

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: P309774

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-HRP-CA08-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: P309774  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)  
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-HRP-CA08-W2A-U-4500K  
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC 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**

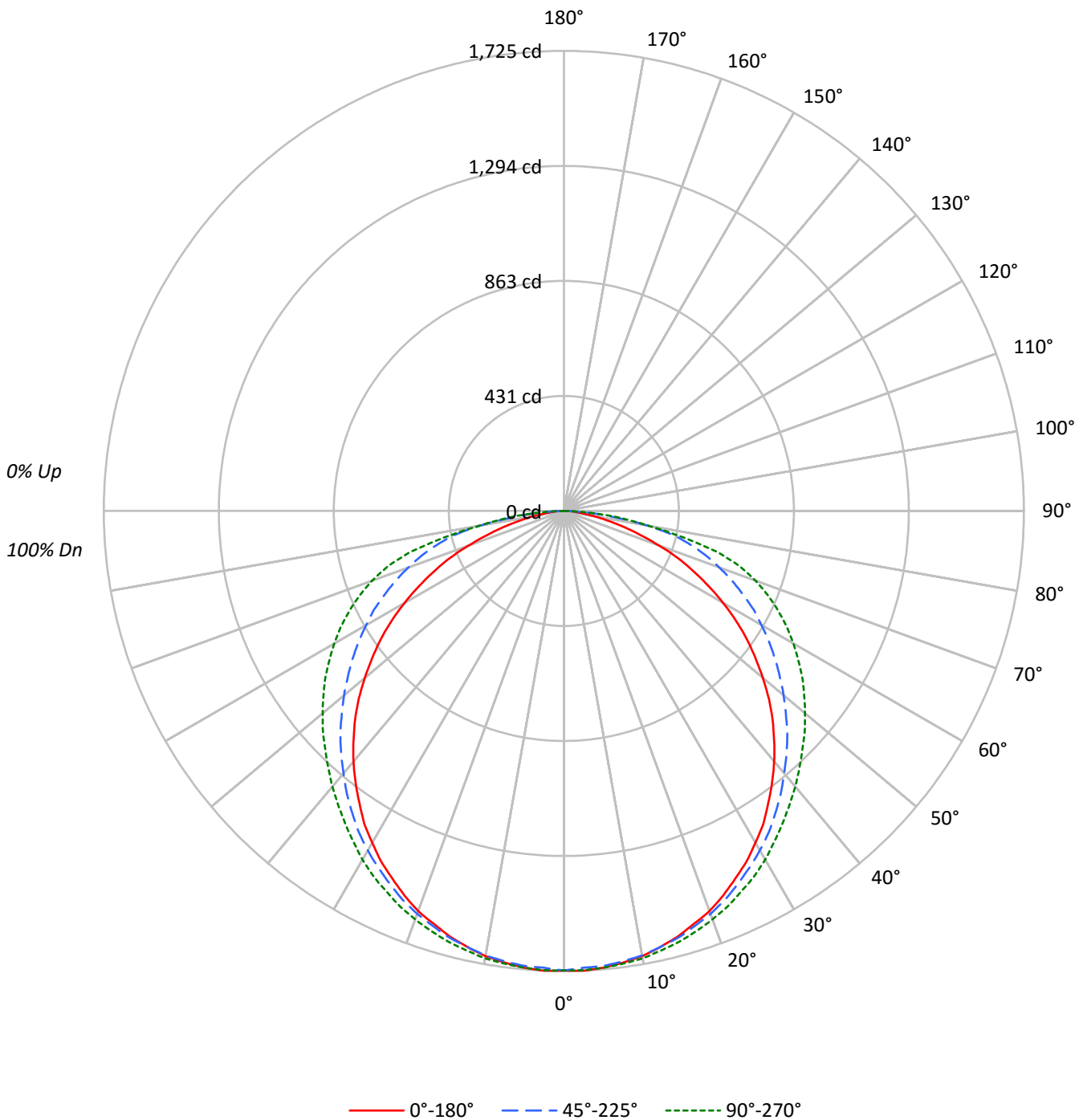
Lumens per Lamp: N/A  
Luminaire Lumens: 5311.0 lumens  
Efficiency: N/A  
Efficacy: 83.0 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 64  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage 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				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	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	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	24	35	29	24	23

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

	0°	45°	90°
0°	2319	2319	2319
5°	2321	2312	2321
10°	2315	2312	2327
15°	2301	2307	2329
20°	2286	2302	2334
25°	2258	2291	2337
30°	2231	2283	2346
35°	2195	2272	2348
40°	2156	2257	2370
45°	2107	2255	2407
50°	2039	2253	2471
55°	1966	2269	2561
60°	1855	2303	2675
65°	1713	2357	2824
70°	1496	2440	3009
75°	1214	2566	3109
80°	896	2515	2515
85°	687	1854	2093



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	163.2	3.1
10°-20°	468.8	8.8
20°-30°	713.6	13.4
30°-40°	866.5	16.3
40°-50°	915.5	17.2
50°-60°	863.8	16.3
60°-70°	718.2	13.5
70°-80°	472.5	8.9
80°-90°	128.8	2.4
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°	1345.6	25.3
0°-40°	2212.1	41.7
0°-60°	3991.4	75.2
0°-90°	5311.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5311.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1723	1723	1723	1723	1723	
5°	1719	1719	1712	1719	1719	163
15°	1652	1654	1656	1672	1672	466
25°	1521	1530	1543	1570	1574	702
35°	1336	1352	1383	1418	1430	836
45°	1107	1130	1185	1243	1265	853
55°	838	874	967	1058	1092	747
65°	538	600	740	849	887	532
75°	234	340	494	585	598	252
85°	44	98	120	133	136	54
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1723.2	1723.2	1723.2	1723.2	1723.2
2.5°	1725.4	1723.2	1714.3	1723.2	1723.2
5°	1718.7	1718.7	1712.0	1718.7	1718.7
7.5°	1707.6	1707.6	1703.1	1712.0	1712.0
10°	1694.3	1694.3	1692.0	1703.1	1703.1
12.5°	1674.2	1676.5	1674.2	1687.6	1687.6
15°	1652.0	1654.2	1656.5	1672.0	1672.0
17.5°	1623.1	1627.6	1632.0	1649.8	1652.0
20°	1596.4	1598.6	1607.5	1627.6	1629.8
22.5°	1560.8	1567.5	1578.6	1598.6	1605.3
25°	1520.8	1529.7	1543.1	1569.7	1574.2
27.5°	1483.0	1489.7	1507.5	1536.4	1545.3
30°	1436.3	1447.5	1469.7	1498.6	1509.7
32.5°	1391.9	1403.0	1429.7	1460.8	1469.7
35°	1336.3	1351.8	1383.0	1418.5	1429.7
37.5°	1282.9	1298.5	1336.3	1376.3	1389.6
40°	1227.3	1245.1	1285.1	1331.8	1349.6
42.5°	1167.3	1191.8	1236.2	1287.4	1307.4
45°	1107.3	1129.5	1185.1	1242.9	1265.1
47.5°	1042.8	1069.5	1129.5	1198.4	1225.1
50°	973.9	1007.2	1076.1	1151.7	1180.6
52.5°	904.9	942.7	1020.6	1105.0	1136.2
55°	838.2	873.8	967.2	1058.4	1091.7
57.5°	764.9	809.3	911.6	1009.4	1042.8
60°	689.3	738.2	856.0	958.3	993.9
62.5°	613.7	669.3	802.7	904.9	942.7
65°	538.1	600.3	740.4	849.4	887.1
67.5°	464.7	533.6	682.6	791.5	829.3
70°	380.2	466.9	620.3	727.1	764.9
72.5°	302.4	402.4	560.3	660.4	693.7
75°	233.5	340.2	493.6	584.8	598.1
77.5°	171.2	277.9	424.7	455.8	458.0
80°	115.6	222.3	324.6	320.2	324.6
82.5°	75.6	166.8	204.6	229.0	231.2
85°	44.5	97.8	120.1	133.4	135.6
87.5°	22.2	33.4	42.2	44.5	48.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)