	1054.4
52.5°	822.1	849.3	913.4	982.3	1006.4
55°	761.2	791.6	862.1	932.7	959.9
57.5°	698.7	732.3	807.7	884.6	911.8
60°	637.8	674.7	758.0	834.9	865.4
62.5°	578.5	615.4	701.9	782.0	812.5
65°	514.4	557.7	647.4	729.1	758.0
67.5°	453.5	500.0	594.5	674.7	703.5
70°	394.2	439.1	540.0	618.6	647.4
72.5°	330.1	381.4	482.4	564.1	594.5
75°	266.0	326.9	426.3	506.4	535.2
77.5°	206.7	269.2	368.6	434.3	448.7
80°	152.2	216.3	302.9	349.3	367.0
82.5°	97.8	161.9	230.8	264.4	278.8
85°	54.5	107.4	150.6	169.9	176.3
87.5°	22.4	46.5	60.9	68.9	68.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)