

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: P311120

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-CA08-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: P311120
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: 24FCZ2-75HE-UNV-L82765-CA08-W2A-U-2700K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.08" ACRYLIC 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: 6324.0 lumens
Efficiency: N/A
Efficacy: 100.7 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

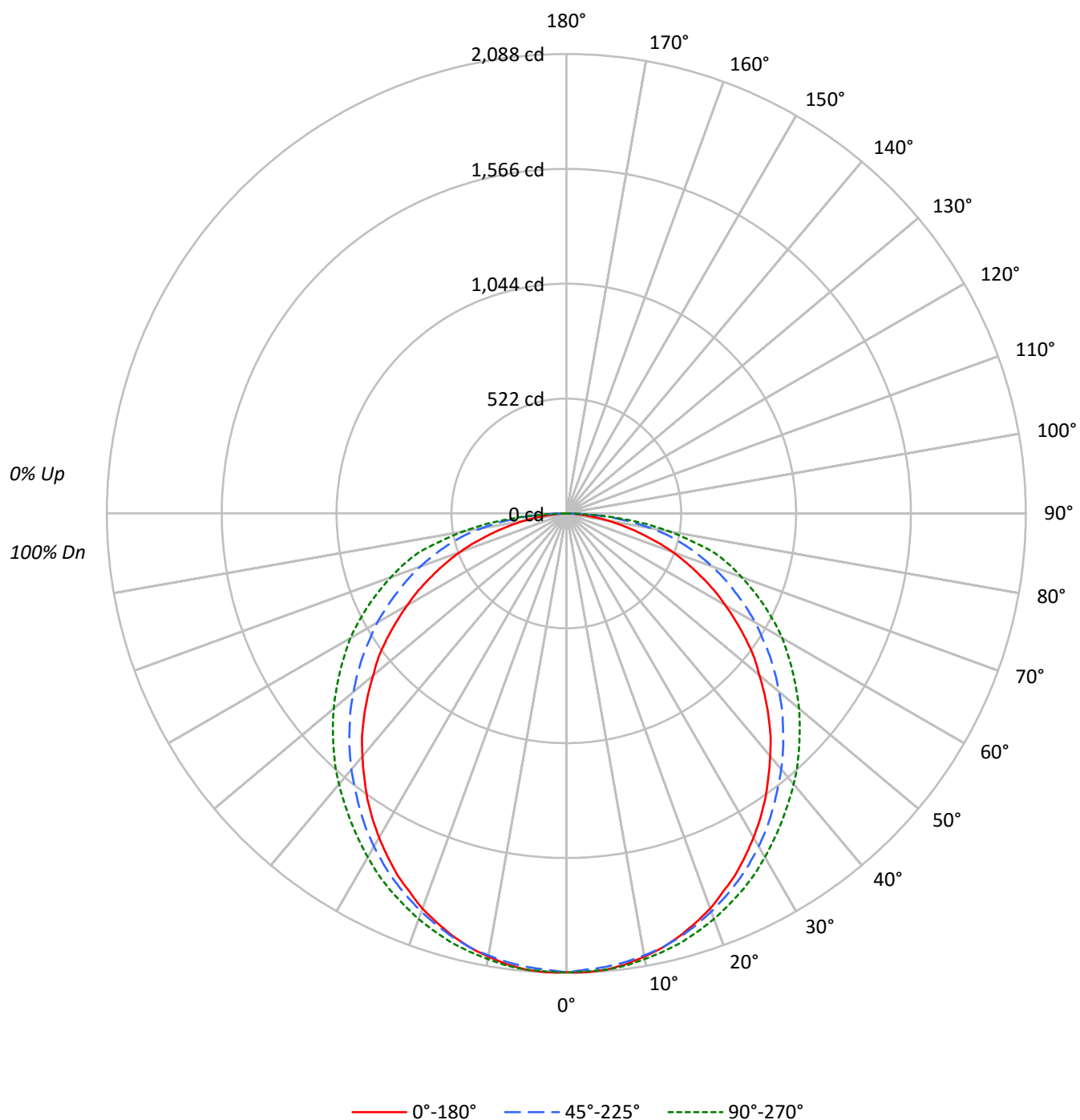
Input Watts (W): 62.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2806	2806	2806
5°	2811	2794	2811
10°	2795	2786	2809
15°	2771	2777	2812
20°	2737	2758	2809
25°	2694	2738	2807
30°	2644	2715	2803
35°	2592	2688	2805
40°	2532	2668	2823
45°	2471	2651	2847
50°	2398	2644	2890
55°	2338	2648	2948
60°	2247	2671	3049
65°	2144	2699	3160
70°	2031	2782	3335
75°	1811	2901	3643
80°	1544	3073	3723
85°	1101	3044	3563



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	197.4	3.1
10°-20°	564.4	8.9
20°-30°	852.4	13.5
30°-40°	1027.4	16.2
40°-50°	1078.6	17.1
50°-60°	1009.1	16.0
60°-70°	833.3	13.2
70°-80°	567.8	9.0
80°-90°	193.6	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°	1614.2	25.5
0°-40°	2641.6	41.8
0°-60°	4729.2	74.8
0°-90°	6324.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6324.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2086	2086	2086	2086	2086	
5°	2081	2079	2069	2081	2081	197
15°	1989	1991	1993	2014	2018	561
25°	1815	1823	1844	1880	1890	835
35°	1578	1595	1637	1691	1708	986
45°	1299	1326	1393	1469	1496	1002
55°	997	1036	1129	1221	1257	890
65°	674	730	848	955	992	668
75°	348	428	558	663	701	371
85°	71	141	197	222	231	89
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2085.6	2085.6	2085.6	2085.6	2085.6
2.5°	2087.7	2085.6	2075.1	2085.6	2083.5
5°	2081.4	2079.3	2068.8	2081.4	2081.4
7.5°	2066.7	2066.7	2056.2	2070.9	2073.0
10°	2045.7	2045.7	2039.4	2056.2	2056.2
12.5°	2020.6	2020.6	2020.6	2037.3	2039.4
15°	1989.1	1991.2	1993.3	2014.3	2018.5
17.5°	1951.3	1955.5	1961.8	1987.0	1991.2
20°	1911.5	1915.6	1926.1	1955.5	1961.8
22.5°	1861.1	1871.6	1886.3	1919.8	1926.1
25°	1814.9	1823.3	1844.3	1880.0	1890.5
27.5°	1758.3	1770.9	1798.1	1835.9	1850.6
30°	1701.6	1714.2	1747.8	1791.9	1804.4
32.5°	1640.8	1659.7	1695.3	1741.5	1756.2
35°	1577.8	1594.6	1636.6	1691.1	1707.9
37.5°	1508.6	1531.7	1577.8	1636.6	1657.6
40°	1441.5	1466.6	1519.1	1582.0	1607.2
42.5°	1374.3	1399.5	1458.2	1529.6	1554.8
45°	1298.8	1326.1	1393.2	1468.7	1496.0
47.5°	1223.2	1256.8	1330.3	1410.0	1439.4
50°	1145.6	1183.4	1263.1	1347.0	1380.6
52.5°	1076.4	1112.0	1196.0	1286.2	1317.7
55°	996.6	1036.5	1128.8	1221.1	1256.8
57.5°	914.8	958.9	1057.5	1158.2	1193.9
60°	835.1	883.3	992.4	1093.2	1133.0
62.5°	757.4	805.7	919.0	1023.9	1063.8
65°	673.5	730.2	847.7	954.7	992.4
67.5°	593.8	654.6	778.4	883.3	921.1
70°	516.2	574.9	707.1	809.9	847.7
72.5°	432.2	499.4	631.6	738.6	778.4
75°	348.3	428.0	558.1	663.0	700.8
77.5°	270.7	352.5	482.6	568.6	587.5
80°	199.3	283.3	396.6	457.4	480.5
82.5°	128.0	211.9	302.1	346.2	365.1
85°	71.3	140.6	197.2	222.4	230.8
87.5°	29.4	60.8	79.7	90.2	90.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)