

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: P313346

Luminaire Tested: **24FCZ2-65HE-UNV-L83050-HRP-CA125-W2A-U-3500K**

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: P313346  
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: 24FCZ2-65HE-UNV-L83050-HRP-CA125-W2A-U-3500K  
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" ACRYLIC SHEET  
Light Source: (336) 3500K 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: 4625.0 lumens  
Efficiency: N/A  
Efficacy: 87.9 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

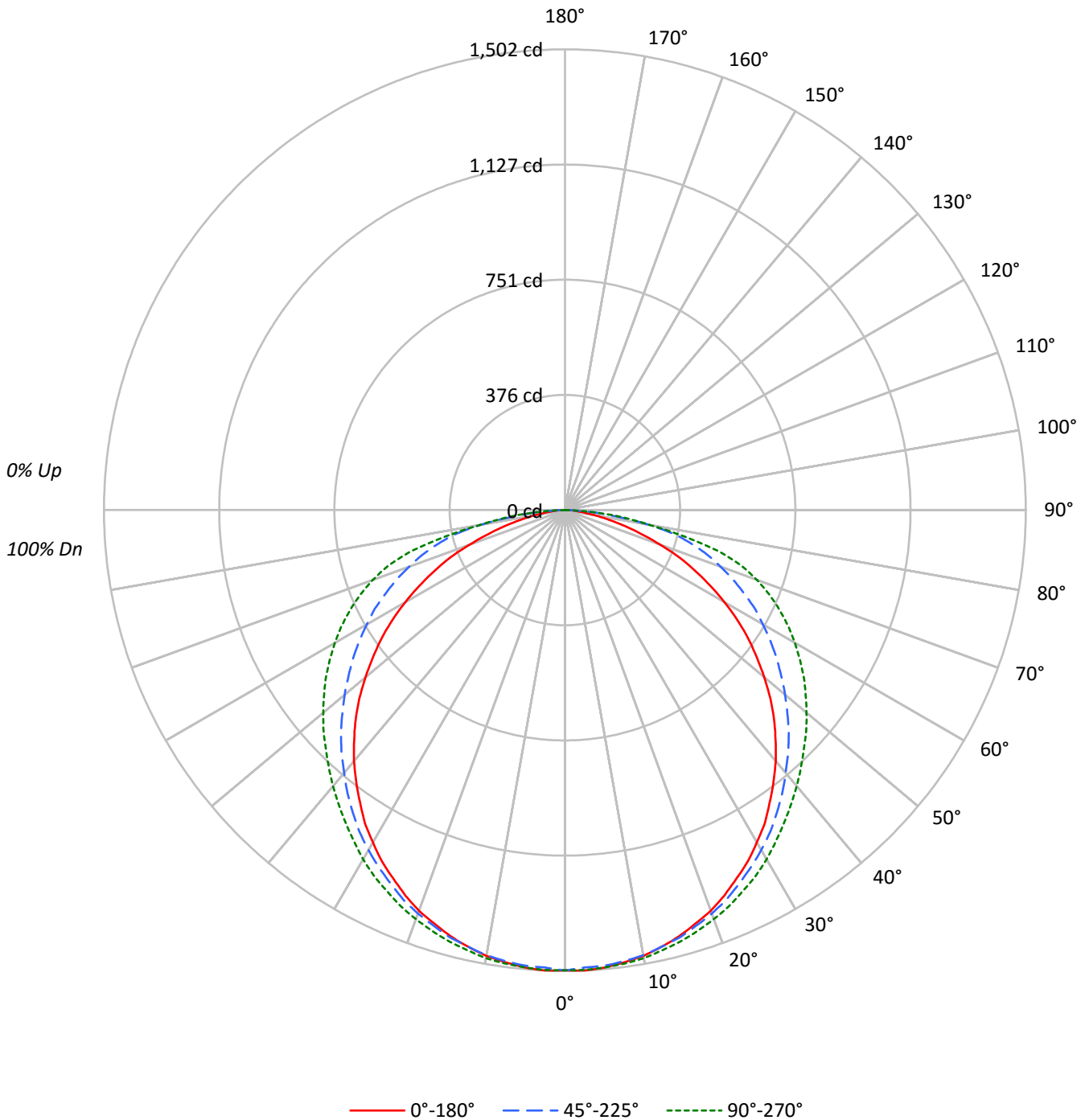
Input Watts (W): 52.6  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	2019	2019	2019
5°	2021	2014	2021
10°	2016	2013	2026
15°	2004	2009	2028
20°	1991	2004	2032
25°	1966	1995	2035
30°	1943	1989	2043
35°	1911	1978	2045
40°	1877	1966	2064
45°	1835	1964	2096
50°	1775	1962	2152
55°	1712	1976	2230
60°	1615	2006	2329
65°	1492	2053	2460
70°	1303	2125	2620
75°	1057	2234	2707
80°	780	2190	2190
85°	597	1615	1823



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	142.2	3.1
10°-20°	408.2	8.8
20°-30°	621.4	13.4
30°-40°	754.6	16.3
40°-50°	797.2	17.2
50°-60°	752.3	16.3
60°-70°	625.5	13.5
70°-80°	411.5	8.9
80°-90°	112.2	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°	1171.8	25.3
0°-40°	1926.4	41.7
0°-60°	3475.9	75.2
0°-90°	4625.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4625.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1501	1501	1501	1501	1501	
5°	1497	1497	1491	1497	1497	142
15°	1439	1441	1442	1456	1456	406
25°	1324	1332	1344	1367	1371	611
35°	1164	1177	1204	1235	1245	728
45°	964	984	1032	1082	1102	743
55°	730	761	842	922	951	650
65°	469	523	645	740	773	463
75°	203	296	430	509	521	219
85°	39	85	105	116	118	47
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1500.6	1500.6	1500.6	1500.6	1500.6
2.5°	1502.5	1500.6	1492.8	1500.6	1500.6
5°	1496.7	1496.7	1490.9	1496.7	1496.7
7.5°	1487.0	1487.0	1483.2	1490.9	1490.9
10°	1475.4	1475.4	1473.5	1483.2	1483.2
12.5°	1458.0	1459.9	1458.0	1469.6	1469.6
15°	1438.6	1440.6	1442.5	1456.1	1456.1
17.5°	1413.5	1417.3	1421.2	1436.7	1438.6
20°	1390.2	1392.2	1399.9	1417.3	1419.3
22.5°	1359.2	1365.0	1374.7	1392.2	1398.0
25°	1324.4	1332.1	1343.7	1367.0	1370.9
27.5°	1291.5	1297.3	1312.8	1337.9	1345.7
30°	1250.8	1260.5	1279.9	1305.0	1314.7
32.5°	1212.1	1221.8	1245.0	1272.1	1279.9
35°	1163.7	1177.2	1204.3	1235.3	1245.0
37.5°	1117.2	1130.8	1163.7	1198.5	1210.1
40°	1068.8	1084.3	1119.1	1159.8	1175.3
42.5°	1016.5	1037.8	1076.5	1121.1	1138.5
45°	964.2	983.6	1032.0	1082.4	1101.7
47.5°	908.1	931.3	983.6	1043.6	1066.9
50°	848.1	877.1	937.1	1003.0	1028.1
52.5°	788.0	821.0	888.7	962.3	989.4
55°	730.0	760.9	842.3	921.6	950.7
57.5°	666.1	704.8	793.9	879.1	908.1
60°	600.2	642.8	745.5	834.5	865.5
62.5°	534.4	582.8	699.0	788.0	821.0
65°	468.6	522.8	644.8	739.6	772.6
67.5°	404.7	464.7	594.4	689.3	722.2
70°	331.1	406.6	540.2	633.1	666.1
72.5°	263.3	350.5	487.9	575.1	604.1
75°	203.3	296.2	429.8	509.2	520.8
77.5°	149.1	242.0	369.8	396.9	398.9
80°	100.7	193.6	282.7	278.8	282.7
82.5°	65.8	145.2	178.1	199.4	201.4
85°	38.7	85.2	104.6	116.2	118.1
87.5°	19.4	29.0	36.8	38.7	42.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)