

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: P313351

Luminaire Tested: **24FCZ2-65HE-UNV-L83050-HRP-CP125-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: P313351  
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-CP125-W2A-U-3500K  
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" POLYCARB 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**

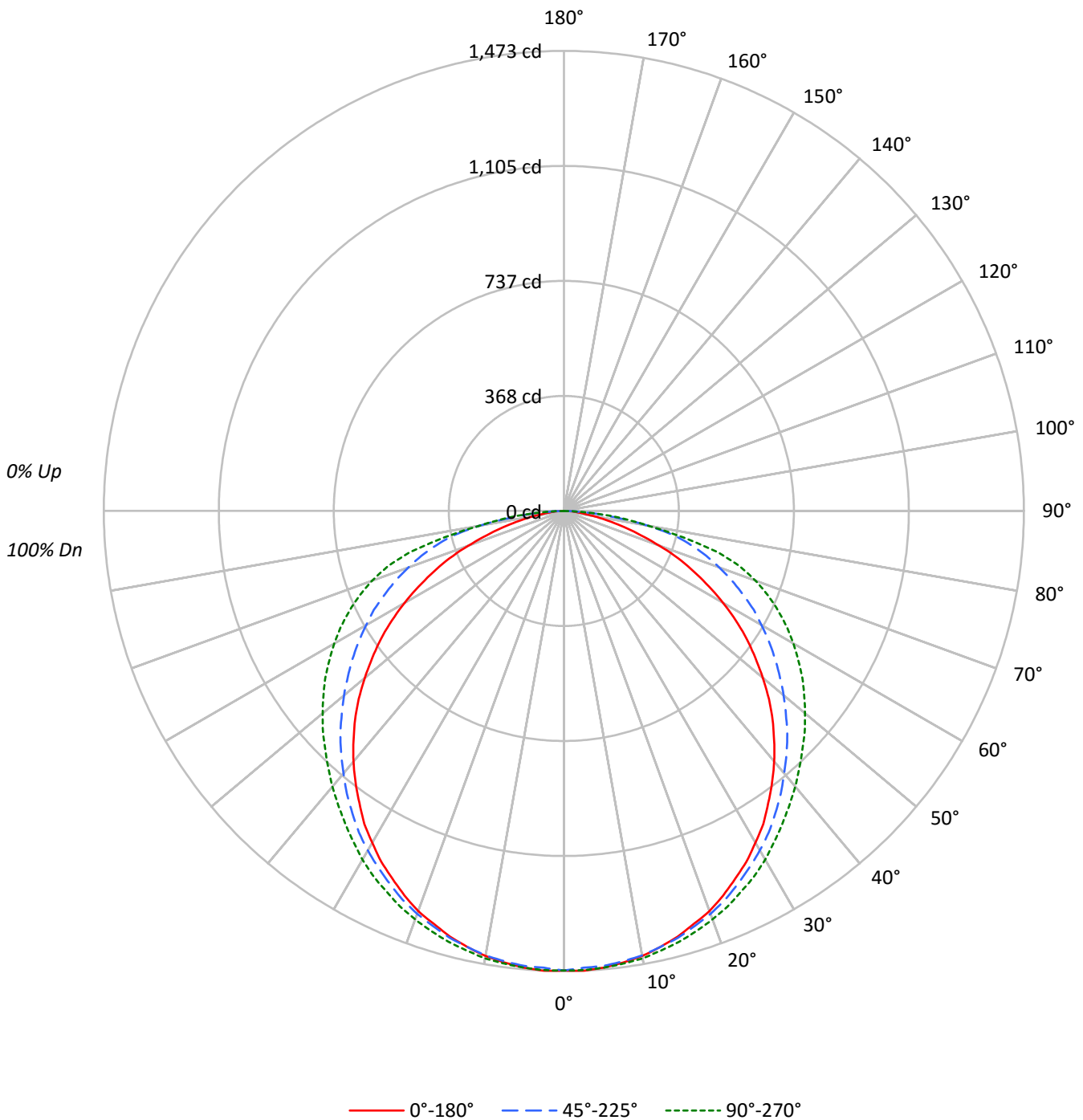
Lumens per Lamp: N/A  
Luminaire Lumens: 4535.0 lumens  
Efficiency: N/A  
Efficacy: 86.2 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 52.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
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°	1980	1980	1980
5°	1982	1974	1982
10°	1977	1974	1987
15°	1965	1970	1989
20°	1952	1965	1993
25°	1928	1956	1996
30°	1906	1950	2003
35°	1874	1940	2005
40°	1841	1927	2024
45°	1799	1925	2056
50°	1741	1923	2110
55°	1679	1937	2187
60°	1584	1967	2284
65°	1463	2013	2412
70°	1277	2084	2569
75°	1036	2191	2655
80°	765	2148	2148
85°	587	1582	1788



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	139.4	3.1
10°-20°	400.3	8.8
20°-30°	609.4	13.4
30°-40°	739.9	16.3
40°-50°	781.7	17.2
50°-60°	737.6	16.3
60°-70°	613.3	13.5
70°-80°	403.5	8.9
80°-90°	110.0	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°	1149.0	25.3
0°-40°	1888.9	41.7
0°-60°	3408.2	75.2
0°-90°	4535.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4535.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1471	1471	1471	1471	1471	
5°	1468	1468	1462	1468	1468	139
15°	1411	1412	1414	1428	1428	398
25°	1299	1306	1318	1340	1344	599
35°	1141	1154	1181	1211	1221	714
45°	946	964	1012	1061	1080	728
55°	716	746	826	904	932	638
65°	460	513	632	725	758	454
75°	199	290	422	499	511	215
85°	38	84	102	114	116	47
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1471.4	1471.4	1471.4	1471.4	1471.4
2.5°	1473.3	1471.4	1463.8	1471.4	1471.4
5°	1467.6	1467.6	1461.9	1467.6	1467.6
7.5°	1458.1	1458.1	1454.3	1461.9	1461.9
10°	1446.7	1446.7	1444.8	1454.3	1454.3
12.5°	1429.6	1431.5	1429.6	1441.0	1441.0
15°	1410.6	1412.5	1414.4	1427.7	1427.7
17.5°	1385.9	1389.7	1393.5	1408.7	1410.6
20°	1363.2	1365.1	1372.7	1389.7	1391.6
22.5°	1332.8	1338.5	1348.0	1365.1	1370.8
25°	1298.6	1306.2	1317.6	1340.4	1344.2
27.5°	1266.3	1272.0	1287.2	1311.9	1319.5
30°	1226.5	1236.0	1254.9	1279.6	1289.1
32.5°	1188.5	1198.0	1220.8	1247.4	1254.9
35°	1141.0	1154.3	1180.9	1211.3	1220.8
37.5°	1095.5	1108.8	1141.0	1175.2	1186.6
40°	1048.0	1063.2	1097.4	1137.2	1152.4
42.5°	996.7	1017.6	1055.6	1099.3	1116.4
45°	945.5	964.5	1011.9	1061.3	1080.3
47.5°	890.4	913.2	964.5	1023.3	1046.1
50°	831.6	860.0	918.9	983.5	1008.1
52.5°	772.7	805.0	871.4	943.6	970.2
55°	715.8	746.1	825.9	903.7	932.2
57.5°	653.1	691.1	778.4	861.9	890.4
60°	588.6	630.3	730.9	818.3	848.7
62.5°	524.0	571.5	685.4	772.7	805.0
65°	459.5	512.6	632.2	725.3	757.5
67.5°	396.8	455.7	582.9	675.9	708.2
70°	324.7	398.7	529.7	620.8	653.1
72.5°	258.2	343.6	478.4	563.9	592.4
75°	199.3	290.5	421.5	499.3	510.7
77.5°	146.2	237.3	362.6	389.2	391.1
80°	98.7	189.9	277.2	273.4	277.2
82.5°	64.6	142.4	174.7	195.6	197.5
85°	38.0	83.5	102.5	113.9	115.8
87.5°	19.0	28.5	36.1	38.0	41.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)