

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: P309777

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-HRP-CA08-W2A-U-5700K**

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: P309777
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-75HE-UNV-L82765-HRP-CA08-W2A-U-5700K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC SHEET
Light Source: (336) 5700K 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: 5451.0 lumens
Efficiency: N/A
Efficacy: 84.4 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

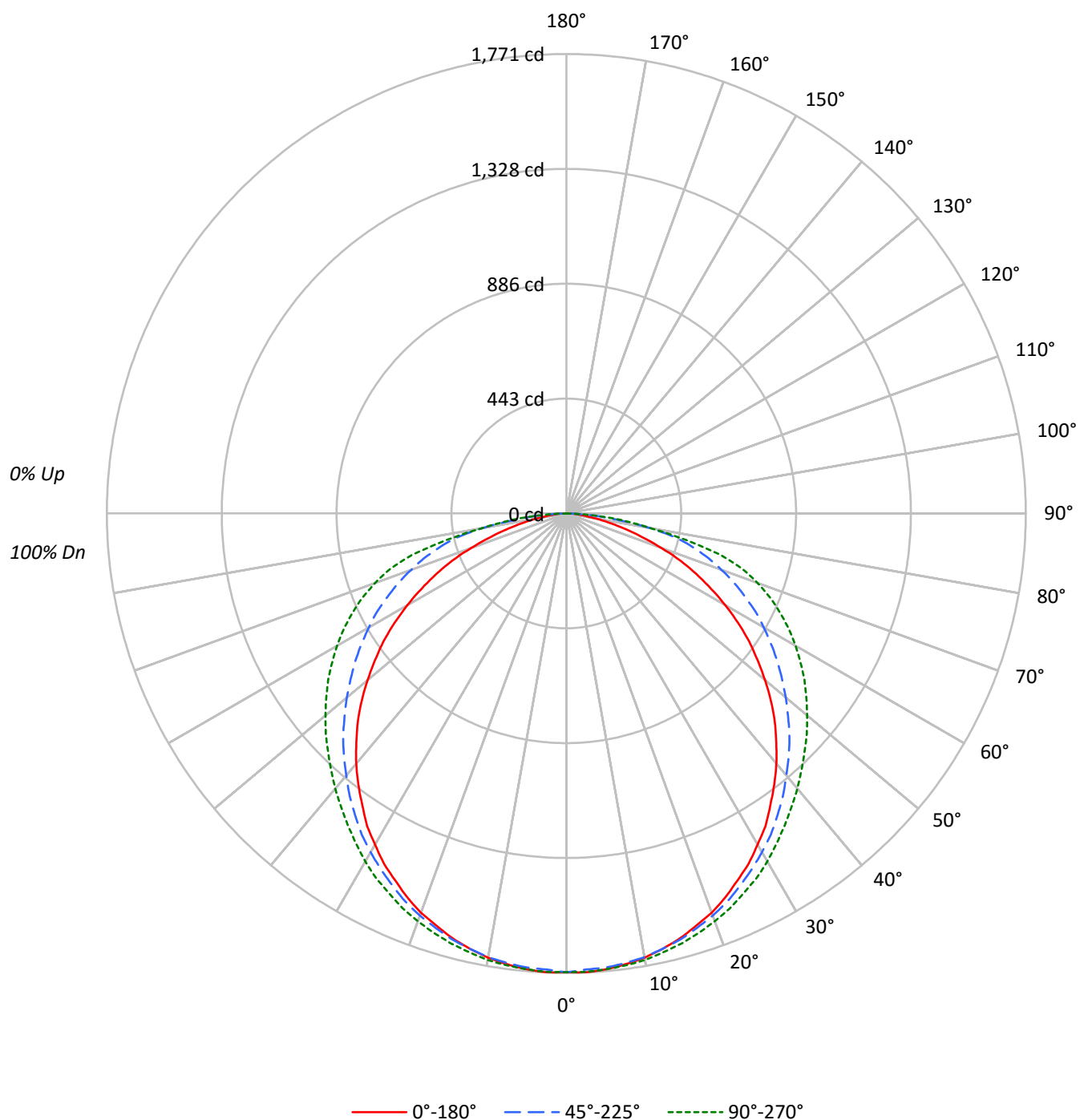
Input Watts (W): 64.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P309777

CATALOG NUMBER: 24FCZ2-75HE-UNV-L82765-HRP-CA08-W2A-U-5700K

Luminous Intensity Polar Plot





TEST NUMBER: P309777

CATALOG NUMBER: 24FCZ2-75HE-UNV-L82765-HRP-CA08-W2A-U-5700K

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	101	96	93	96	93	90		92	90	87		82
2	98	89	82	76	95	87	80	75	83	78	73		80	75	71		67
3	89	78	69	62	86	76	68	62	73	66	61		70	64	59		56
4	81	68	59	52	79	67	59	52	65	57	51		62	56	50		48
5	74	61	52	45	72	60	51	45	58	50	44		56	49	44		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	63	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	36	30	57	44	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	24		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2380	2380	2380
5°	2383	2373	2383
10°	2376	2373	2388
15°	2362	2368	2390
20°	2346	2362	2395
25°	2317	2351	2399
30°	2290	2344	2407
35°	2253	2331	2410
40°	2213	2317	2433
45°	2163	2314	2471
50°	2092	2312	2537
55°	2018	2329	2628
60°	1904	2364	2745
65°	1758	2419	2899
70°	1535	2505	3088
75°	1246	2634	3191
80°	920	2582	2582
85°	704	1902	2149



TEST NUMBER: P309777

CATALOG NUMBER: 24FCZ2-75HE-UNV-L82765-HRP-CA08-W2A-U-5700K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	167.5	3.1
10°-20°	481.1	8.8
20°-30°	732.4	13.4
30°-40°	889.3	16.3
40°-50°	939.6	17.2
50°-60°	886.6	16.3
60°-70°	737.2	13.5
70°-80°	485.0	8.9
80°-90°	132.2	2.4
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°	1381.1	25.3
0°-40°	2270.4	41.7
0°-60°	4096.6	75.2
0°-90°	5451.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5451.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1769	1769	1769	1769	1769	
5°	1764	1764	1757	1764	1764	168
15°	1696	1698	1700	1716	1716	478
25°	1561	1570	1584	1611	1616	720
35°	1372	1388	1419	1456	1467	859
45°	1136	1159	1216	1276	1298	875
55°	860	897	993	1086	1120	766
65°	552	616	760	872	910	546
75°	240	349	507	600	614	258
85°	46	100	123	137	139	56
90°	0	0	0	0	0	



TEST NUMBER: P309777

CATALOG NUMBER: 24FCZ2-75HE-UNV-L82765-HRP-CA08-W2A-U-5700K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1768.6	1768.6	1768.6	1768.6	1768.6
2.5°	1770.9	1768.6	1759.5	1768.6	1768.6
5°	1764.0	1764.0	1757.2	1764.0	1764.0
7.5°	1752.6	1752.6	1748.0	1757.2	1757.2
10°	1738.9	1738.9	1736.6	1748.0	1748.0
12.5°	1718.4	1720.7	1718.4	1732.1	1732.1
15°	1695.6	1697.8	1700.1	1716.1	1716.1
17.5°	1665.9	1670.5	1675.0	1693.3	1695.6
20°	1638.5	1640.8	1649.9	1670.5	1672.7
22.5°	1602.0	1608.8	1620.2	1640.8	1647.6
25°	1560.9	1570.0	1583.7	1611.1	1615.7
27.5°	1522.1	1529.0	1547.2	1576.9	1586.0
30°	1474.2	1485.6	1508.4	1538.1	1549.5
32.5°	1428.6	1440.0	1467.4	1499.3	1508.4
35°	1371.5	1387.5	1419.4	1455.9	1467.4
37.5°	1316.7	1332.7	1371.5	1412.6	1426.3
40°	1259.7	1277.9	1319.0	1366.9	1385.2
42.5°	1198.1	1223.2	1268.8	1321.3	1341.8
45°	1136.5	1159.3	1216.3	1275.7	1298.5
47.5°	1070.3	1097.7	1159.3	1230.0	1257.4
50°	999.5	1033.8	1104.5	1182.1	1211.8
52.5°	928.8	967.6	1047.5	1134.2	1166.1
55°	860.3	896.8	992.7	1086.3	1120.5
57.5°	785.0	830.7	935.6	1036.0	1070.3
60°	707.4	757.6	878.6	983.6	1020.1
62.5°	629.8	686.9	823.8	928.8	967.6
65°	552.3	616.2	759.9	871.7	910.5
67.5°	476.9	547.7	700.6	812.4	851.2
70°	390.2	479.2	636.7	746.2	785.0
72.5°	310.4	413.0	575.1	677.8	712.0
75°	239.6	349.2	506.6	600.2	613.9
77.5°	175.7	285.3	435.9	467.8	470.1
80°	118.7	228.2	333.2	328.6	333.2
82.5°	77.6	171.2	209.9	235.1	237.3
85°	45.6	100.4	123.2	136.9	139.2
87.5°	22.8	34.2	43.4	45.6	50.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)