

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: P311067

Luminaire Tested: **24FCZ2-65HE-UNV-L82765-CP250-W2A-U-3000K**

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: P311067
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-15)
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-CP250-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.250" POLYCARB SHEET
Light Source: (336) 3000K 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: 5236.0 lumens
Efficiency: N/A
Efficacy: 100.3 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

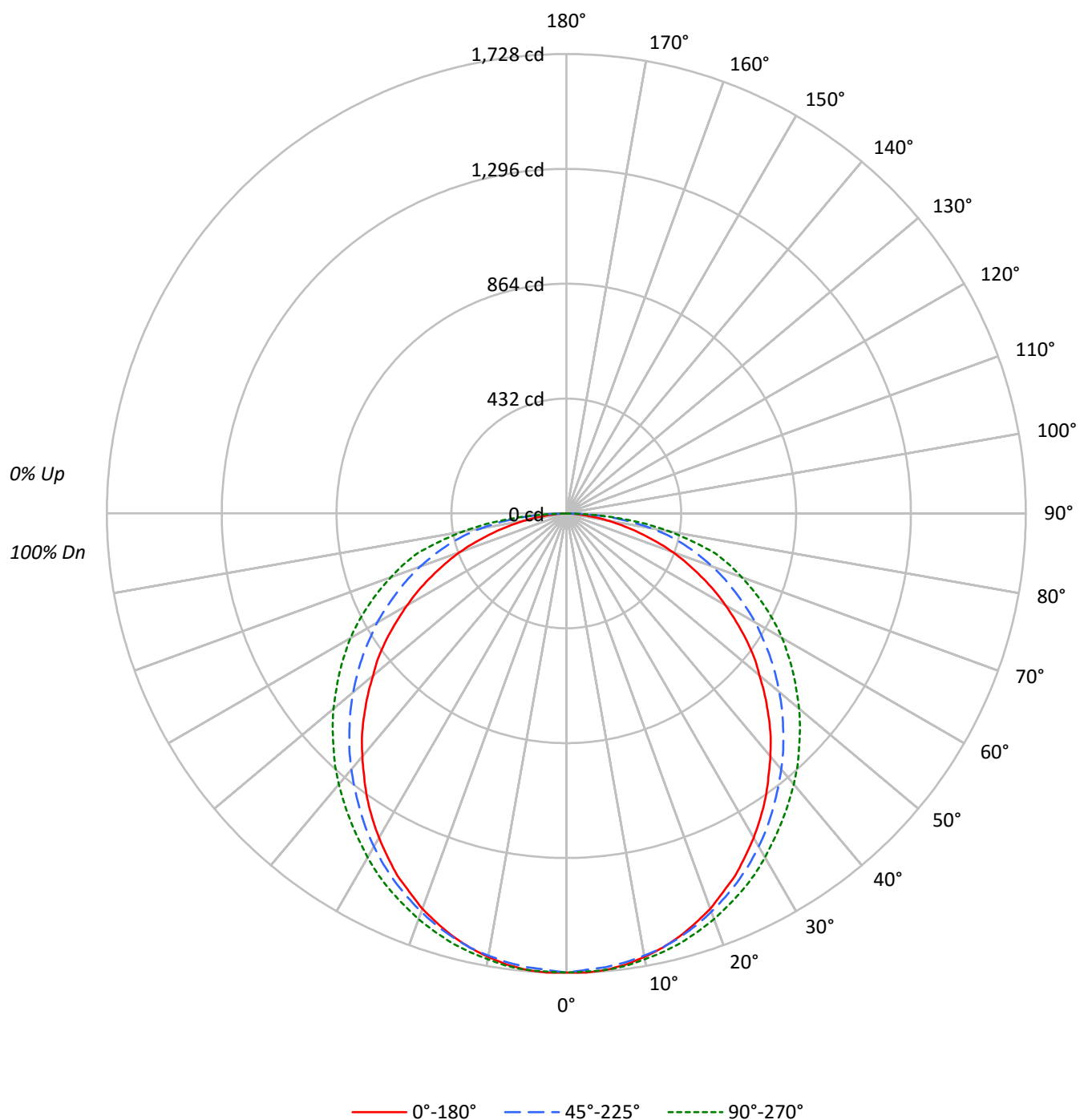
Input Watts (W): 52.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	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		100
1	108	103	98	94	105	100	96	92	96	92	89		92	89	87		82
2	98	89	81	75	95	87	80	74	83	78	73		80	75	71		67
3	89	77	69	62	86	76	68	61	73	66	60		70	64	59		56
4	81	68	59	52	79	67	58	52	64	57	51		62	56	50		47
5	74	61	52	45	72	60	51	44	58	50	44		56	49	43		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	64	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	37	31	57	45	36	30	43	36	30		42	35	30		28
9	55	41	33	27	54	41	33	27	40	32	27		39	32	27		25
10	52	38	30	25	50	38	30	25	37	30	25		36	29	25		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2323	2323	2323
5°	2328	2313	2328
10°	2314	2307	2326
15°	2294	2299	2328
20°	2266	2283	2326
25°	2231	2267	2324
30°	2189	2248	2321
35°	2146	2226	2323
40°	2096	2209	2337
45°	2046	2195	2357
50°	1985	2189	2393
55°	1936	2192	2441
60°	1861	2211	2524
65°	1775	2234	2616
70°	1681	2303	2761
75°	1499	2402	3016
80°	1278	2544	3082
85°	912	2521	2950



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	163.4	3.1
10°-20°	467.3	8.9
20°-30°	705.8	13.5
30°-40°	850.6	16.2
40°-50°	893.0	17.1
50°-60°	835.5	16.0
60°-70°	689.9	13.2
70°-80°	470.1	9.0
80°-90°	160.3	3.1
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°	1336.5	25.5
0°-40°	2187.1	41.8
0°-60°	3915.6	74.8
0°-90°	5236.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5236.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1727	1727	1727	1727	1727	
5°	1723	1722	1713	1723	1723	164
15°	1647	1649	1650	1668	1671	464
25°	1503	1510	1527	1556	1565	691
35°	1306	1320	1355	1400	1414	816
45°	1075	1098	1154	1216	1239	829
55°	825	858	935	1011	1041	737
65°	558	604	702	790	822	553
75°	288	354	462	549	580	308
85°	59	116	163	184	191	74
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1726.8	1726.8	1726.8	1726.8	1726.8
2.5°	1728.5	1726.8	1718.1	1726.8	1725.1
5°	1723.3	1721.6	1712.9	1723.3	1723.3
7.5°	1711.2	1711.2	1702.5	1714.6	1716.4
10°	1693.8	1693.8	1688.6	1702.5	1702.5
12.5°	1672.9	1672.9	1672.9	1686.8	1688.6
15°	1646.9	1648.6	1650.4	1667.7	1671.2
17.5°	1615.6	1619.1	1624.3	1645.1	1648.6
20°	1582.6	1586.1	1594.8	1619.1	1624.3
22.5°	1540.9	1549.6	1561.8	1589.5	1594.8
25°	1502.7	1509.6	1527.0	1556.5	1565.2
27.5°	1455.8	1466.2	1488.8	1520.1	1532.2
30°	1408.9	1419.3	1447.1	1483.6	1494.0
32.5°	1358.5	1374.1	1403.7	1441.9	1454.0
35°	1306.4	1320.3	1355.0	1400.2	1414.1
37.5°	1249.1	1268.2	1306.4	1355.0	1372.4
40°	1193.5	1214.3	1257.7	1309.9	1330.7
42.5°	1137.9	1158.7	1207.4	1266.4	1287.3
45°	1075.3	1097.9	1153.5	1216.0	1238.6
47.5°	1012.8	1040.6	1101.4	1167.4	1191.7
50°	948.5	979.8	1045.8	1115.3	1143.1
52.5°	891.2	920.7	990.2	1064.9	1091.0
55°	825.2	858.2	934.6	1011.1	1040.6
57.5°	757.4	793.9	875.6	958.9	988.5
60°	691.4	731.4	821.7	905.1	938.1
62.5°	627.1	667.1	760.9	847.8	880.8
65°	557.6	604.5	701.8	790.4	821.7
67.5°	491.6	542.0	644.5	731.4	762.6
70°	427.4	476.0	585.4	670.6	701.8
72.5°	357.9	413.5	522.9	611.5	644.5
75°	288.4	354.4	462.1	549.0	580.2
77.5°	224.1	291.9	399.6	470.8	486.4
80°	165.0	234.5	328.3	378.7	397.8
82.5°	106.0	175.5	250.2	286.6	302.3
85°	59.1	116.4	163.3	184.1	191.1
87.5°	24.3	50.4	66.0	74.7	74.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)