

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: P310458

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-RDP-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: P310458
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-CA125-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" 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: 4692.0 lumens
Efficiency: N/A
Efficacy: 73.3 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

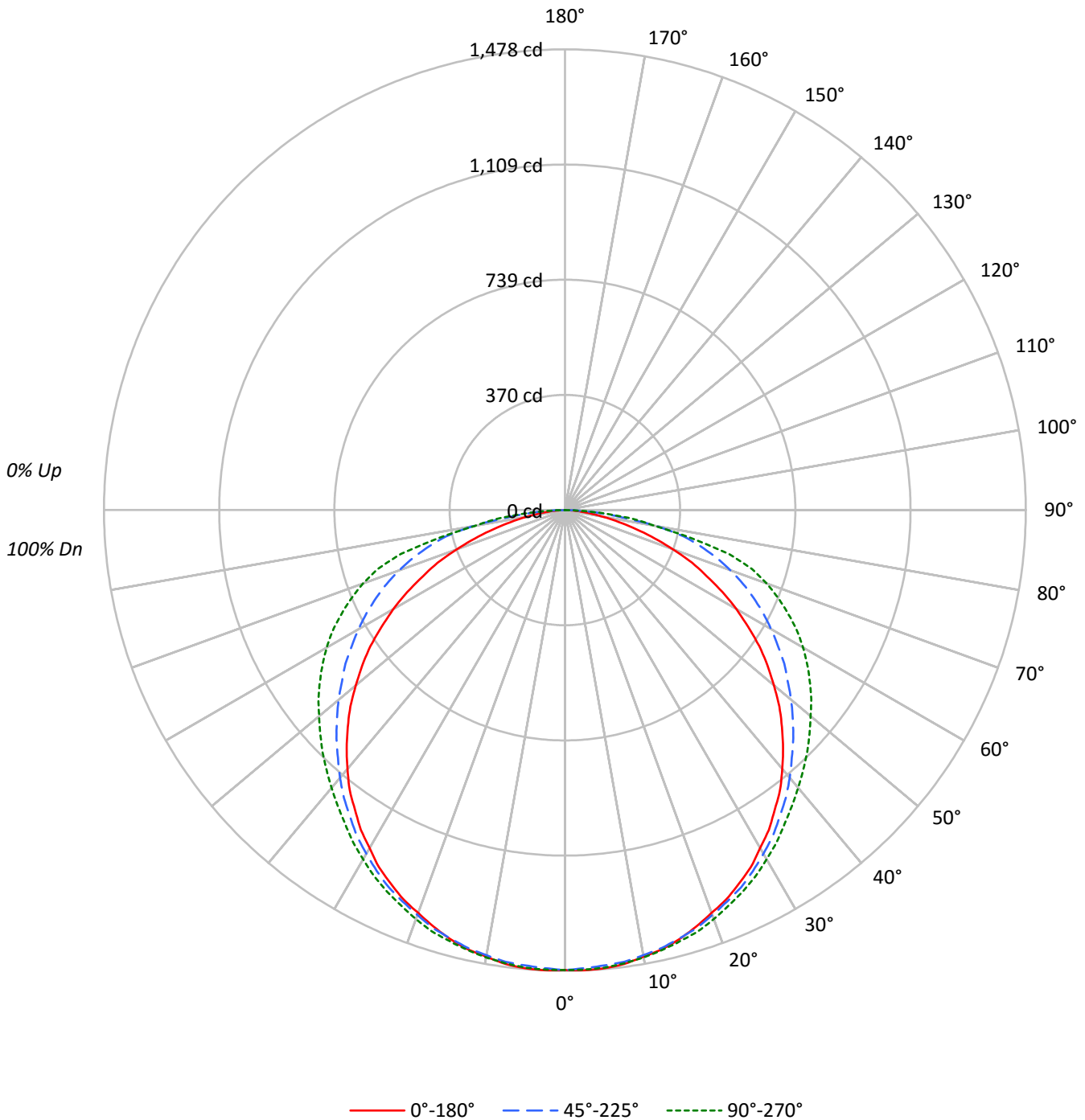
Input Watts (W): 64
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1985	1985	1985
5°	1993	1980	1990
10°	1987	1981	1990
15°	1984	1981	1994
20°	1969	1979	1999
25°	1962	1983	2004
30°	1945	1978	2010
35°	1927	1973	2018
40°	1905	1970	2044
45°	1873	1971	2090
50°	1832	1983	2153
55°	1785	2015	2249
60°	1710	2054	2373
65°	1600	2126	2519
70°	1456	2225	2710
75°	1234	2347	2831
80°	974	2362	2290
85°	718	1797	2012



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	140.0	3.0
10°-20°	402.8	8.6
20°-30°	616.0	13.1
30°-40°	753.0	16.0
40°-50°	802.6	17.1
50°-60°	767.4	16.4
60°-70°	650.1	13.9
70°-80°	436.9	9.3
80°-90°	123.2	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°	1158.8	24.7
0°-40°	1911.8	40.7
0°-60°	3481.8	74.2
0°-90°	4692.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4692.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1476	1476	1476	1476	1476	
5°	1476	1473	1466	1473	1473	140
15°	1424	1424	1422	1434	1431	402
25°	1322	1327	1336	1348	1350	609
35°	1173	1182	1201	1224	1229	735
45°	984	1001	1036	1080	1098	759
55°	761	789	859	926	959	678
65°	503	554	668	756	791	499
75°	237	324	452	528	545	254
85°	46	95	116	126	130	58
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1475.5	1475.5	1475.5	1475.5	1475.5
2.5°	1477.8	1477.8	1470.8	1475.5	1475.5
5°	1475.5	1473.2	1466.2	1473.2	1473.2
7.5°	1468.5	1466.2	1461.5	1468.5	1466.2
10°	1454.6	1454.6	1449.9	1456.9	1456.9
12.5°	1442.9	1440.6	1438.3	1447.6	1445.2
15°	1424.3	1424.3	1422.0	1433.6	1431.3
17.5°	1401.0	1403.4	1405.7	1415.0	1417.3
20°	1375.4	1380.1	1382.4	1396.4	1396.4
22.5°	1352.2	1354.5	1359.1	1373.1	1373.1
25°	1321.9	1326.6	1335.9	1347.5	1349.8
27.5°	1291.6	1294.0	1305.6	1321.9	1324.2
30°	1252.1	1259.1	1273.0	1291.6	1294.0
32.5°	1217.2	1224.2	1240.4	1259.1	1263.7
35°	1173.0	1182.3	1200.9	1224.2	1228.8
37.5°	1133.4	1140.4	1163.6	1189.2	1196.2
40°	1084.5	1098.5	1121.8	1152.0	1163.6
42.5°	1035.6	1049.6	1077.5	1117.1	1131.1
45°	984.4	1000.7	1035.6	1079.9	1098.5
47.5°	933.2	951.9	991.4	1042.6	1063.6
50°	875.1	898.3	947.2	1005.4	1028.7
52.5°	819.2	847.1	900.7	965.8	996.1
55°	761.0	789.0	858.8	926.3	958.8
57.5°	695.9	733.1	809.9	886.7	921.6
60°	635.3	670.3	763.4	847.1	882.0
62.5°	570.2	616.7	716.8	805.2	840.2
65°	502.7	553.9	667.9	756.4	791.3
67.5°	442.2	498.0	619.1	707.5	742.4
70°	370.0	439.9	565.5	654.0	688.9
72.5°	302.5	379.3	509.7	595.8	628.4
75°	237.4	323.5	451.5	528.3	544.6
77.5°	176.9	267.6	391.0	423.6	411.9
80°	125.7	214.1	304.9	288.6	295.6
82.5°	81.5	162.9	188.5	214.1	221.1
85°	46.5	95.4	116.4	125.7	130.3
87.5°	20.9	34.9	46.5	46.5	44.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)