

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: P314140

Luminaire Tested: **24FCZ2-75HE-UNV-L83050-CA08-W2A-U-3000K**

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: P314140
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-L83050-CA08-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.08" ACRYLIC SHEET
Light Source: (336) 3000K 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: 6513.0 lumens
Efficiency: N/A
Efficacy: 103.9 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

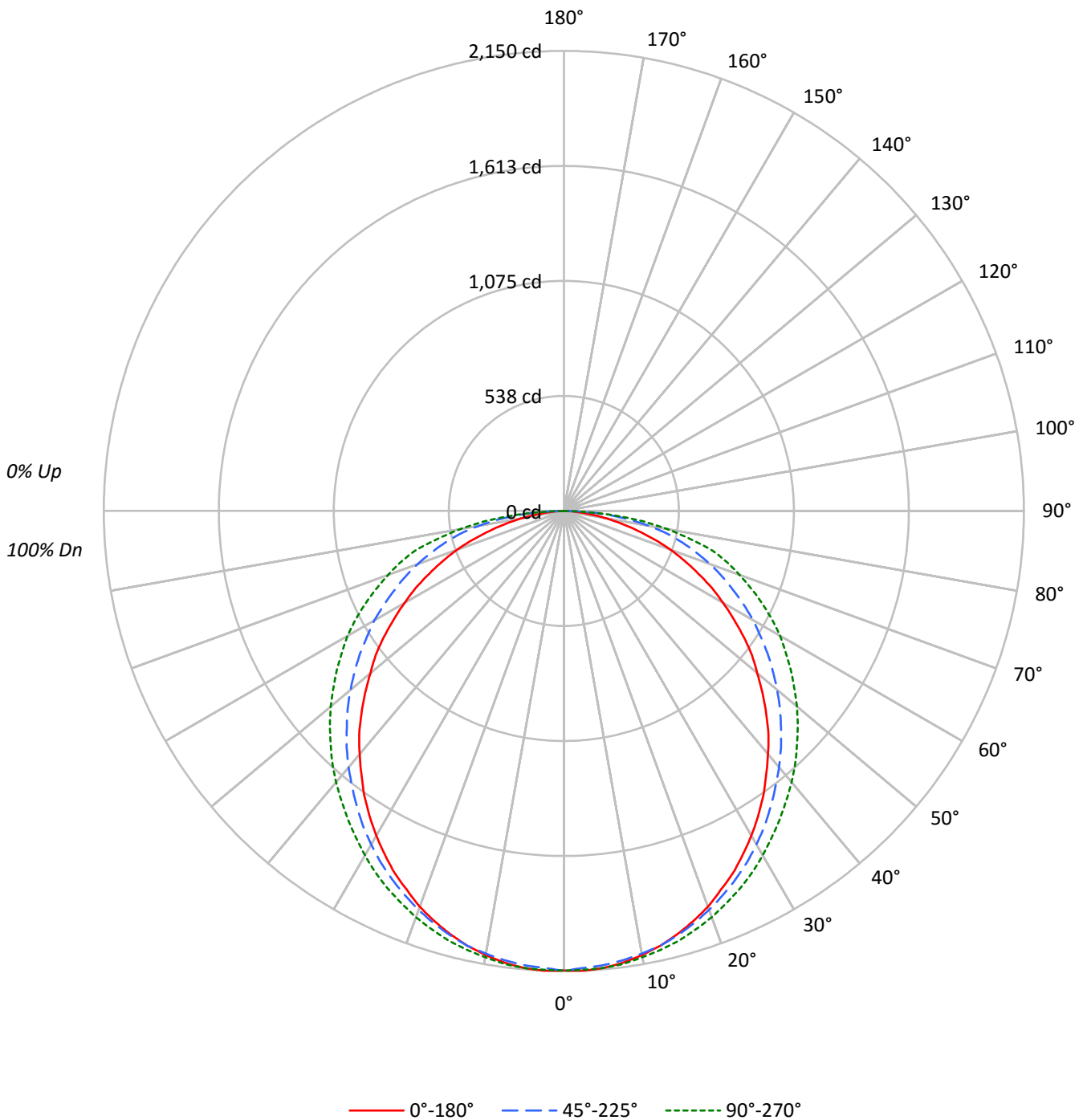
Input Watts (W): 62.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	92	89	92	89	87	88	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	37	31	57	45	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2890	2890	2890
5°	2895	2878	2895
10°	2879	2870	2893
15°	2853	2860	2896
20°	2819	2840	2893
25°	2775	2820	2890
30°	2723	2797	2887
35°	2669	2768	2889
40°	2607	2748	2907
45°	2545	2730	2932
50°	2470	2723	2976
55°	2408	2727	3036
60°	2314	2750	3140
65°	2208	2779	3254
70°	2091	2865	3434
75°	1865	2988	3752
80°	1591	3164	3834
85°	1135	3135	3670



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	203.3	3.1
10°-20°	581.2	8.9
20°-30°	877.9	13.5
30°-40°	1058.1	16.2
40°-50°	1110.8	17.1
50°-60°	1039.2	16.0
60°-70°	858.2	13.2
70°-80°	584.8	9.0
80°-90°	199.4	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°	1662.4	25.5
0°-40°	2720.5	41.8
0°-60°	4870.5	74.8
0°-90°	6513.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6513.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2148	2148	2148	2148	2148	
5°	2144	2141	2131	2144	2144	203
15°	2048	2051	2053	2074	2079	577
25°	1869	1878	1899	1936	1947	860
35°	1625	1642	1686	1742	1759	1015
45°	1338	1366	1435	1513	1541	1032
55°	1026	1068	1163	1258	1294	916
65°	694	752	873	983	1022	688
75°	359	441	575	683	722	382
85°	74	145	203	229	238	92
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2147.9	2147.9	2147.9	2147.9	2147.9
2.5°	2150.1	2147.9	2137.1	2147.9	2145.8
5°	2143.6	2141.4	2130.6	2143.6	2143.6
7.5°	2128.5	2128.5	2117.7	2132.8	2135.0
10°	2106.9	2106.9	2100.4	2117.7	2117.7
12.5°	2080.9	2080.9	2080.9	2098.2	2100.4
15°	2048.5	2050.7	2052.9	2074.5	2078.8
17.5°	2009.6	2014.0	2020.4	2046.4	2050.7
20°	1968.6	1972.9	1983.7	2014.0	2020.4
22.5°	1916.7	1927.5	1942.6	1977.2	1983.7
25°	1869.2	1877.8	1899.4	1936.2	1947.0
27.5°	1810.8	1823.8	1851.9	1890.8	1905.9
30°	1752.5	1765.5	1800.0	1845.4	1858.4
32.5°	1689.8	1709.3	1746.0	1793.5	1808.7
35°	1625.0	1642.3	1685.5	1741.7	1759.0
37.5°	1553.7	1577.5	1625.0	1685.5	1707.1
40°	1484.5	1510.5	1564.5	1629.3	1655.2
42.5°	1415.4	1441.3	1501.8	1575.3	1601.2
45°	1337.6	1365.7	1434.8	1512.6	1540.7
47.5°	1259.8	1294.4	1370.0	1452.1	1482.4
50°	1179.8	1218.7	1300.9	1387.3	1421.9
52.5°	1108.5	1145.3	1231.7	1324.6	1357.0
55°	1026.4	1067.5	1162.6	1257.6	1294.4
57.5°	942.2	987.5	1089.1	1192.8	1229.5
60°	860.0	909.7	1022.1	1125.8	1166.9
62.5°	780.1	829.8	946.5	1054.5	1095.6
65°	693.6	752.0	873.0	983.2	1022.1
67.5°	611.5	674.2	801.7	909.7	948.6
70°	531.6	592.1	728.2	834.1	873.0
72.5°	445.1	514.3	650.4	760.6	801.7
75°	358.7	440.8	574.8	682.8	721.7
77.5°	278.8	363.0	497.0	585.6	605.1
80°	205.3	291.7	408.4	471.1	494.8
82.5°	131.8	218.3	311.2	356.5	376.0
85°	73.5	144.8	203.1	229.1	237.7
87.5°	30.3	62.7	82.1	92.9	92.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)