

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: P311066

Luminaire Tested: **24FCZ2-65HE-UNV-L82765-CP250-W2A-U-2700K**

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: P311066
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: 24FCZ2-65HE-UNV-L82765-CP250-W2A-U-2700K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.250" POLYCARB SHEET
Light Source: (336) 2700K 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: 5089.0 lumens
Efficiency: N/A
Efficacy: 96.7 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

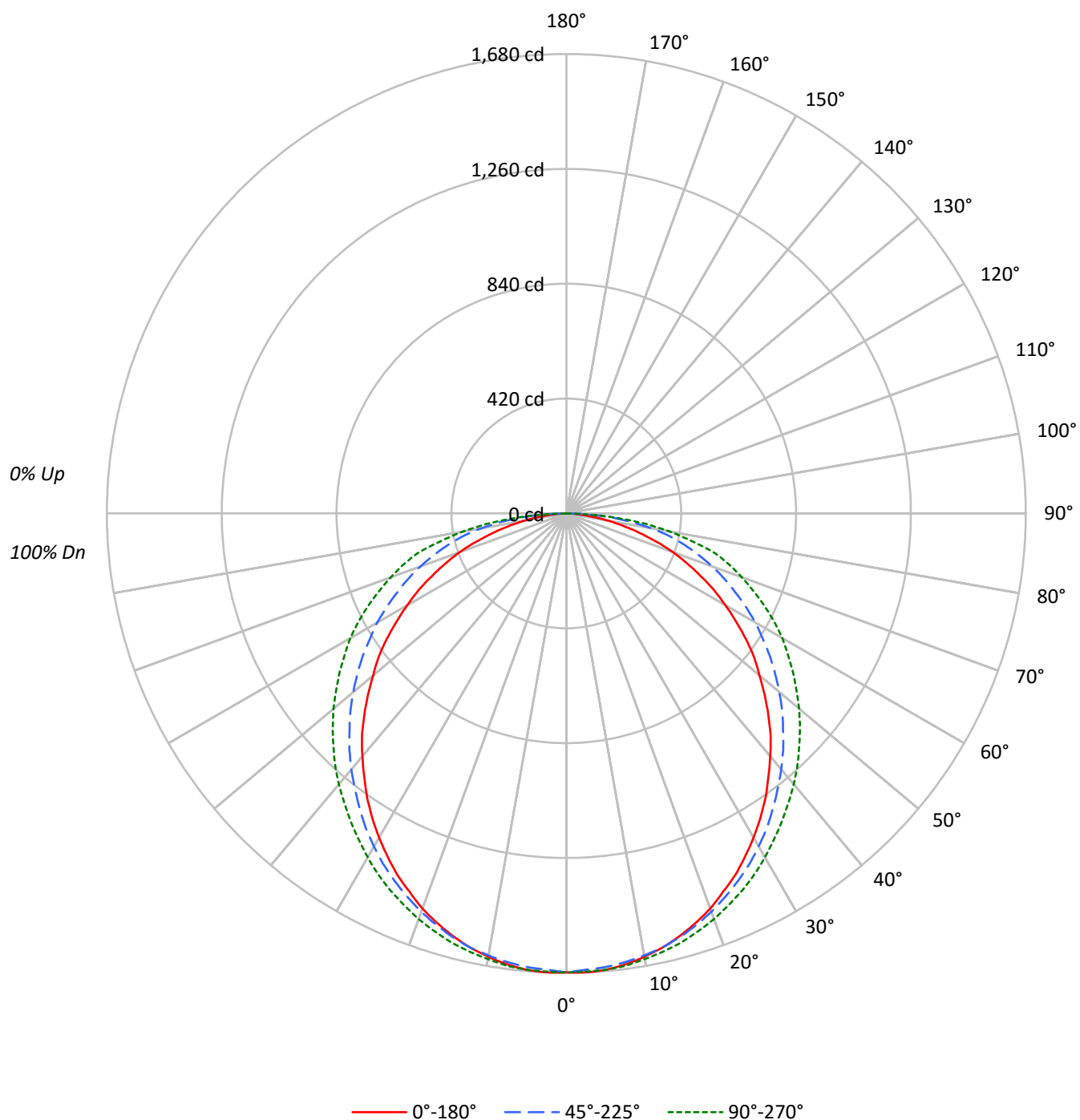
Input Watts (W): 52.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2258	2258	2258
5°	2262	2249	2262
10°	2249	2242	2261
15°	2230	2234	2263
20°	2202	2219	2260
25°	2168	2203	2258
30°	2127	2185	2256
35°	2086	2163	2258
40°	2037	2147	2272
45°	1989	2133	2291
50°	1930	2128	2326
55°	1881	2131	2373
60°	1808	2149	2454
65°	1726	2172	2543
70°	1634	2238	2683
75°	1457	2335	2931
80°	1243	2473	2996
85°	886	2450	2867



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	158.8	3.1
10°-20°	454.2	8.9
20°-30°	686.0	13.5
30°-40°	826.8	16.2
40°-50°	867.9	17.1
50°-60°	812.0	16.0
60°-70°	670.6	13.2
70°-80°	456.9	9.0
80°-90°	155.8	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°	1299.0	25.5
0°-40°	2125.7	41.8
0°-60°	3805.7	74.8
0°-90°	5089.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5089.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1678	1678	1678	1678	1678	
5°	1675	1673	1665	1675	1675	159
15°	1601	1602	1604	1621	1624	451
25°	1460	1467	1484	1513	1521	672
35°	1270	1283	1317	1361	1374	793
45°	1045	1067	1121	1182	1204	806
55°	802	834	908	983	1011	716
65°	542	588	682	768	799	538
75°	280	344	449	534	564	299
85°	57	113	159	179	186	72
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1678.3	1678.3	1678.3	1678.3	1678.3
2.5°	1680.0	1678.3	1669.9	1678.3	1676.6
5°	1674.9	1673.2	1664.8	1674.9	1674.9
7.5°	1663.1	1663.1	1654.7	1666.5	1668.2
10°	1646.2	1646.2	1641.2	1654.7	1654.7
12.5°	1626.0	1626.0	1626.0	1639.5	1641.2
15°	1600.6	1602.3	1604.0	1620.9	1624.3
17.5°	1570.2	1573.6	1578.7	1599.0	1602.3
20°	1538.2	1541.5	1550.0	1573.6	1578.7
22.5°	1497.6	1506.1	1517.9	1544.9	1550.0
25°	1460.5	1467.3	1484.1	1512.8	1521.3
27.5°	1414.9	1425.0	1447.0	1477.4	1489.2
30°	1369.3	1379.5	1406.5	1441.9	1452.1
32.5°	1320.4	1335.6	1364.3	1401.4	1413.2
35°	1269.7	1283.2	1317.0	1360.9	1374.4
37.5°	1214.0	1232.6	1269.7	1317.0	1333.9
40°	1160.0	1180.2	1222.4	1273.1	1293.3
42.5°	1105.9	1126.2	1173.5	1230.9	1251.1
45°	1045.1	1067.1	1121.1	1181.9	1203.9
47.5°	984.4	1011.4	1070.5	1134.6	1158.3
50°	921.9	952.3	1016.4	1084.0	1111.0
52.5°	866.2	894.9	962.4	1035.0	1060.3
55°	802.0	834.1	908.4	982.7	1011.4
57.5°	736.2	771.6	851.0	932.0	960.7
60°	672.0	710.8	798.6	879.7	911.8
62.5°	609.5	648.4	739.5	824.0	856.0
65°	542.0	587.6	682.1	768.2	798.6
67.5°	477.8	526.8	626.4	710.8	741.2
70°	415.4	462.6	569.0	651.7	682.1
72.5°	347.8	401.8	508.2	594.3	626.4
75°	280.3	344.4	449.1	533.5	563.9
77.5°	217.8	283.7	388.3	457.6	472.8
80°	160.4	227.9	319.1	368.1	386.7
82.5°	103.0	170.5	243.1	278.6	293.8
85°	57.4	113.1	158.7	179.0	185.7
87.5°	23.6	49.0	64.2	72.6	72.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)