

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: P311063

Luminaire Tested: **24FCZ2-65HE-UNV-L82765-CP187-W2A-U-5500K**

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: P311063
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-CP187-W2A-U-5500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.187" POLYCARB SHEET
Light Source: (336) 5500K 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: 5814.0 lumens
Efficiency: N/A
Efficacy: 107.5 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

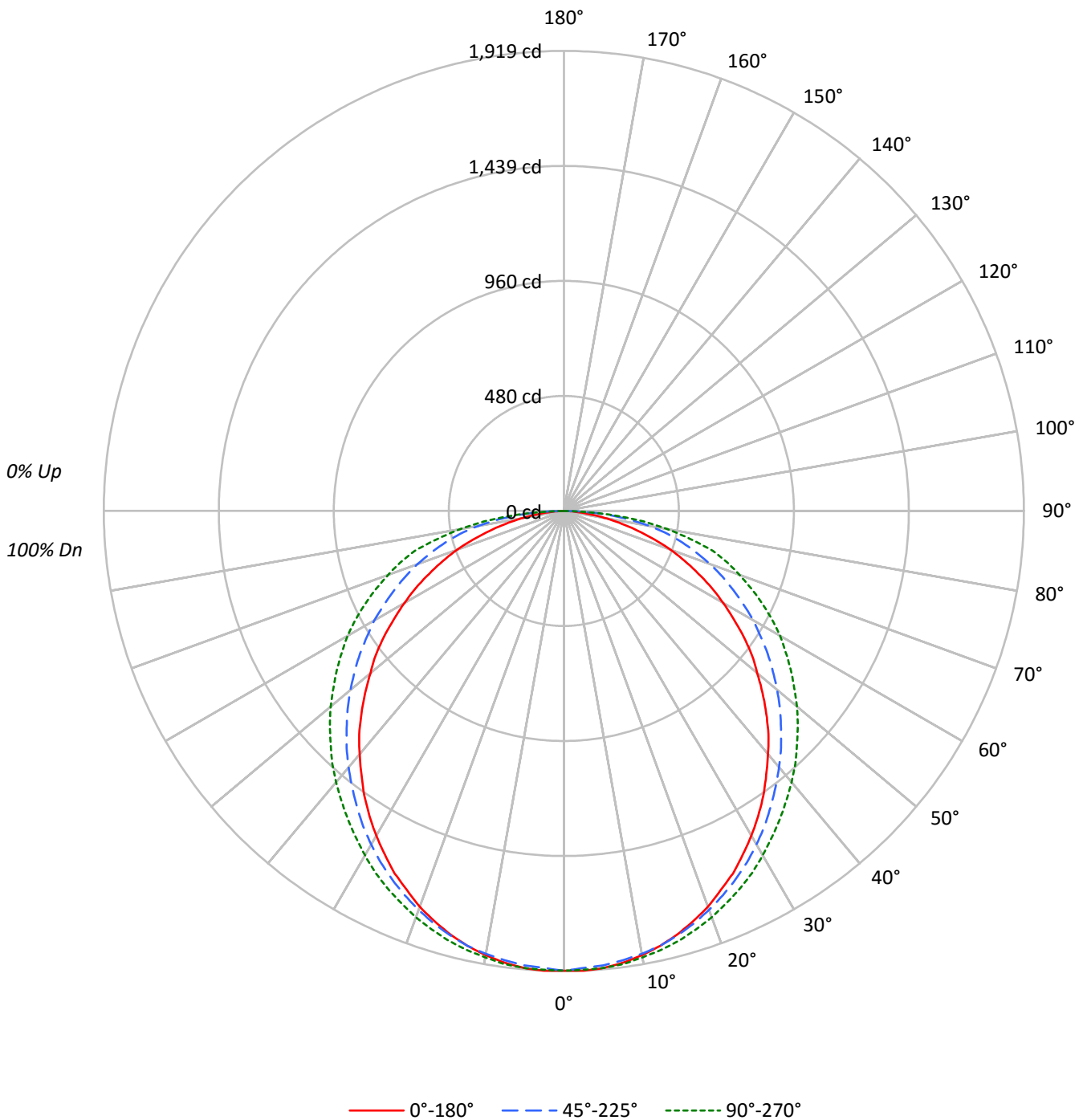
Input Watts (W): 54.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	92	89	92	89	87	88	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	37	31	57	45	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	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2580	2580	2580
5°	2584	2569	2584
10°	2570	2562	2583
15°	2547	2553	2585
20°	2516	2536	2582
25°	2477	2517	2580
30°	2431	2496	2577
35°	2383	2471	2579
40°	2328	2453	2595
45°	2272	2437	2617
50°	2205	2431	2657
55°	2149	2434	2711
60°	2066	2455	2803
65°	1971	2481	2905
70°	1867	2557	3066
75°	1665	2667	3349
80°	1420	2825	3422
85°	1013	2799	3276



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	181.5	3.1
10°-20°	518.9	8.9
20°-30°	783.7	13.5
30°-40°	944.5	16.2
40°-50°	991.6	17.1
50°-60°	927.7	16.0
60°-70°	766.1	13.2
70°-80°	522.0	9.0
80°-90°	178.0	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°	1484.0	25.5
0°-40°	2428.6	41.8
0°-60°	4347.8	74.8
0°-90°	5814.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5814.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1917	1917	1917	1917	1917	
5°	1914	1912	1902	1914	1914	182
15°	1829	1831	1832	1852	1856	515
25°	1669	1676	1696	1728	1738	768
35°	1451	1466	1505	1555	1570	906
45°	1194	1219	1281	1350	1375	921
55°	916	953	1038	1123	1156	818
65°	619	671	779	878	912	614
75°	320	394	513	610	644	341
85°	66	129	181	204	212	82
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1917.4	1917.4	1917.4	1917.4	1917.4
2.5°	1919.3	1917.4	1907.8	1917.4	1915.5
5°	1913.5	1911.6	1902.0	1913.5	1913.5
7.5°	1900.0	1900.0	1890.4	1903.9	1905.8
10°	1880.8	1880.8	1875.0	1890.4	1890.4
12.5°	1857.6	1857.6	1857.6	1873.0	1875.0
15°	1828.7	1830.6	1832.5	1851.8	1855.7
17.5°	1794.0	1797.8	1803.6	1826.7	1830.6
20°	1757.3	1761.2	1770.8	1797.8	1803.6
22.5°	1711.0	1720.7	1734.2	1765.0	1770.8
25°	1668.6	1676.3	1695.6	1728.4	1738.0
27.5°	1616.5	1628.1	1653.1	1687.9	1701.4
30°	1564.4	1576.0	1606.8	1647.3	1658.9
32.5°	1508.5	1525.8	1558.6	1601.1	1614.6
35°	1450.6	1466.0	1504.6	1554.8	1570.2
37.5°	1386.9	1408.2	1450.6	1504.6	1523.9
40°	1325.2	1348.4	1396.6	1454.5	1477.6
42.5°	1263.5	1286.6	1340.6	1406.2	1429.4
45°	1194.0	1219.1	1280.8	1350.3	1375.4
47.5°	1124.6	1155.5	1223.0	1296.3	1323.3
50°	1053.2	1087.9	1161.2	1238.4	1269.3
52.5°	989.6	1022.4	1099.5	1182.5	1211.4
55°	916.3	952.9	1037.8	1122.7	1155.5
57.5°	841.0	881.5	972.2	1064.8	1097.6
60°	767.7	812.1	912.4	1005.0	1041.6
62.5°	696.4	740.7	844.9	941.3	978.0
65°	619.2	671.3	779.3	877.7	912.4
67.5°	545.9	601.8	715.7	812.1	846.8
70°	474.5	528.5	650.1	744.6	779.3
72.5°	397.4	459.1	580.6	679.0	715.7
75°	320.2	393.5	513.1	609.6	644.3
77.5°	248.8	324.1	443.7	522.8	540.1
80°	183.3	260.4	364.6	420.5	441.7
82.5°	117.7	194.8	277.8	318.3	335.6
85°	65.6	129.2	181.3	204.5	212.2
87.5°	27.0	55.9	73.3	82.9	82.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)