

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: P313737

Luminaire Tested: **24FCZ2-65HE-UNV-L83050-RDP-CP250-W2A-U-4000K**

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: P313737
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-L83050-RDP-CP250-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB SHEET
Light Source: (336) 4000K 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: 3916.0 lumens
Efficiency: N/A
Efficacy: 72.8 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

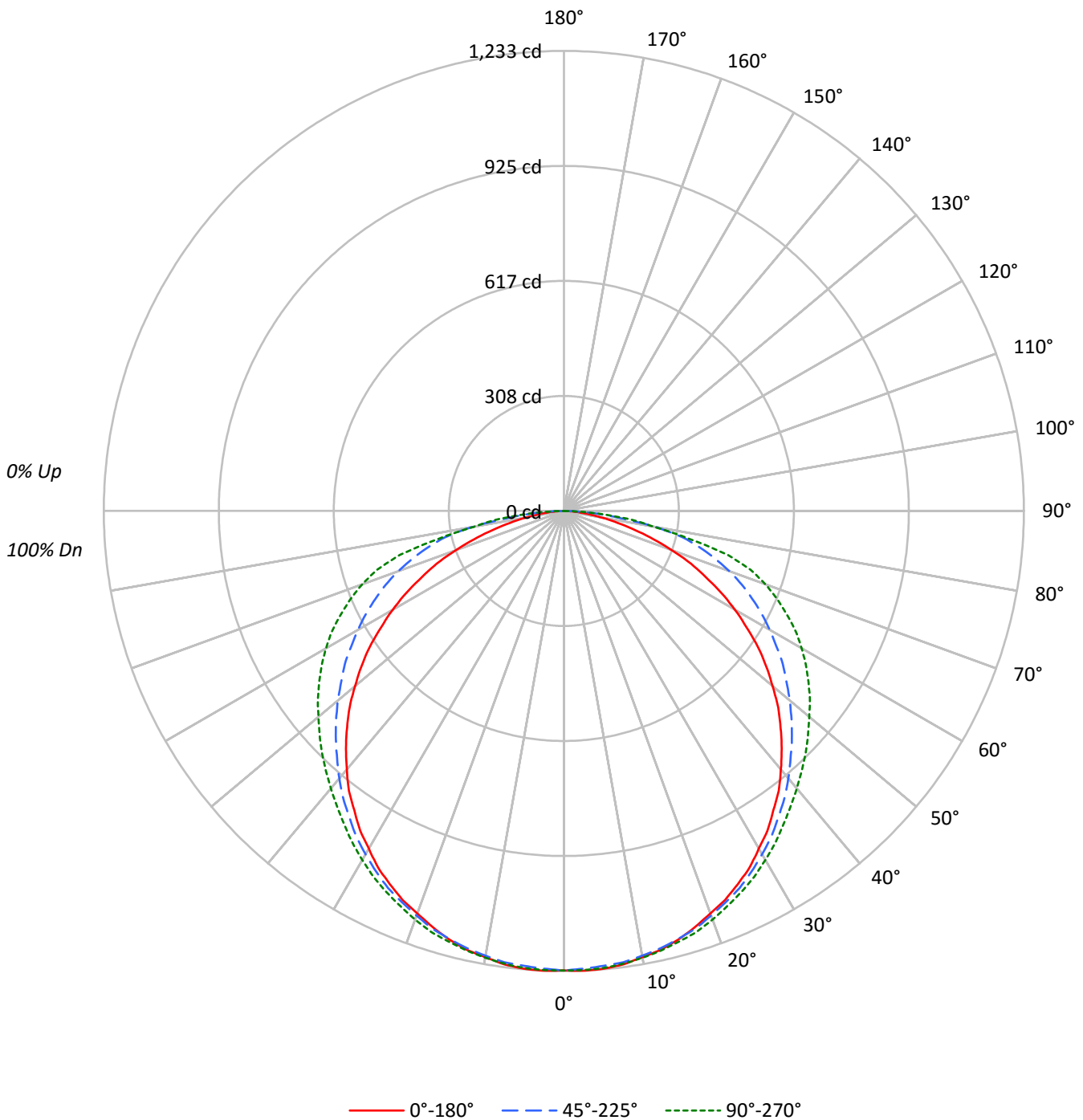
Input Watts (W): 53.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1657	1657	1657
5°	1663	1653	1661
10°	1659	1653	1661
15°	1656	1653	1664
20°	1644	1652	1669
25°	1638	1655	1673
30°	1624	1651	1678
35°	1608	1646	1685
40°	1590	1644	1706
45°	1563	1645	1744
50°	1529	1655	1797
55°	1490	1681	1877
60°	1427	1714	1981
65°	1336	1775	2103
70°	1215	1857	2262
75°	1030	1959	2363
80°	813	1972	1912
85°	599	1499	1680



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	116.8	3.0
10°-20°	336.2	8.6
20°-30°	514.1	13.1
30°-40°	628.5	16.0
40°-50°	669.9	17.1
50°-60°	640.5	16.4
60°-70°	542.6	13.9
70°-80°	364.6	9.3
80°-90°	102.8	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°	967.1	24.7
0°-40°	1595.6	40.7
0°-60°	2905.9	74.2
0°-90°	3916.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3916.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1232	1232	1232	1232	1232	
5°	1232	1230	1224	1230	1230	117
15°	1189	1189	1187	1196	1195	335
25°	1103	1107	1115	1125	1127	508
35°	979	987	1002	1022	1026	613
45°	822	835	864	901	917	634
55°	635	658	717	773	800	566
65°	420	462	558	631	660	417
75°	198	270	377	441	454	212
85°	39	80	97	105	109	48
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1231.5	1231.5	1231.5	1231.5	1231.5
2.5°	1233.4	1233.4	1227.6	1231.5	1231.5
5°	1231.5	1229.5	1223.7	1229.5	1229.5
7.5°	1225.6	1223.7	1219.8	1225.6	1223.7
10°	1214.0	1214.0	1210.1	1215.9	1215.9
12.5°	1204.3	1202.3	1200.4	1208.2	1206.2
15°	1188.7	1188.7	1186.8	1196.5	1194.6
17.5°	1169.3	1171.3	1173.2	1181.0	1182.9
20°	1147.9	1151.8	1153.8	1165.4	1165.4
22.5°	1128.5	1130.5	1134.4	1146.0	1146.0
25°	1103.3	1107.2	1114.9	1124.6	1126.6
27.5°	1078.0	1080.0	1089.7	1103.3	1105.2
30°	1045.0	1050.8	1062.5	1078.0	1080.0
32.5°	1015.9	1021.7	1035.3	1050.8	1054.7
35°	979.0	986.7	1002.3	1021.7	1025.6
37.5°	945.9	951.8	971.2	992.6	998.4
40°	905.1	916.8	936.2	961.5	971.2
42.5°	864.4	876.0	899.3	932.3	944.0
45°	821.6	835.2	864.4	901.3	916.8
47.5°	778.9	794.4	827.5	870.2	887.7
50°	730.3	749.8	790.5	839.1	858.5
52.5°	683.7	707.0	751.7	806.1	831.3
55°	635.2	658.5	716.7	773.1	800.3
57.5°	580.8	611.9	675.9	740.0	769.2
60°	530.3	559.4	637.1	707.0	736.2
62.5°	475.9	514.7	598.3	672.1	701.2
65°	419.6	462.3	557.5	631.3	660.4
67.5°	369.1	415.7	516.7	590.5	619.6
70°	308.8	367.1	472.0	545.8	574.9
72.5°	252.5	316.6	425.4	497.2	524.4
75°	198.1	270.0	376.8	440.9	454.5
77.5°	147.6	223.4	326.3	353.5	343.8
80°	104.9	178.7	254.5	240.9	246.7
82.5°	68.0	136.0	157.3	178.7	184.5
85°	38.8	79.6	97.1	104.9	108.8
87.5°	17.5	29.1	38.8	38.8	36.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)