

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: P311068

Luminaire Tested: **24FCZ2-65HE-UNV-L82765-CP250-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: P311068
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-3500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.250" POLYCARB SHEET
Light Source: (336) 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: 5417.0 lumens
Efficiency: N/A
Efficacy: 102.6 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

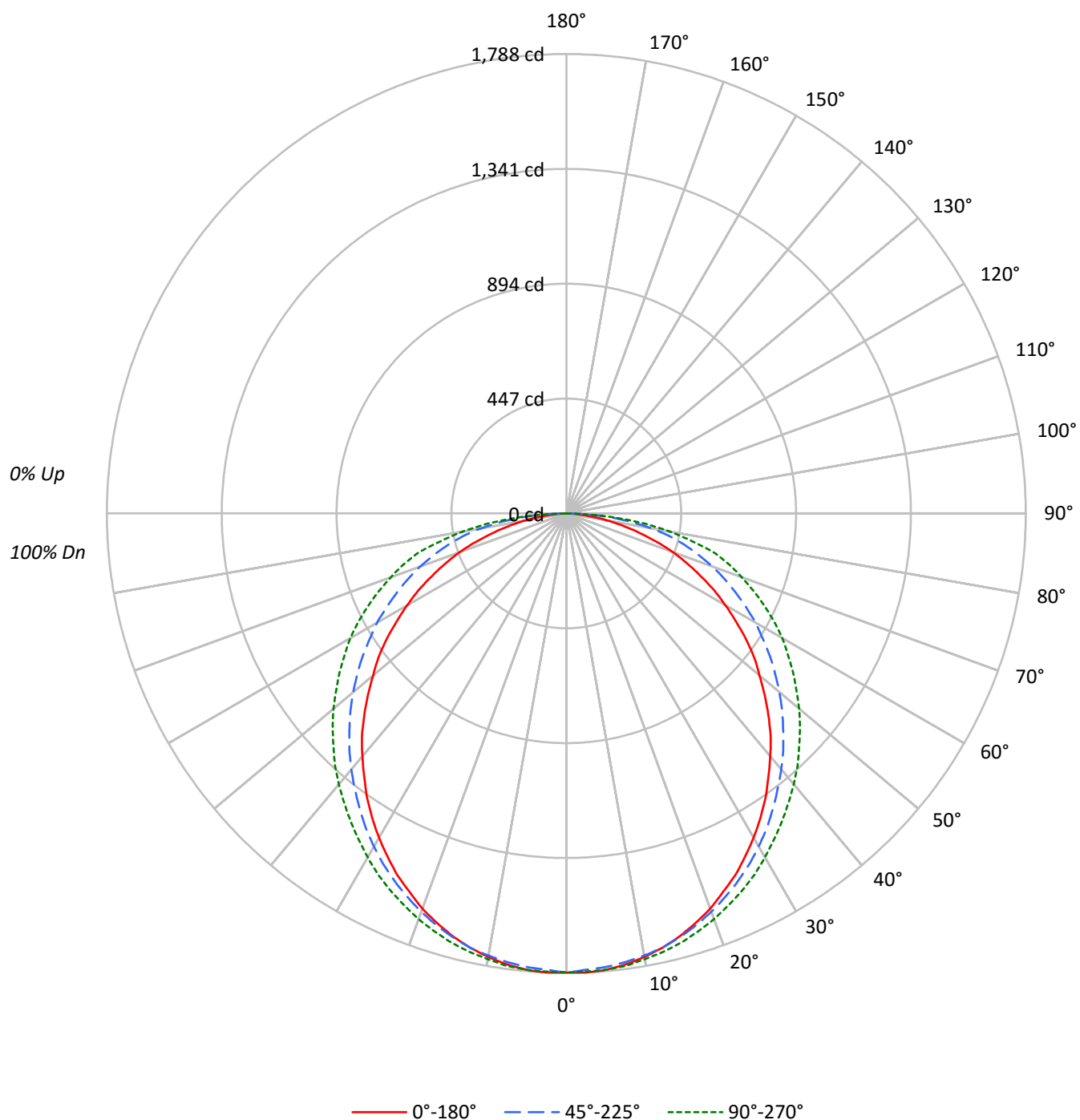
Input Watts (W): 52.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2404	2404	2404
5°	2408	2393	2408
10°	2394	2387	2406
15°	2373	2378	2408
20°	2344	2362	2406
25°	2308	2345	2404
30°	2265	2326	2401
35°	2220	2303	2403
40°	2169	2285	2418
45°	2117	2271	2438
50°	2054	2265	2475
55°	2003	2268	2525
60°	1925	2288	2612
65°	1837	2312	2706
70°	1739	2383	2856
75°	1551	2485	3121
80°	1323	2632	3189
85°	943	2607	3052



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	169.1	3.1
10°-20°	483.4	8.9
20°-30°	730.2	13.5
30°-40°	880.0	16.2
40°-50°	923.9	17.1
50°-60°	864.3	16.0
60°-70°	713.8	13.2
70°-80°	486.4	9.0
80°-90°	165.9	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°	1382.7	25.5
0°-40°	2262.7	41.8
0°-60°	4050.9	74.8
0°-90°	5417.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5417.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1786	1786	1786	1786	1786	
5°	1783	1781	1772	1783	1783	169
15°	1704	1706	1707	1725	1729	480
25°	1555	1562	1580	1610	1619	715
35°	1352	1366	1402	1449	1463	845
45°	1112	1136	1193	1258	1281	858
55°	854	888	967	1046	1077	762
65°	577	625	726	818	850	572
75°	298	367	478	568	600	318
85°	61	120	169	190	198	76
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1786.5	1786.5	1786.5	1786.5	1786.5
2.5°	1788.3	1786.5	1777.5	1786.5	1784.7
5°	1782.9	1781.1	1772.1	1782.9	1782.9
7.5°	1770.3	1770.3	1761.3	1773.9	1775.7
10°	1752.3	1752.3	1746.9	1761.3	1761.3
12.5°	1730.8	1730.8	1730.8	1745.1	1746.9
15°	1703.8	1705.6	1707.4	1725.4	1729.0
17.5°	1671.5	1675.0	1680.4	1702.0	1705.6
20°	1637.3	1640.9	1649.9	1675.0	1680.4
22.5°	1594.2	1603.2	1615.7	1644.5	1649.9
25°	1554.6	1561.8	1579.8	1610.3	1619.3
27.5°	1506.1	1516.9	1540.3	1572.6	1585.2
30°	1457.6	1468.4	1497.1	1534.9	1545.6
32.5°	1405.5	1421.6	1452.2	1491.7	1504.3
35°	1351.5	1365.9	1401.9	1448.6	1463.0
37.5°	1292.2	1312.0	1351.5	1401.9	1419.8
40°	1234.7	1256.3	1301.2	1355.1	1376.7
42.5°	1177.2	1198.8	1249.1	1310.2	1331.8
45°	1112.5	1135.9	1193.4	1258.1	1281.4
47.5°	1047.8	1076.6	1139.5	1207.8	1232.9
50°	981.3	1013.7	1082.0	1153.8	1182.6
52.5°	922.0	952.5	1024.4	1101.7	1128.7
55°	853.7	887.8	966.9	1046.0	1076.6
57.5°	783.6	821.3	905.8	992.1	1022.6
60°	715.3	756.6	850.1	936.4	970.5
62.5°	648.8	690.1	787.2	877.1	911.2
65°	576.9	625.4	726.1	817.8	850.1
67.5°	508.6	560.7	666.8	756.6	789.0
70°	442.1	492.5	605.7	693.7	726.1
72.5°	370.2	427.7	541.0	632.6	666.8
75°	298.3	366.6	478.1	567.9	600.3
77.5°	231.8	301.9	413.4	487.1	503.2
80°	170.7	242.6	339.7	391.8	411.6
82.5°	109.6	181.5	258.8	296.5	312.7
85°	61.1	120.4	168.9	190.5	197.7
87.5°	25.2	52.1	68.3	77.3	77.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)