

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: P310449

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-RDP-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: P310449
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)
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-RDP-CA08-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC SHEET
Light Source: (336) 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: 4708.0 lumens
Efficiency: N/A
Efficacy: 73.6 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

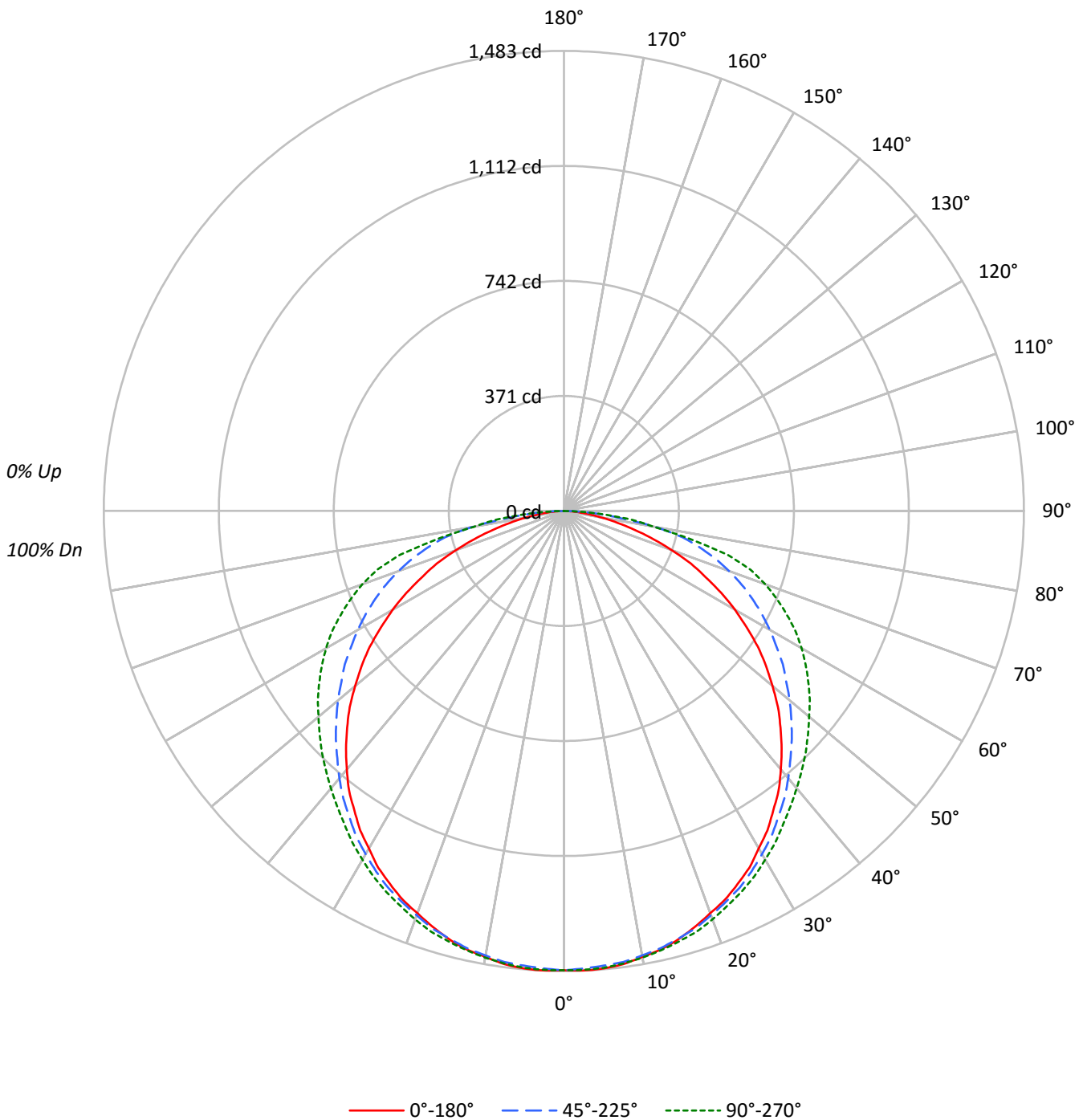
Input Watts (W): 64
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P310449

CATALOG NUMBER: 24FCZ2-75HE-UNV-L82765-RDP-CA08-W2A-U-4500K

Luminous Intensity Polar Plot





TEST NUMBER: P310449

CATALOG NUMBER: 24FCZ2-75HE-UNV-L82765-RDP-CA08-W2A-U-4500K

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	98	94	105	100	96	92	96	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1992	1992	1992
5°	2000	1987	1996
10°	1994	1988	1997
15°	1991	1987	2001
20°	1976	1986	2006
25°	1969	1990	2011
30°	1952	1985	2017
35°	1933	1979	2025
40°	1911	1977	2051
45°	1880	1977	2097
50°	1838	1989	2161
55°	1791	2021	2257
60°	1715	2061	2382
65°	1606	2134	2528
70°	1461	2233	2719
75°	1238	2355	2840
80°	977	2370	2298
85°	721	1803	2019



TEST NUMBER: P310449

CATALOG NUMBER: 24FCZ2-75HE-UNV-L82765-RDP-CA08-W2A-U-4500K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	140.4	3.0
10°-20°	404.2	8.6
20°-30°	618.1	13.1
30°-40°	755.6	16.0
40°-50°	805.3	17.1
50°-60°	770.0	16.4
60°-70°	652.3	13.9
70°-80°	438.4	9.3
80°-90°	123.7	2.6
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°	1162.7	24.7
0°-40°	1918.3	40.7
0°-60°	3493.7	74.2
0°-90°	4708.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4708.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1480	1480	1480	1480	1480	
5°	1480	1478	1471	1478	1478	141
15°	1429	1429	1427	1438	1436	403
25°	1326	1331	1340	1352	1354	611
35°	1177	1186	1205	1228	1233	737
45°	988	1004	1039	1084	1102	762
55°	764	792	862	929	962	680
65°	504	556	670	759	794	501
75°	238	325	453	530	546	255
85°	47	96	117	126	131	58
90°	0	0	0	0	0	



TEST NUMBER: P310449

CATALOG NUMBER: 24FCZ2-75HE-UNV-L82765-RDP-CA08-W2A-U-4500K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1480.5	1480.5	1480.5	1480.5	1480.5
2.5°	1482.9	1482.9	1475.9	1480.5	1480.5
5°	1480.5	1478.2	1471.2	1478.2	1478.2
7.5°	1473.5	1471.2	1466.5	1473.5	1471.2
10°	1459.5	1459.5	1454.8	1461.8	1461.8
12.5°	1447.8	1445.5	1443.2	1452.5	1450.2
15°	1429.2	1429.2	1426.8	1438.5	1436.2
17.5°	1405.8	1408.1	1410.5	1419.8	1422.2
20°	1380.1	1384.8	1387.1	1401.1	1401.1
22.5°	1356.8	1359.1	1363.8	1377.8	1377.8
25°	1326.4	1331.1	1340.4	1352.1	1354.4
27.5°	1296.0	1298.4	1310.1	1326.4	1328.7
30°	1256.4	1263.4	1277.4	1296.0	1298.4
32.5°	1221.3	1228.3	1244.7	1263.4	1268.0
35°	1177.0	1186.3	1205.0	1228.3	1233.0
37.5°	1137.3	1144.3	1167.6	1193.3	1200.3
40°	1088.2	1102.2	1125.6	1155.9	1167.6
42.5°	1039.2	1053.2	1081.2	1120.9	1134.9
45°	987.8	1004.1	1039.2	1083.5	1102.2
47.5°	936.4	955.1	994.8	1046.2	1067.2
50°	878.0	901.4	950.4	1008.8	1032.2
52.5°	822.0	850.0	903.7	969.1	999.5
55°	763.6	791.6	861.7	929.4	962.1
57.5°	698.2	735.6	812.7	889.7	924.7
60°	637.5	672.5	766.0	850.0	885.0
62.5°	572.1	618.8	719.2	808.0	843.0
65°	504.4	555.8	670.2	758.9	794.0
67.5°	443.7	499.7	621.2	709.9	744.9
70°	371.3	441.4	567.5	656.2	691.2
72.5°	303.6	380.6	511.4	597.8	630.5
75°	238.2	324.6	453.0	530.1	546.4
77.5°	177.5	268.6	392.3	425.0	413.3
80°	126.1	214.8	305.9	289.6	296.6
82.5°	81.7	163.5	189.2	214.8	221.8
85°	46.7	95.7	116.8	126.1	130.8
87.5°	21.0	35.0	46.7	46.7	44.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)