

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: P309650

Luminaire Tested: **24FCZ2-60HE-UNV-L82765-HRP-CA125-W2A-U-5500K**

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: P309650  
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: 24FCZ2-60HE-UNV-L82765-HRP-CA125-W2A-U-5500K  
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" ACRYLIC SHEET  
Light Source: (336) 5500K 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**

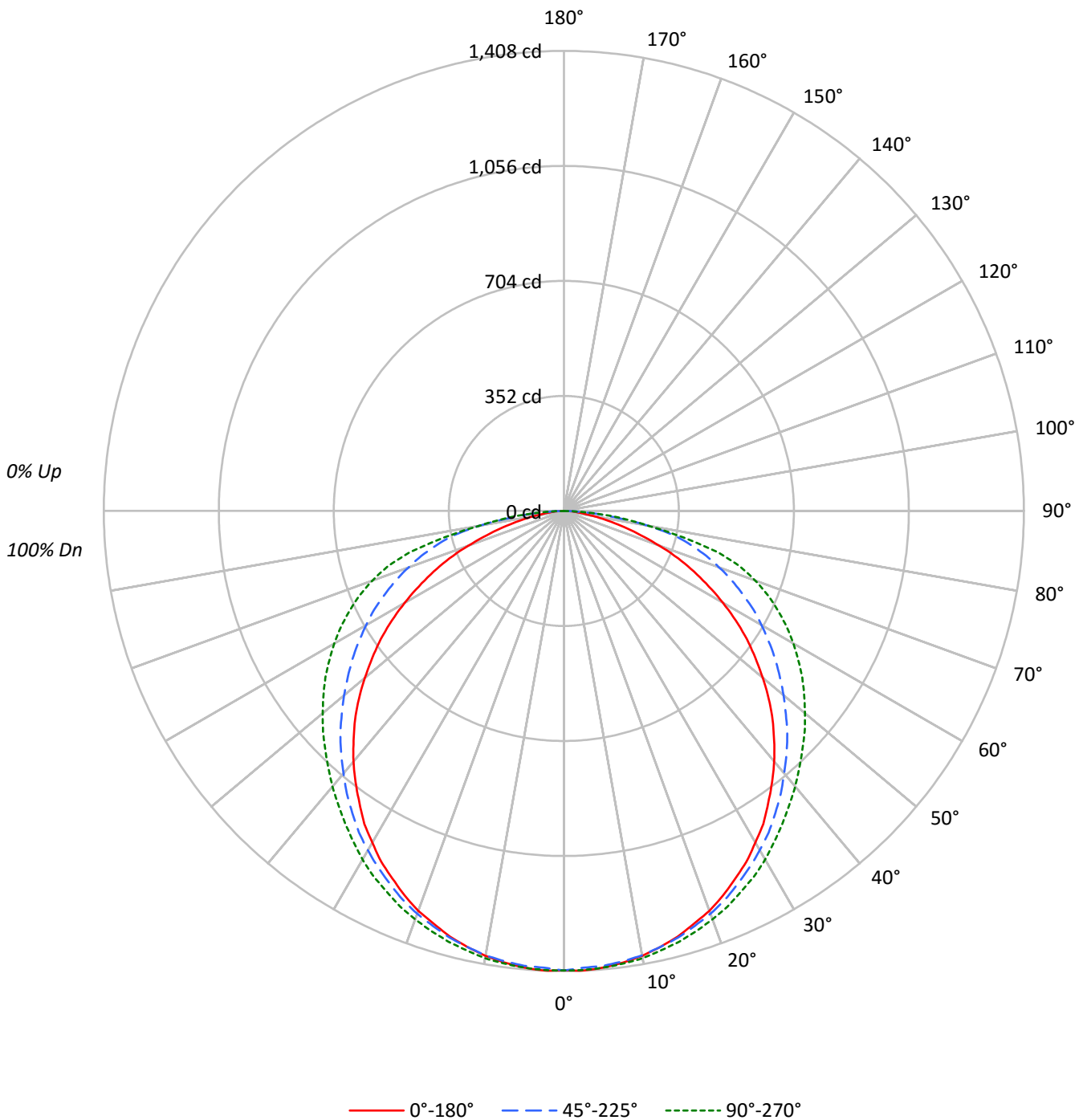
Lumens per Lamp: N/A  
Luminaire Lumens: 4334.0 lumens  
Efficiency: N/A  
Efficacy: 88.6 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 48.9  
Input Voltage (V): NR  
Input Current (Ain): NR  
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°	1892	1892	1892
5°	1894	1887	1894
10°	1889	1887	1899
15°	1878	1883	1901
20°	1865	1878	1904
25°	1843	1869	1907
30°	1821	1863	1914
35°	1791	1854	1916
40°	1759	1842	1934
45°	1719	1840	1964
50°	1663	1838	2017
55°	1605	1852	2090
60°	1514	1880	2182
65°	1398	1924	2305
70°	1221	1991	2456
75°	990	2094	2537
80°	731	2053	2053
85°	560	1513	1709



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	133.2	3.1
10°-20°	382.5	8.8
20°-30°	582.4	13.4
30°-40°	707.1	16.3
40°-50°	747.1	17.2
50°-60°	704.9	16.3
60°-70°	586.1	13.5
70°-80°	385.6	8.9
80°-90°	105.1	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°	1098.1	25.3
0°-40°	1805.2	41.7
0°-60°	3257.2	75.2
0°-90°	4334.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4334.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1406	1406	1406	1406	1406	
5°	1402	1402	1397	1402	1402	133
15°	1348	1350	1352	1364	1364	380
25°	1241	1248	1259	1281	1285	572
35°	1090	1103	1129	1158	1167	683
45°	904	922	967	1014	1032	696
55°	684	713	789	864	891	609
65°	439	490	604	693	724	434
75°	190	278	403	477	488	205
85°	36	80	98	109	111	44
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1406.2	1406.2	1406.2	1406.2	1406.2
2.5°	1408.0	1406.2	1398.9	1406.2	1406.2
5°	1402.5	1402.5	1397.1	1402.5	1402.5
7.5°	1393.5	1393.5	1389.8	1397.1	1397.1
10°	1382.6	1382.6	1380.8	1389.8	1389.8
12.5°	1366.3	1368.1	1366.3	1377.1	1377.1
15°	1348.1	1349.9	1351.7	1364.4	1364.4
17.5°	1324.5	1328.1	1331.8	1346.3	1348.1
20°	1302.7	1304.6	1311.8	1328.1	1330.0
22.5°	1273.7	1279.2	1288.2	1304.6	1310.0
25°	1241.1	1248.3	1259.2	1281.0	1284.6
27.5°	1210.2	1215.7	1230.2	1253.8	1261.0
30°	1172.1	1181.2	1199.3	1222.9	1232.0
32.5°	1135.8	1144.9	1166.7	1192.1	1199.3
35°	1090.5	1103.2	1128.6	1157.6	1166.7
37.5°	1046.9	1059.6	1090.5	1123.1	1134.0
40°	1001.6	1016.1	1048.7	1086.8	1101.3
42.5°	952.6	972.5	1008.8	1050.5	1066.9
45°	903.6	921.7	967.1	1014.3	1032.4
47.5°	851.0	872.7	921.7	978.0	999.7
50°	794.7	821.9	878.2	939.9	963.5
52.5°	738.5	769.3	832.8	901.8	927.2
55°	684.0	713.1	789.3	863.7	890.9
57.5°	624.2	660.4	743.9	823.7	851.0
60°	562.5	602.4	698.5	782.0	811.0
62.5°	500.8	546.1	655.0	738.5	769.3
65°	439.1	489.9	604.2	693.1	724.0
67.5°	379.2	435.5	557.0	645.9	676.8
70°	310.3	381.0	506.2	593.3	624.2
72.5°	246.8	328.4	457.2	538.9	566.1
75°	190.5	277.6	402.8	477.2	488.1
77.5°	139.7	226.8	346.6	372.0	373.8
80°	94.3	181.4	264.9	261.3	264.9
82.5°	61.7	136.1	166.9	186.9	188.7
85°	36.3	79.8	98.0	108.9	110.7
87.5°	18.1	27.2	34.5	36.3	39.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)