

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: P314531

Luminaire Tested: **24FCZ2-75HE-UNV-L83050-S-CP187-W2A-U-3500K**

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: P314531  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)  
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-S-CP187-W2A-U-3500K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.187" POLYCARB SHEET  
Light Source: (336) 3500K 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**

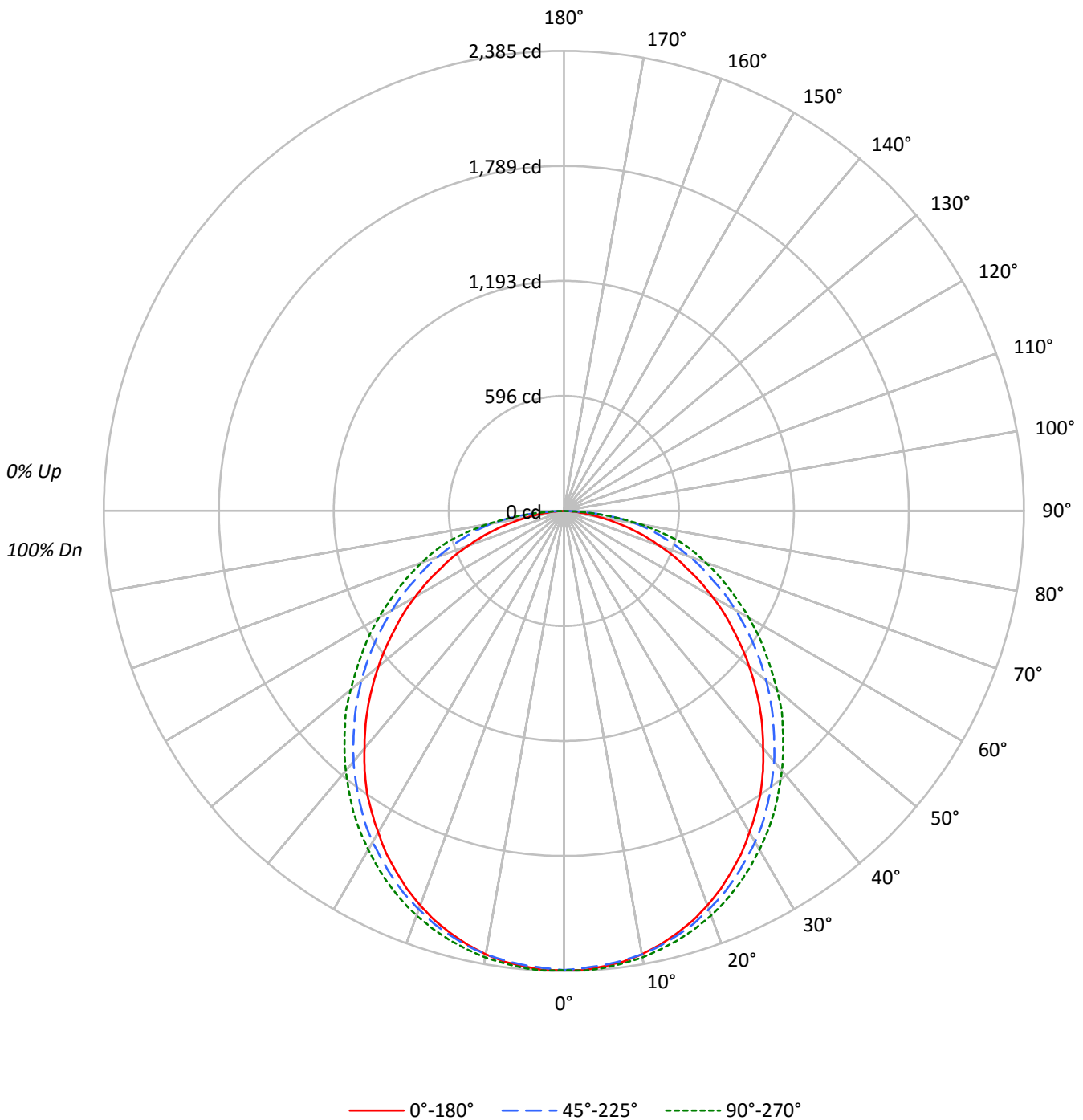
Lumens per Lamp: N/A  
Luminaire Lumens: 6776.0 lumens  
Efficiency: N/A  
Efficacy: 107.9 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 62.8  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	3203	3203	3203
5°	3201	3192	3212
10°	3188	3188	3211
15°	3157	3172	3205
20°	3116	3146	3196
25°	3058	3115	3176
30°	2990	3080	3150
35°	2924	3030	3125
40°	2824	2979	3088
45°	2732	2920	3055
50°	2627	2865	3018
55°	2509	2812	2989
60°	2392	2768	2983
65°	2241	2720	3001
70°	2074	2735	3082
75°	1857	2786	3256
80°	1501	2952	3185
85°	1130	2592	2526



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	225.4	3.3
10°-20°	643.9	9.5
20°-30°	968.0	14.3
30°-40°	1153.0	17.0
40°-50°	1180.0	17.4
50°-60°	1062.4	15.7
60°-70°	834.3	12.3
70°-80°	541.5	8.0
80°-90°	167.5	2.5
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°	1837.3	27.1
0°-40°	2990.3	44.1
0°-60°	5232.7	77.2
0°-90°	6776.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6776.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2380	2380	2380	2380	2380	
5°	2370	2374	2363	2376	2378	225
15°	2266	2273	2277	2296	2301	639
25°	2060	2077	2098	2133	2139	949
35°	1780	1802	1844	1890	1903	1110
45°	1436	1470	1535	1593	1606	1107
55°	1070	1117	1199	1261	1274	959
65°	704	758	854	926	943	701
75°	357	426	536	609	626	378
85°	73	136	168	164	164	88
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2380.5	2380.5	2380.5	2380.5	2380.5
2.5°	2382.6	2382.6	2371.8	2382.6	2384.8
5°	2369.7	2374.0	2363.2	2376.1	2378.3
7.5°	2356.8	2356.8	2350.3	2363.2	2365.4
10°	2333.1	2335.3	2333.1	2348.2	2350.3
12.5°	2303.0	2307.3	2309.4	2324.5	2326.6
15°	2266.4	2272.8	2277.1	2296.5	2300.8
17.5°	2225.5	2231.9	2242.7	2264.2	2268.5
20°	2176.0	2184.6	2197.5	2225.5	2231.9
22.5°	2122.2	2130.8	2152.3	2178.1	2188.9
25°	2059.8	2077.0	2098.5	2132.9	2139.4
27.5°	1997.3	2012.4	2040.4	2077.0	2085.6
30°	1924.2	1947.8	1982.3	2018.9	2027.5
32.5°	1853.1	1876.8	1917.7	1956.4	1967.2
35°	1780.0	1801.5	1844.5	1889.7	1902.6
37.5°	1696.0	1724.0	1771.3	1816.5	1829.5
40°	1607.8	1642.2	1696.0	1743.4	1758.4
42.5°	1523.8	1560.4	1614.2	1665.9	1683.1
45°	1435.6	1470.0	1534.6	1592.7	1605.6
47.5°	1345.2	1383.9	1452.8	1510.9	1532.4
50°	1254.8	1295.7	1368.9	1429.1	1442.0
52.5°	1164.4	1207.4	1284.9	1349.5	1356.0
55°	1069.7	1117.0	1198.8	1261.3	1274.2
57.5°	983.6	1024.5	1112.7	1177.3	1192.4
60°	888.9	934.1	1028.8	1089.1	1108.4
62.5°	798.5	845.9	944.9	1005.1	1022.3
65°	703.8	757.6	854.5	925.5	942.7
67.5°	622.0	673.7	777.0	845.9	863.1
70°	527.3	585.4	695.2	766.2	783.4
72.5°	445.5	505.8	615.6	684.4	710.3
75°	357.3	426.2	535.9	609.1	626.3
77.5°	271.2	350.8	462.7	518.7	518.7
80°	193.7	277.6	381.0	406.8	411.1
82.5°	127.0	208.8	282.0	279.8	279.8
85°	73.2	135.6	167.9	163.6	163.6
87.5°	28.0	56.0	60.3	60.3	58.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)