

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: P314158

Luminaire Tested: **24FCZ2-75HE-UNV-L83050-CP187-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: P314158  
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-4500K  
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.187" POLYCARB 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**

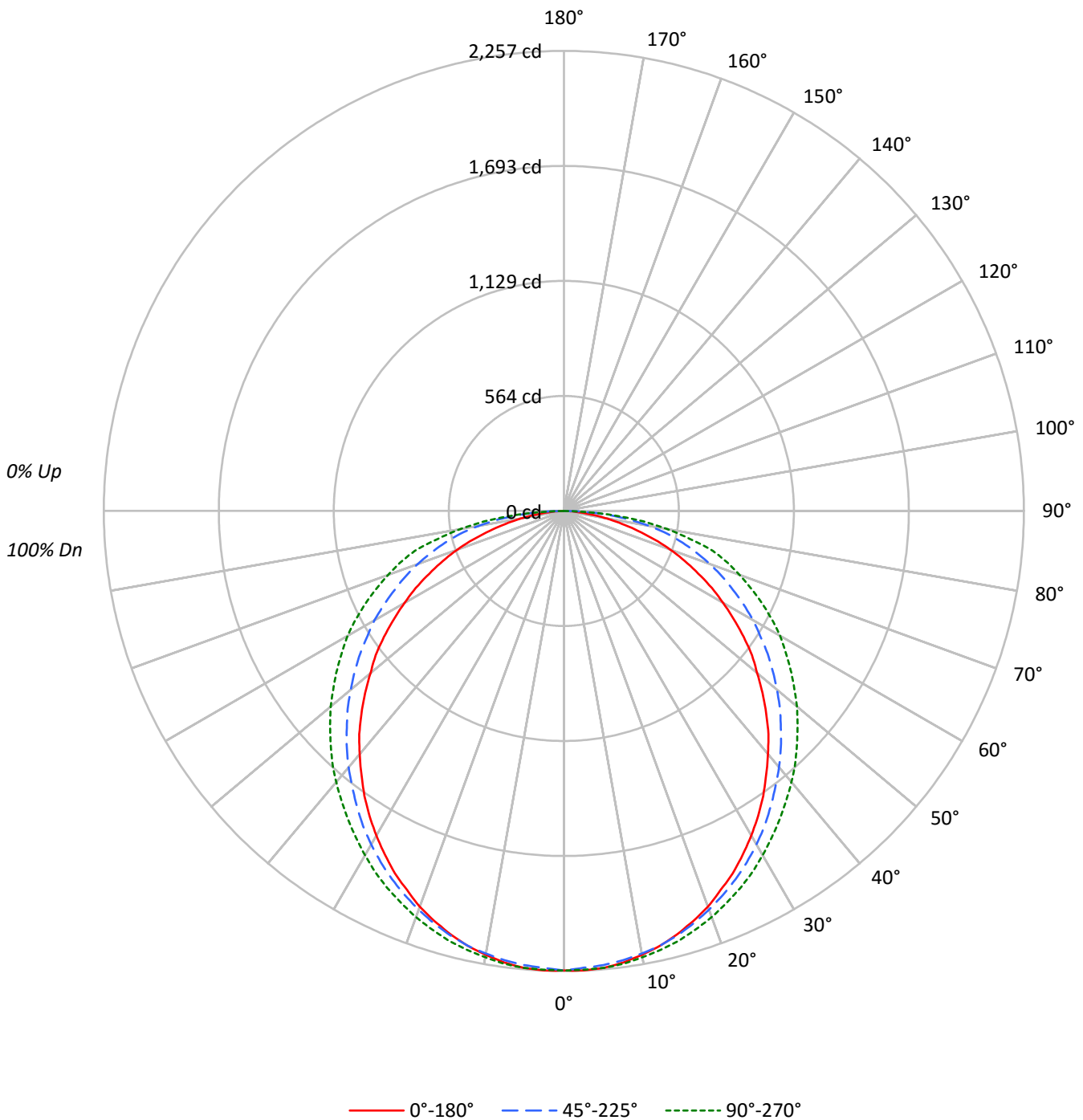
Lumens per Lamp: N/A  
Luminaire Lumens: 6836.0 lumens  
Efficiency: N/A  
Efficacy: 103.7 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 65.9  
Input Voltage (V): NR  
Input Current (A<sub>in</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	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°	3033	3033	3033
5°	3039	3020	3039
10°	3021	3012	3037
15°	2995	3001	3039
20°	2958	2981	3036
25°	2913	2960	3034
30°	2858	2935	3030
35°	2802	2906	3032
40°	2737	2884	3051
45°	2671	2866	3077
50°	2592	2858	3124
55°	2527	2862	3187
60°	2429	2887	3296
65°	2318	2917	3415
70°	2195	3007	3605
75°	1957	3136	3938
80°	1670	3322	4025
85°	1190	3291	3852



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	213.4	3.1
10°-20°	610.1	8.9
20°-30°	921.4	13.5
30°-40°	1110.6	16.2
40°-50°	1165.9	17.1
50°-60°	1090.8	16.0
60°-70°	900.8	13.2
70°-80°	613.8	9.0
80°-90°	209.3	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°	1744.9	25.5
0°-40°	2855.4	41.8
0°-60°	5112.1	74.8
0°-90°	6836.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6836.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2254	2254	2254	2254	2254	
5°	2250	2248	2236	2250	2250	213
15°	2150	2152	2155	2177	2182	606
25°	1962	1971	1994	2032	2044	903
35°	1706	1724	1769	1828	1846	1066
45°	1404	1433	1506	1588	1617	1083
55°	1077	1120	1220	1320	1359	962
65°	728	789	916	1032	1073	722
75°	376	463	603	717	758	401
85°	77	152	213	240	250	97
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2254.5	2254.5	2254.5	2254.5	2254.5
2.5°	2256.7	2254.5	2243.1	2254.5	2252.2
5°	2249.9	2247.6	2236.3	2249.9	2249.9
7.5°	2234.0	2234.0	2222.7	2238.6	2240.8
10°	2211.4	2211.4	2204.6	2222.7	2222.7
12.5°	2184.1	2184.1	2184.1	2202.3	2204.6
15°	2150.1	2152.4	2154.7	2177.3	2181.9
17.5°	2109.3	2113.8	2120.6	2147.9	2152.4
20°	2066.2	2070.7	2082.1	2113.8	2120.6
22.5°	2011.8	2023.1	2039.0	2075.3	2082.1
25°	1961.9	1970.9	1993.6	2032.2	2043.5
27.5°	1900.6	1914.2	1943.7	1984.6	2000.4
30°	1839.4	1853.0	1889.3	1936.9	1950.5
32.5°	1773.6	1794.0	1832.6	1882.5	1898.4
35°	1705.6	1723.7	1769.1	1828.1	1846.2
37.5°	1630.7	1655.7	1705.6	1769.1	1791.8
40°	1558.2	1585.4	1642.1	1710.1	1737.3
42.5°	1485.6	1512.8	1576.3	1653.4	1680.6
45°	1403.9	1433.4	1506.0	1587.6	1617.1
47.5°	1322.3	1358.6	1438.0	1524.1	1555.9
50°	1238.4	1279.2	1365.4	1456.1	1492.4
52.5°	1163.5	1202.1	1292.8	1390.3	1424.3
55°	1077.3	1120.4	1220.2	1320.0	1358.6
57.5°	988.9	1036.5	1143.1	1252.0	1290.5
60°	902.7	954.9	1072.8	1181.7	1224.8
62.5°	818.8	870.9	993.4	1106.8	1149.9
65°	728.0	789.3	916.3	1032.0	1072.8
67.5°	641.9	707.6	841.5	954.9	995.7
70°	557.9	621.4	764.3	875.5	916.3
72.5°	467.2	539.8	682.7	798.4	841.5
75°	376.5	462.7	603.3	716.7	757.5
77.5°	292.6	381.0	521.7	614.6	635.1
80°	215.5	306.2	428.7	494.4	519.4
82.5°	138.4	229.1	326.6	374.2	394.6
85°	77.1	152.0	213.2	240.4	249.5
87.5°	31.8	65.8	86.2	97.5	97.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)