

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: P309773

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-HRP-CA08-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: P309773  
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-4000K  
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC 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**

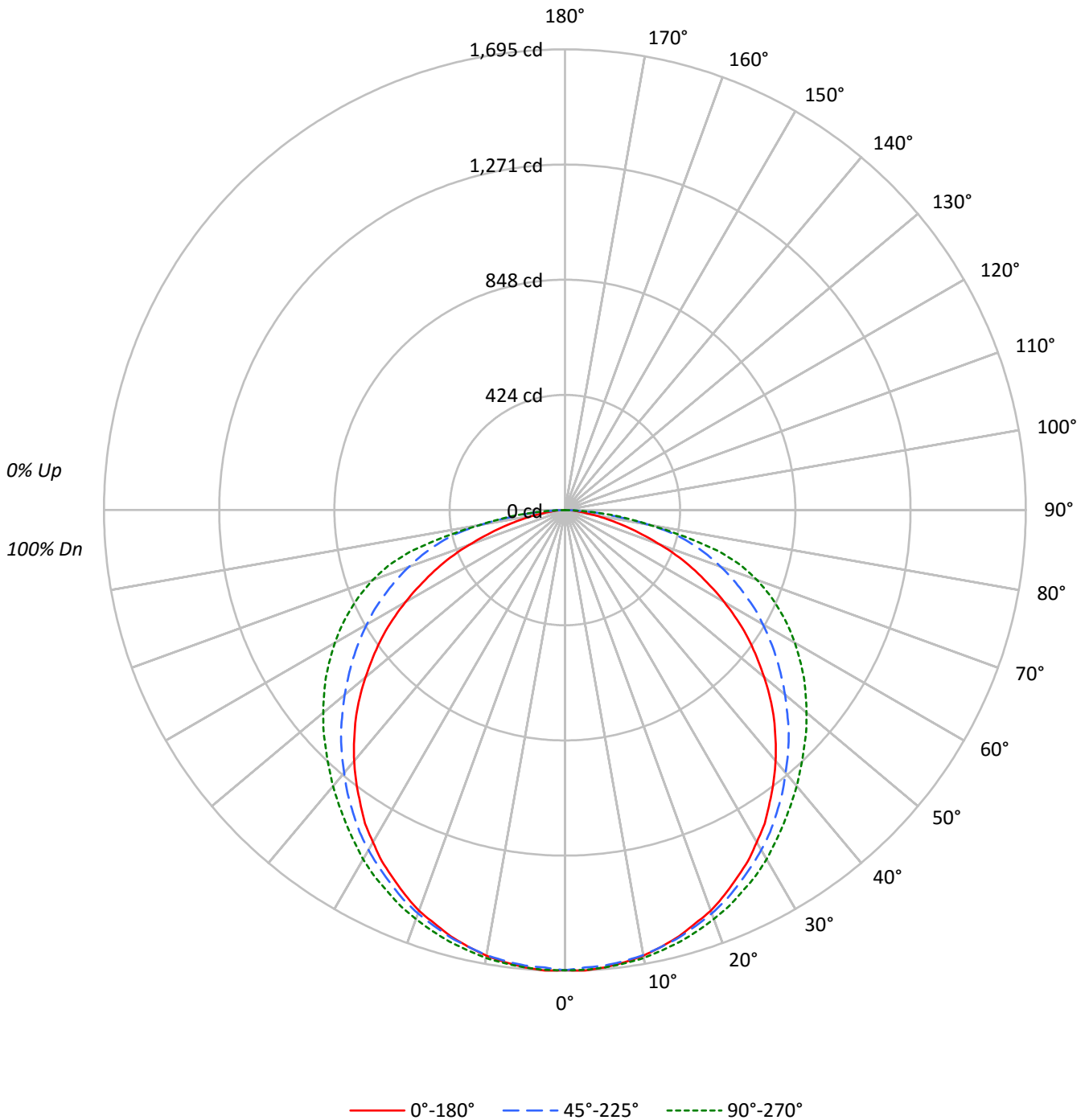
Lumens per Lamp: N/A  
Luminaire Lumens: 5218.0 lumens  
Efficiency: N/A  
Efficacy: 82.2 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 63.5  
Input Voltage (V): NR  
Input Current (Ain): NR  
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	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					100			
1	108	103	98	94	105	101	96	93	96	93	90	92	90	87	89	86	84	82					82			
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67					67			
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56					56			
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48					48			
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41					41			
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36					36			
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31					31			
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30	28					28			
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25					25			
10	52	38	30	25	50	38	30	25	37	30	25	36	29	24	35	29	24	23					23			

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

	0°	45°	90°
0°	2278	2278	2278
5°	2281	2272	2281
10°	2274	2271	2286
15°	2261	2267	2288
20°	2246	2261	2293
25°	2218	2251	2296
30°	2192	2243	2305
35°	2156	2232	2307
40°	2118	2218	2329
45°	2070	2215	2365
50°	2003	2213	2428
55°	1932	2229	2516
60°	1822	2263	2628
65°	1683	2316	2775
70°	1469	2398	2956
75°	1193	2521	3055
80°	880	2471	2471
85°	675	1822	2058



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	160.4	3.1
10°-20°	460.5	8.8
20°-30°	701.1	13.4
30°-40°	851.3	16.3
40°-50°	899.4	17.2
50°-60°	848.7	16.3
60°-70°	705.7	13.5
70°-80°	464.3	8.9
80°-90°	126.6	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°	1322.1	25.3
0°-40°	2173.4	41.7
0°-60°	3921.5	75.2
0°-90°	5218.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5218.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1693	1693	1693	1693	1693	
5°	1689	1689	1682	1689	1689	160
15°	1623	1625	1627	1643	1643	458
25°	1494	1503	1516	1542	1547	689
35°	1313	1328	1359	1394	1405	822
45°	1088	1110	1164	1221	1243	838
55°	824	858	950	1040	1073	734
65°	529	590	727	834	872	523
75°	229	334	485	574	588	247
85°	44	96	118	131	133	53
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1693.0	1693.0	1693.0	1693.0	1693.0
2.5°	1695.2	1693.0	1684.2	1693.0	1693.0
5°	1688.6	1688.6	1682.1	1688.6	1688.6
7.5°	1677.7	1677.7	1673.3	1682.1	1682.1
10°	1664.6	1664.6	1662.4	1673.3	1673.3
12.5°	1644.9	1647.1	1644.9	1658.0	1658.0
15°	1623.1	1625.3	1627.4	1642.7	1642.7
17.5°	1594.7	1599.1	1603.4	1620.9	1623.1
20°	1568.5	1570.7	1579.4	1599.1	1601.2
22.5°	1533.5	1540.1	1551.0	1570.7	1577.2
25°	1494.2	1502.9	1516.0	1542.3	1546.6
27.5°	1457.1	1463.6	1481.1	1509.5	1518.2
30°	1411.2	1422.1	1444.0	1472.4	1483.3
32.5°	1367.5	1378.4	1404.6	1435.2	1444.0
35°	1312.9	1328.2	1358.8	1393.7	1404.6
37.5°	1260.5	1275.7	1312.9	1352.2	1365.3
40°	1205.8	1223.3	1262.6	1308.5	1326.0
42.5°	1146.9	1170.9	1214.6	1264.8	1284.5
45°	1087.9	1109.7	1164.3	1221.1	1243.0
47.5°	1024.5	1050.7	1109.7	1177.4	1203.7
50°	956.8	989.6	1057.3	1131.6	1160.0
52.5°	889.1	926.2	1002.7	1085.7	1116.3
55°	823.6	858.5	950.3	1039.8	1072.6
57.5°	751.5	795.2	895.6	991.8	1024.5
60°	677.2	725.3	841.0	941.5	976.5
62.5°	602.9	657.5	788.6	889.1	926.2
65°	528.6	589.8	727.4	834.5	871.6
67.5°	456.6	524.3	670.6	777.7	814.8
70°	373.5	458.7	609.5	714.3	751.5
72.5°	297.1	395.4	550.5	648.8	681.6
75°	229.4	334.2	485.0	574.5	587.6
77.5°	168.2	273.1	417.2	447.8	450.0
80°	113.6	218.4	318.9	314.6	318.9
82.5°	74.3	163.8	201.0	225.0	227.2
85°	43.7	96.1	118.0	131.1	133.3
87.5°	21.8	32.8	41.5	43.7	48.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)