

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: P310398

Luminaire Tested: **24FCZ2-65HE-UNV-L82765-RDP-CP250-W2A-U-5700K**

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: P310398  
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: 24FCZ2-65HE-UNV-L82765-RDP-CP250-W2A-U-5700K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB SHEET  
Light Source: (336) 5700K 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**

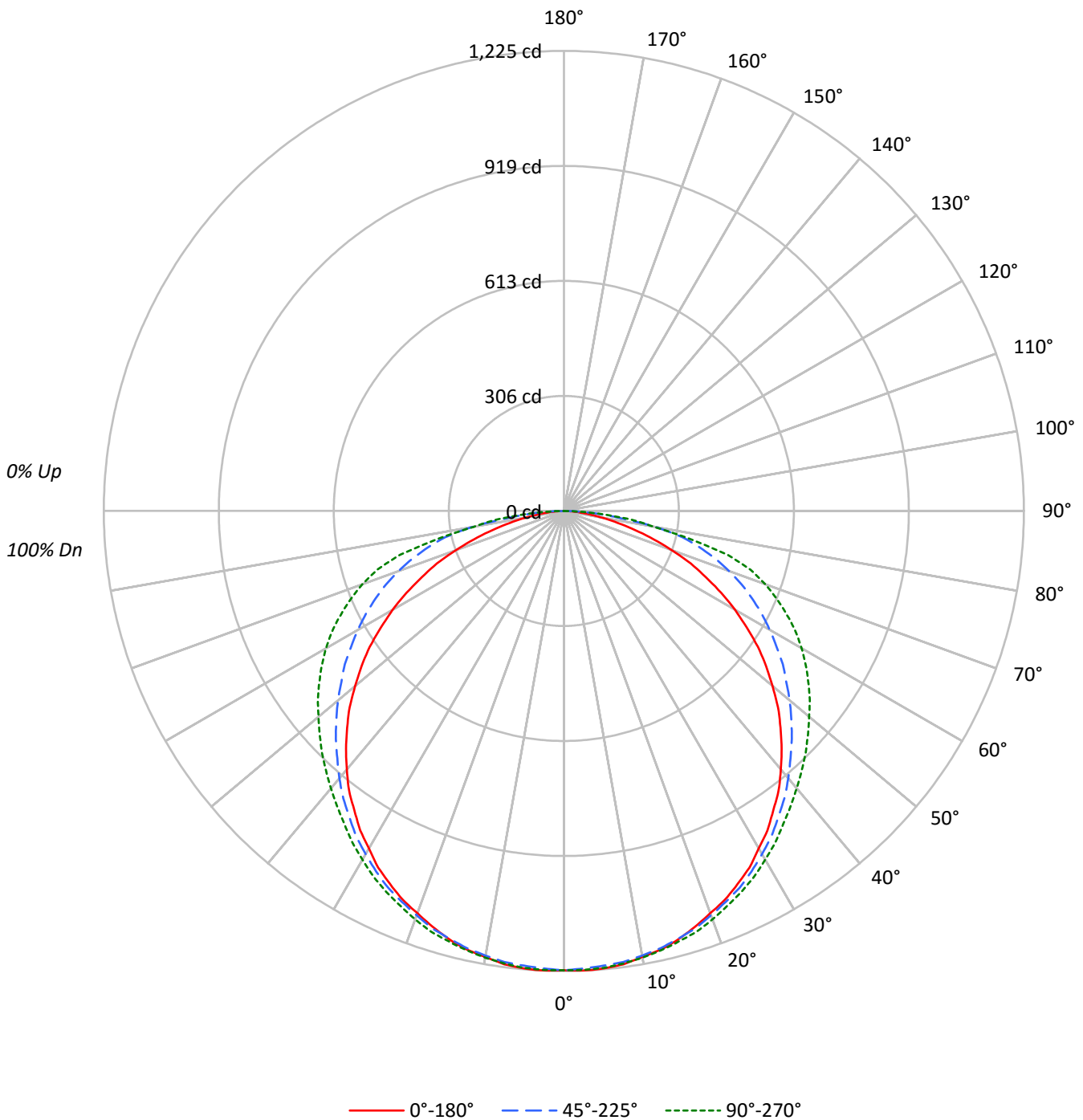
Lumens per Lamp: N/A  
Luminaire Lumens: 3889.0 lumens  
Efficiency: N/A  
Efficacy: 71.9 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 54.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
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°	1646	1646	1646
5°	1652	1641	1649
10°	1647	1642	1650
15°	1644	1642	1652
20°	1632	1641	1657
25°	1627	1644	1661
30°	1612	1639	1666
35°	1597	1635	1673
40°	1579	1633	1694
45°	1553	1633	1733
50°	1518	1643	1785
55°	1480	1670	1864
60°	1417	1703	1967
65°	1327	1762	2088
70°	1207	1844	2246
75°	1023	1945	2347
80°	807	1958	1898
85°	596	1488	1667



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	116.0	3.0
10°-20°	333.9	8.6
20°-30°	510.6	13.1
30°-40°	624.2	16.0
40°-50°	665.2	17.1
50°-60°	636.0	16.4
60°-70°	538.8	13.9
70°-80°	362.1	9.3
80°-90°	102.2	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°	960.5	24.7
0°-40°	1584.6	40.7
0°-60°	2885.9	74.2
0°-90°	3889.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3889.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1223	1223	1223	1223	1223	
5°	1223	1221	1215	1221	1221	116
15°	1180	1180	1179	1188	1186	333
25°	1096	1100	1107	1117	1119	505
35°	972	980	995	1015	1018	609
45°	816	830	858	895	910	629
55°	631	654	712	768	795	562
65°	417	459	554	627	656	414
75°	197	268	374	438	451	211
85°	39	79	96	104	108	48
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1223.0	1223.0	1223.0	1223.0	1223.0
2.5°	1224.9	1224.9	1219.1	1223.0	1223.0
5°	1223.0	1221.1	1215.3	1221.1	1221.1
7.5°	1217.2	1215.3	1211.4	1217.2	1215.3
10°	1205.6	1205.6	1201.8	1207.5	1207.5
12.5°	1196.0	1194.0	1192.1	1199.8	1197.9
15°	1180.5	1180.5	1178.6	1188.3	1186.3
17.5°	1161.3	1163.2	1165.1	1172.8	1174.8
20°	1140.0	1143.9	1145.8	1157.4	1157.4
22.5°	1120.7	1122.7	1126.5	1138.1	1138.1
25°	1095.7	1099.5	1107.2	1116.9	1118.8
27.5°	1070.6	1072.5	1082.2	1095.7	1097.6
30°	1037.8	1043.6	1055.2	1070.6	1072.5
32.5°	1008.9	1014.6	1028.2	1043.6	1047.4
35°	972.2	979.9	995.4	1014.6	1018.5
37.5°	939.4	945.2	964.5	985.7	991.5
40°	898.9	910.5	929.8	954.8	964.5
42.5°	858.4	870.0	893.1	925.9	937.5
45°	816.0	829.5	858.4	895.1	910.5
47.5°	773.5	789.0	821.7	864.2	881.5
50°	725.3	744.6	785.1	833.3	852.6
52.5°	679.0	702.2	746.5	800.5	825.6
55°	630.8	653.9	711.8	767.7	794.7
57.5°	576.8	607.6	671.3	734.9	763.9
60°	526.6	555.5	632.7	702.2	731.1
62.5°	472.6	511.2	594.1	667.4	696.4
65°	416.7	459.1	553.6	626.9	655.9
67.5°	366.5	412.8	513.1	586.4	615.3
70°	306.7	364.6	468.7	542.0	571.0
72.5°	250.8	314.4	422.4	493.8	520.8
75°	196.8	268.1	374.2	437.9	451.4
77.5°	146.6	221.8	324.1	351.1	341.4
80°	104.2	177.5	252.7	239.2	245.0
82.5°	67.5	135.0	156.2	177.5	183.3
85°	38.6	79.1	96.4	104.2	108.0
87.5°	17.4	28.9	38.6	38.6	36.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)