

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: P310358

Luminaire Tested: **24FCZ2-65HE-UNV-L82765-RDP-CA08-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: P310358
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-CA08-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC 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: 4012.0 lumens
Efficiency: N/A
Efficacy: 75.4 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

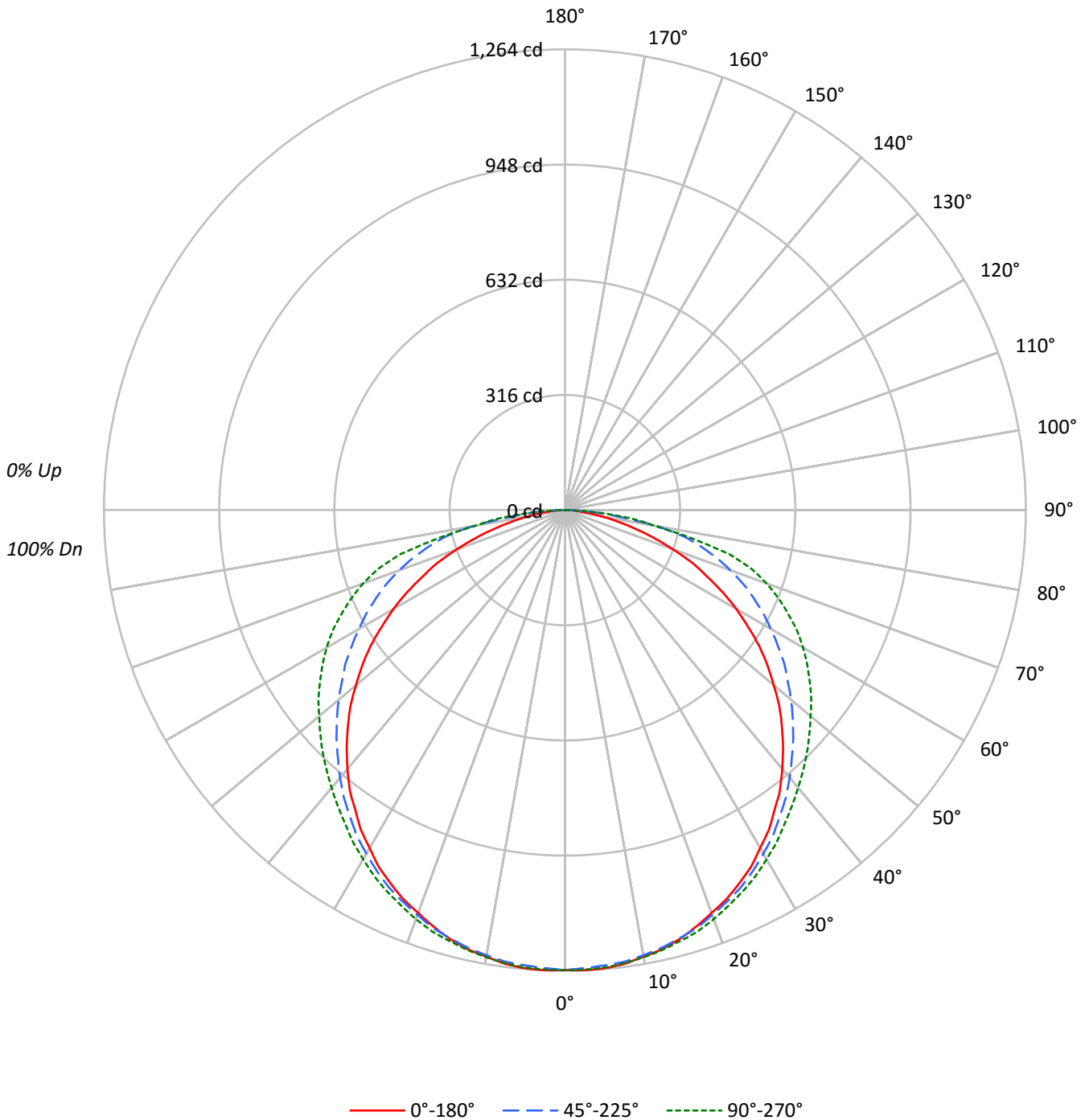
Input Watts (W): 53.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1698	1698	1698
5°	1704	1693	1701
10°	1699	1694	1702
15°	1696	1694	1705
20°	1684	1693	1710
25°	1678	1696	1714
30°	1663	1691	1719
35°	1647	1687	1726
40°	1629	1685	1748
45°	1602	1685	1787
50°	1566	1695	1841
55°	1526	1723	1923
60°	1462	1756	2030
65°	1368	1818	2154
70°	1245	1902	2317
75°	1055	2007	2421
80°	833	2020	1958
85°	614	1536	1720



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	119.7	3.0
10°-20°	344.4	8.6
20°-30°	526.7	13.1
30°-40°	643.9	16.0
40°-50°	686.3	17.1
50°-60°	656.2	16.4
60°-70°	555.8	13.9
70°-80°	373.6	9.3
80°-90°	105.4	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°	990.8	24.7
0°-40°	1634.7	40.7
0°-60°	2977.2	74.2
0°-90°	4012.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4012.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1262	1262	1262	1262	1262	
5°	1262	1260	1254	1260	1260	120
15°	1218	1218	1216	1226	1224	343
25°	1130	1134	1142	1152	1154	521
35°	1003	1011	1027	1047	1051	628
45°	842	856	886	923	939	649
55°	651	675	734	792	820	580
65°	430	474	571	647	677	427
75°	203	277	386	452	466	217
85°	40	82	100	108	111	49
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1261.7	1261.7	1261.7	1261.7	1261.7
2.5°	1263.6	1263.6	1257.7	1261.7	1261.7
5°	1261.7	1259.7	1253.7	1259.7	1259.7
7.5°	1255.7	1253.7	1249.7	1255.7	1253.7
10°	1243.7	1243.7	1239.8	1245.7	1245.7
12.5°	1233.8	1231.8	1229.8	1237.8	1235.8
15°	1217.9	1217.9	1215.9	1225.8	1223.8
17.5°	1198.0	1200.0	1202.0	1209.9	1211.9
20°	1176.1	1180.1	1182.1	1194.0	1194.0
22.5°	1156.2	1158.2	1162.2	1174.1	1174.1
25°	1130.3	1134.3	1142.3	1152.2	1154.2
27.5°	1104.4	1106.4	1116.4	1130.3	1132.3
30°	1070.6	1076.6	1088.5	1104.4	1106.4
32.5°	1040.8	1046.7	1060.7	1076.6	1080.6
35°	1003.0	1010.9	1026.8	1046.7	1050.7
37.5°	969.1	975.1	995.0	1016.9	1022.9
40°	927.3	939.3	959.2	985.0	995.0
42.5°	885.5	897.5	921.4	955.2	967.1
45°	841.8	855.7	885.5	923.4	939.3
47.5°	798.0	813.9	847.7	891.5	909.4
50°	748.2	768.1	809.9	859.7	879.6
52.5°	700.5	724.4	770.1	825.8	851.7
55°	650.7	674.6	734.3	792.0	819.9
57.5°	595.0	626.8	692.5	758.2	788.0
60°	543.3	573.1	652.7	724.4	754.2
62.5°	487.5	527.3	612.9	688.5	718.4
65°	429.8	473.6	571.1	646.7	676.6
67.5°	378.1	425.9	529.3	605.0	634.8
70°	316.4	376.1	483.6	559.2	589.0
72.5°	258.7	324.4	435.8	509.4	537.3
75°	203.0	276.6	386.1	451.7	465.7
77.5°	151.2	228.8	334.3	362.2	352.2
80°	107.5	183.1	260.7	246.8	252.7
82.5°	69.6	139.3	161.2	183.1	189.0
85°	39.8	81.6	99.5	107.5	111.4
87.5°	17.9	29.8	39.8	39.8	37.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)