

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: P309652

Luminaire Tested: **24FCZ2-60HE-UNV-L82765-HRP-CA125-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: P309652  
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-6500K  
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" 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**

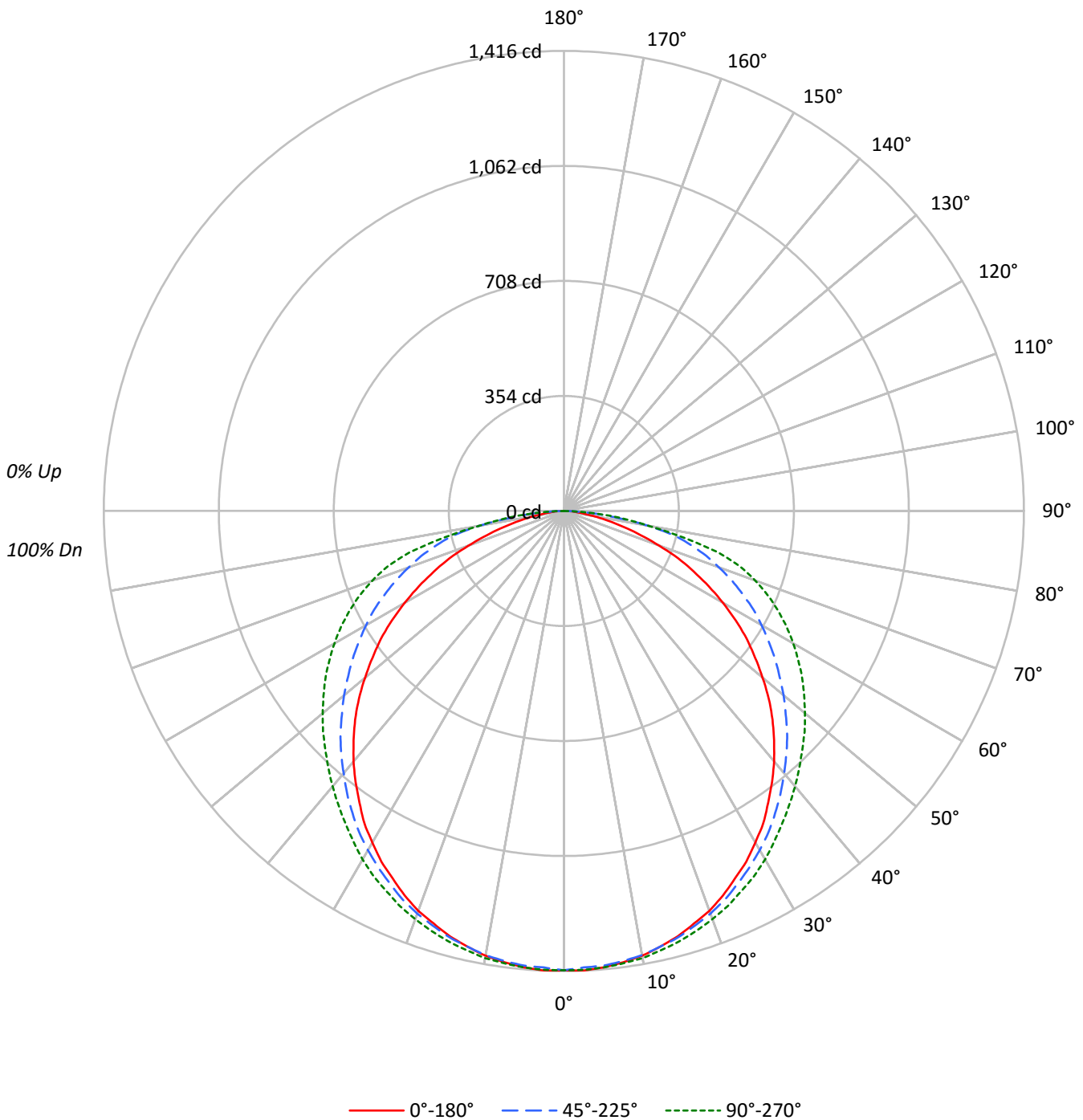
Lumens per Lamp: N/A  
Luminaire Lumens: 4357.0 lumens  
Efficiency: N/A  
Efficacy: 87.7 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 49.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
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°	1902	1902	1902
5°	1904	1897	1904
10°	1899	1896	1909
15°	1888	1893	1911
20°	1875	1888	1914
25°	1852	1879	1917
30°	1831	1873	1924
35°	1801	1864	1927
40°	1769	1852	1945
45°	1729	1850	1975
50°	1672	1848	2027
55°	1613	1861	2101
60°	1522	1890	2194
65°	1405	1934	2317
70°	1227	2002	2469
75°	996	2105	2551
80°	735	2063	2063
85°	563	1521	1718



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	133.9	3.1
10°-20°	384.6	8.8
20°-30°	585.4	13.4
30°-40°	710.9	16.3
40°-50°	751.0	17.2
50°-60°	708.7	16.3
60°-70°	589.2	13.5
70°-80°	387.7	8.9
80°-90°	105.7	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°	1103.9	25.3
0°-40°	1814.8	41.7
0°-60°	3274.5	75.2
0°-90°	4357.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4357.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1414	1414	1414	1414	1414	
5°	1410	1410	1404	1410	1410	134
15°	1355	1357	1359	1372	1372	382
25°	1248	1255	1266	1288	1291	576
35°	1096	1109	1135	1164	1173	686
45°	908	927	972	1020	1038	700
55°	688	717	794	868	896	613
65°	441	492	607	697	728	436
75°	192	279	405	480	491	206
85°	36	80	98	109	111	45
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1413.6	1413.6	1413.6	1413.6	1413.6
2.5°	1415.5	1413.6	1406.3	1413.6	1413.6
5°	1410.0	1410.0	1404.5	1410.0	1410.0
7.5°	1400.9	1400.9	1397.2	1404.5	1404.5
10°	1389.9	1389.9	1388.1	1397.2	1397.2
12.5°	1373.5	1375.3	1373.5	1384.4	1384.4
15°	1355.3	1357.1	1358.9	1371.7	1371.7
17.5°	1331.6	1335.2	1338.8	1353.4	1355.3
20°	1309.7	1311.5	1318.8	1335.2	1337.0
22.5°	1280.5	1285.9	1295.1	1311.5	1317.0
25°	1247.6	1254.9	1265.9	1287.8	1291.4
27.5°	1216.6	1222.1	1236.7	1260.4	1267.7
30°	1178.3	1187.5	1205.7	1229.4	1238.5
32.5°	1141.8	1151.0	1172.9	1198.4	1205.7
35°	1096.2	1109.0	1134.6	1163.7	1172.9
37.5°	1052.5	1065.2	1096.2	1129.1	1140.0
40°	1006.9	1021.5	1054.3	1092.6	1107.2
42.5°	957.6	977.7	1014.2	1056.1	1072.5
45°	908.4	926.6	972.2	1019.6	1037.9
47.5°	855.5	877.4	926.6	983.2	1005.0
50°	798.9	826.3	882.8	944.9	968.6
52.5°	742.4	773.4	837.2	906.5	932.1
55°	687.7	716.8	793.5	868.2	895.6
57.5°	627.5	664.0	747.9	828.1	855.5
60°	565.5	605.6	702.3	786.2	815.3
62.5°	503.4	549.0	658.5	742.4	773.4
65°	441.4	492.5	607.4	696.8	727.8
67.5°	381.2	437.8	560.0	649.4	680.4
70°	311.9	383.0	508.9	596.5	627.5
72.5°	248.1	330.2	459.7	541.7	569.1
75°	191.5	279.1	404.9	479.7	490.7
77.5°	140.5	228.0	348.4	373.9	375.8
80°	94.9	182.4	266.3	262.7	266.3
82.5°	62.0	136.8	167.8	187.9	189.7
85°	36.5	80.3	98.5	109.4	111.3
87.5°	18.2	27.4	34.7	36.5	40.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)