

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: P314157

Luminaire Tested: **24FCZ2-75HE-UNV-L83050-CP187-W2A-U-4000K**

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: P314157
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-CP187-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.187" POLYCARB SHEET
Light Source: (336) 4000K 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: 6771.0 lumens
Efficiency: N/A
Efficacy: 105.5 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

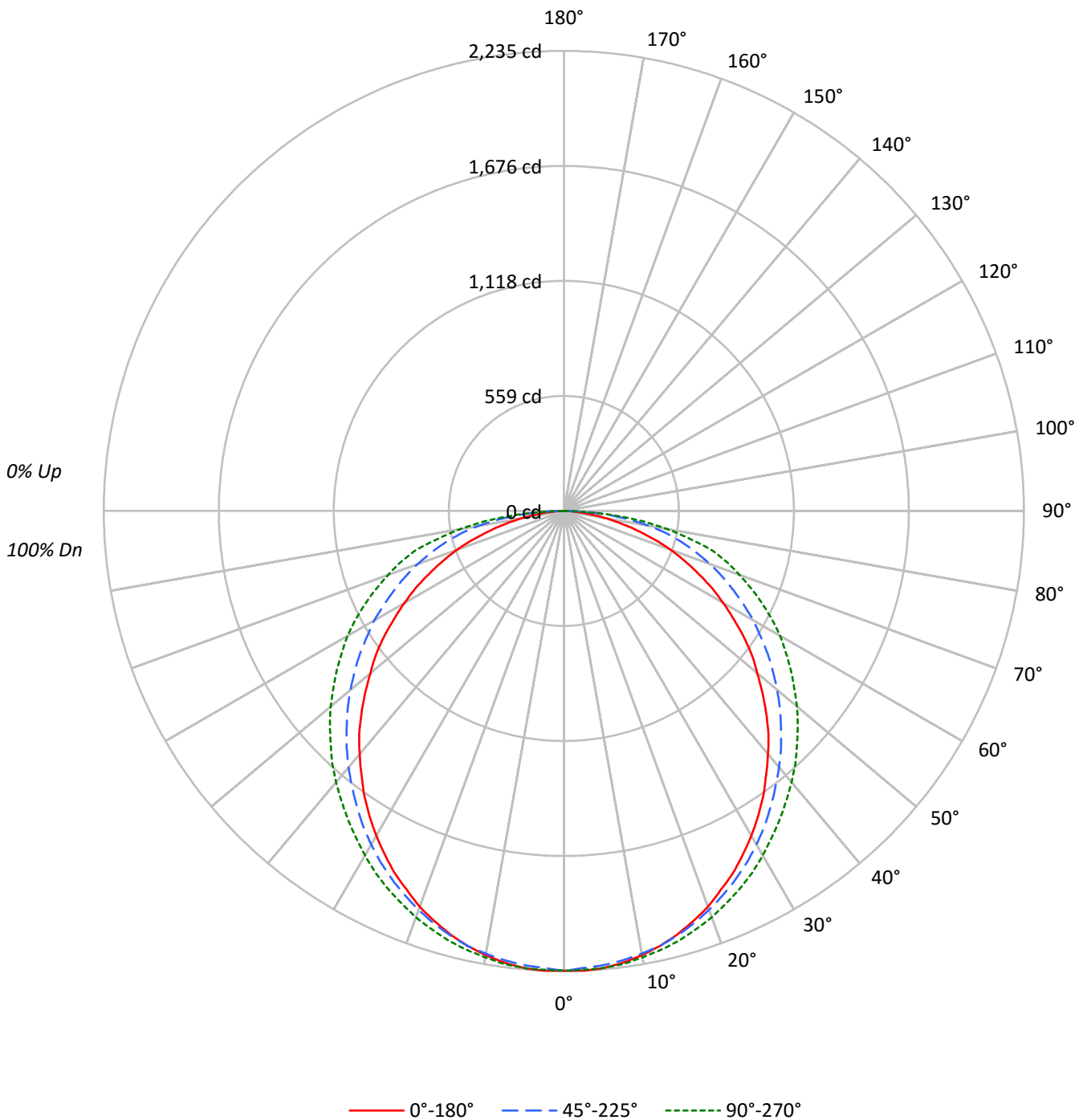
Input Watts (W): 64.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3004	3004	3004
5°	3010	2992	3010
10°	2992	2983	3008
15°	2967	2973	3010
20°	2930	2953	3008
25°	2885	2932	3005
30°	2831	2907	3002
35°	2775	2878	3004
40°	2711	2857	3022
45°	2646	2838	3048
50°	2568	2831	3094
55°	2503	2835	3157
60°	2406	2859	3264
65°	2296	2890	3383
70°	2174	2978	3570
75°	1939	3107	3900
80°	1654	3290	3986
85°	1179	3260	3815



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	211.3	3.1
10°-20°	604.3	8.9
20°-30°	912.7	13.5
30°-40°	1100.0	16.2
40°-50°	1154.8	17.1
50°-60°	1080.4	16.0
60°-70°	892.2	13.2
70°-80°	608.0	9.0
80°-90°	207.3	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°	1728.3	25.5
0°-40°	2828.3	41.8
0°-60°	5063.5	74.8
0°-90°	6771.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6771.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2233	2233	2233	2233	2233	
5°	2228	2226	2215	2228	2228	211
15°	2130	2132	2134	2157	2161	600
25°	1943	1952	1975	2013	2024	894
35°	1689	1707	1752	1811	1829	1056
45°	1391	1420	1492	1572	1602	1072
55°	1067	1110	1209	1308	1346	952
65°	721	782	908	1022	1063	715
75°	373	458	598	710	750	398
85°	76	150	211	238	247	96
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2233.0	2233.0	2233.0	2233.0	2233.0
2.5°	2235.3	2233.0	2221.8	2233.0	2230.8
5°	2228.5	2226.3	2215.0	2228.5	2228.5
7.5°	2212.8	2212.8	2201.6	2217.3	2219.5
10°	2190.3	2190.3	2183.6	2201.6	2201.6
12.5°	2163.4	2163.4	2163.4	2181.3	2183.6
15°	2129.7	2131.9	2134.2	2156.6	2161.1
17.5°	2089.2	2093.7	2100.5	2127.4	2131.9
20°	2046.6	2051.1	2062.3	2093.7	2100.5
22.5°	1992.6	2003.9	2019.6	2055.5	2062.3
25°	1943.2	1952.2	1974.7	2012.9	2024.1
27.5°	1882.6	1896.0	1925.2	1965.7	1981.4
30°	1821.9	1835.4	1871.3	1918.5	1932.0
32.5°	1756.8	1777.0	1815.2	1864.6	1880.3
35°	1689.4	1707.3	1752.3	1810.7	1828.6
37.5°	1615.2	1639.9	1689.4	1752.3	1774.7
40°	1543.3	1570.3	1626.5	1693.9	1720.8
42.5°	1471.5	1498.4	1561.3	1637.7	1664.7
45°	1390.6	1419.8	1491.7	1572.5	1601.8
47.5°	1309.7	1345.7	1424.3	1509.6	1541.1
50°	1226.6	1267.0	1352.4	1442.3	1478.2
52.5°	1152.5	1190.6	1280.5	1377.1	1410.8
55°	1067.1	1109.8	1208.6	1307.5	1345.7
57.5°	979.5	1026.6	1132.2	1240.1	1278.3
60°	894.1	945.8	1062.6	1170.4	1213.1
62.5°	811.0	862.7	984.0	1096.3	1139.0
65°	721.1	781.8	907.6	1022.2	1062.6
67.5°	635.8	700.9	833.4	945.8	986.2
70°	552.6	615.5	757.1	867.1	907.6
72.5°	462.8	534.7	676.2	790.8	833.4
75°	372.9	458.3	597.6	709.9	750.3
77.5°	289.8	377.4	516.7	608.8	629.0
80°	213.4	303.3	424.6	489.7	514.4
82.5°	137.0	226.9	323.5	370.7	390.9
85°	76.4	150.5	211.2	238.1	247.1
87.5°	31.5	65.1	85.4	96.6	96.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)