

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: P310408

Luminaire Tested: **24FCZ2-70HE-UNV-L82765-RDP-CA08-W2A-U-6500K**

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: P310408  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 24FCZ2-70HE-UNV-L82765-RDP-CA08-W2A-U-6500K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC SHEET  
Light Source: (336) 6500K 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**

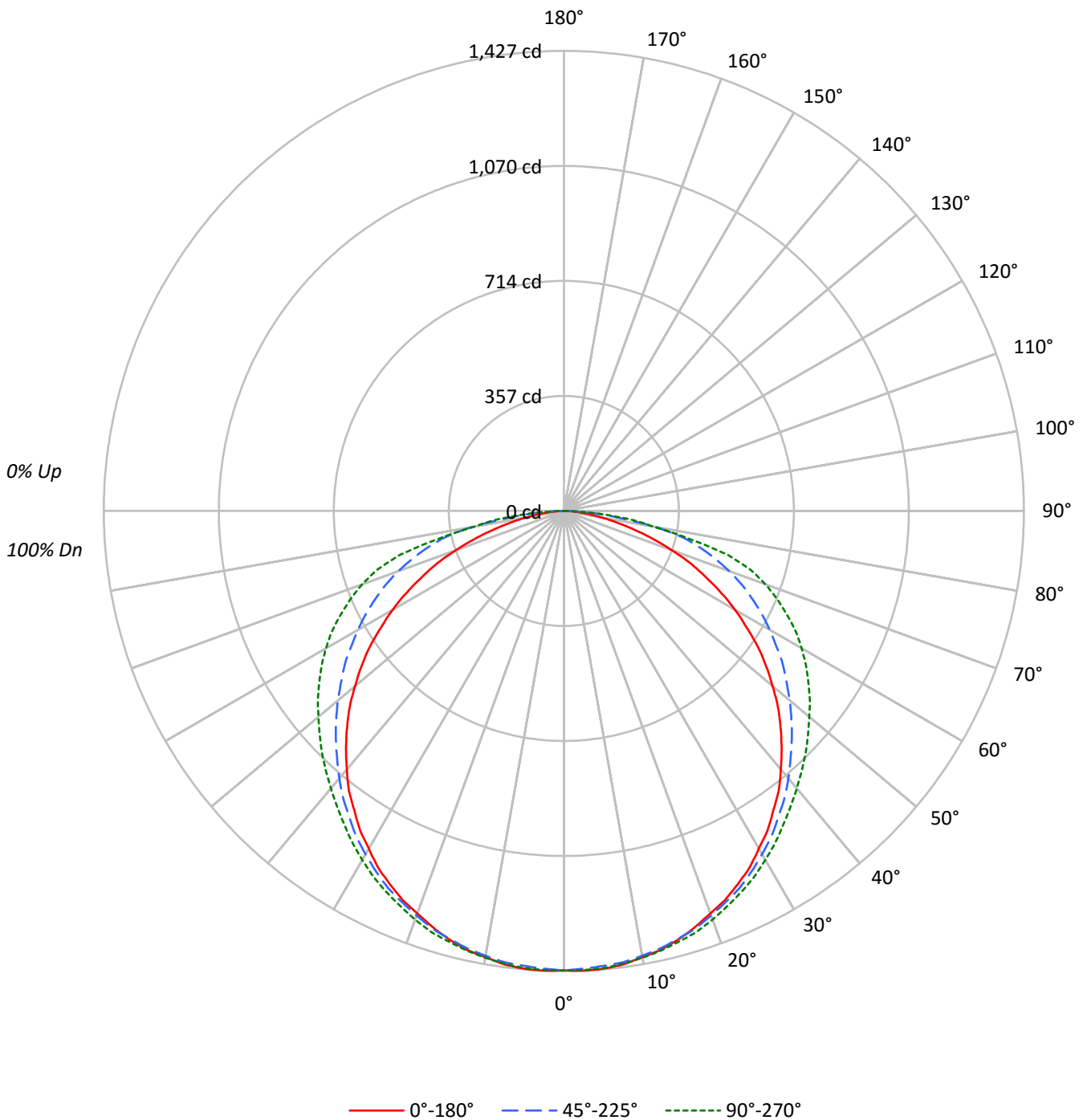
Lumens per Lamp: N/A  
Luminaire Lumens: 4532.0 lumens  
Efficiency: N/A  
Efficacy: 75.2 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 60.3  
Input Voltage (V): NR  
Input Current (Ain): NR  
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	100	96	92	96	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

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

	0°	45°	90°
0°	1918	1918	1918
5°	1925	1913	1922
10°	1920	1913	1923
15°	1916	1913	1926
20°	1902	1912	1931
25°	1896	1916	1936
30°	1879	1910	1942
35°	1861	1905	1950
40°	1840	1903	1974
45°	1809	1903	2019
50°	1769	1915	2080
55°	1724	1946	2172
60°	1651	1984	2293
65°	1546	2054	2433
70°	1406	2149	2618
75°	1192	2267	2734
80°	941	2282	2212
85°	695	1735	1944



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	135.2	3.0
10°-20°	389.1	8.6
20°-30°	595.0	13.1
30°-40°	727.4	16.0
40°-50°	775.2	17.1
50°-60°	741.2	16.4
60°-70°	627.9	13.9
70°-80°	422.0	9.3
80°-90°	119.1	2.6
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°	1119.3	24.7
0°-40°	1846.6	40.7
0°-60°	3363.0	74.2
0°-90°	4532.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4532.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1425	1425	1425	1425	1425	
5°	1425	1423	1416	1423	1423	135
15°	1376	1376	1374	1385	1382	388
25°	1277	1281	1290	1302	1304	588
35°	1133	1142	1160	1182	1187	710
45°	951	967	1000	1043	1061	733
55°	735	762	830	895	926	655
65°	486	535	645	731	764	482
75°	229	312	436	510	526	245
85°	45	92	112	121	126	56
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1425.2	1425.2	1425.2	1425.2	1425.2
2.5°	1427.4	1427.4	1420.7	1425.2	1425.2
5°	1425.2	1422.9	1416.2	1422.9	1422.9
7.5°	1418.4	1416.2	1411.7	1418.4	1416.2
10°	1405.0	1405.0	1400.5	1407.2	1407.2
12.5°	1393.7	1391.5	1389.2	1398.2	1396.0
15°	1375.7	1375.7	1373.5	1384.7	1382.5
17.5°	1353.3	1355.5	1357.7	1366.7	1369.0
20°	1328.5	1333.0	1335.3	1348.8	1348.8
22.5°	1306.0	1308.3	1312.8	1326.3	1326.3
25°	1276.8	1281.3	1290.3	1301.5	1303.8
27.5°	1247.6	1249.8	1261.1	1276.8	1279.1
30°	1209.4	1216.1	1229.6	1247.6	1249.8
32.5°	1175.7	1182.4	1198.1	1216.1	1220.6
35°	1133.0	1141.9	1159.9	1182.4	1186.9
37.5°	1094.7	1101.5	1124.0	1148.7	1155.4
40°	1047.5	1061.0	1083.5	1112.7	1124.0
42.5°	1000.3	1013.8	1040.8	1079.0	1092.5
45°	950.9	966.6	1000.3	1043.0	1061.0
47.5°	901.4	919.4	957.6	1007.1	1027.3
50°	845.2	867.7	914.9	971.1	993.6
52.5°	791.3	818.2	869.9	932.9	962.1
55°	735.1	762.0	829.5	894.7	926.1
57.5°	672.1	708.1	782.3	856.5	890.2
60°	613.7	647.4	737.3	818.2	852.0
62.5°	550.7	595.7	692.4	777.8	811.5
65°	485.6	535.0	645.2	730.6	764.3
67.5°	427.1	481.1	597.9	683.4	717.1
70°	357.4	424.9	546.2	631.7	665.4
72.5°	292.2	366.4	492.3	575.5	606.9
75°	229.3	312.5	436.1	510.3	526.0
77.5°	170.8	258.5	377.7	409.1	397.9
80°	121.4	206.8	294.5	278.7	285.5
82.5°	78.7	157.4	182.1	206.8	213.6
85°	45.0	92.2	112.4	121.4	125.9
87.5°	20.2	33.7	45.0	45.0	42.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)