

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: P313348

Luminaire Tested: **24FCZ2-65HE-UNV-L83050-HRP-CA125-W2A-U-4500K**

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: P313348
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)
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-HRP-CA125-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" ACRYLIC SHEET
Light Source: (336) 4500K 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: 4903.0 lumens
Efficiency: N/A
Efficacy: 88.8 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

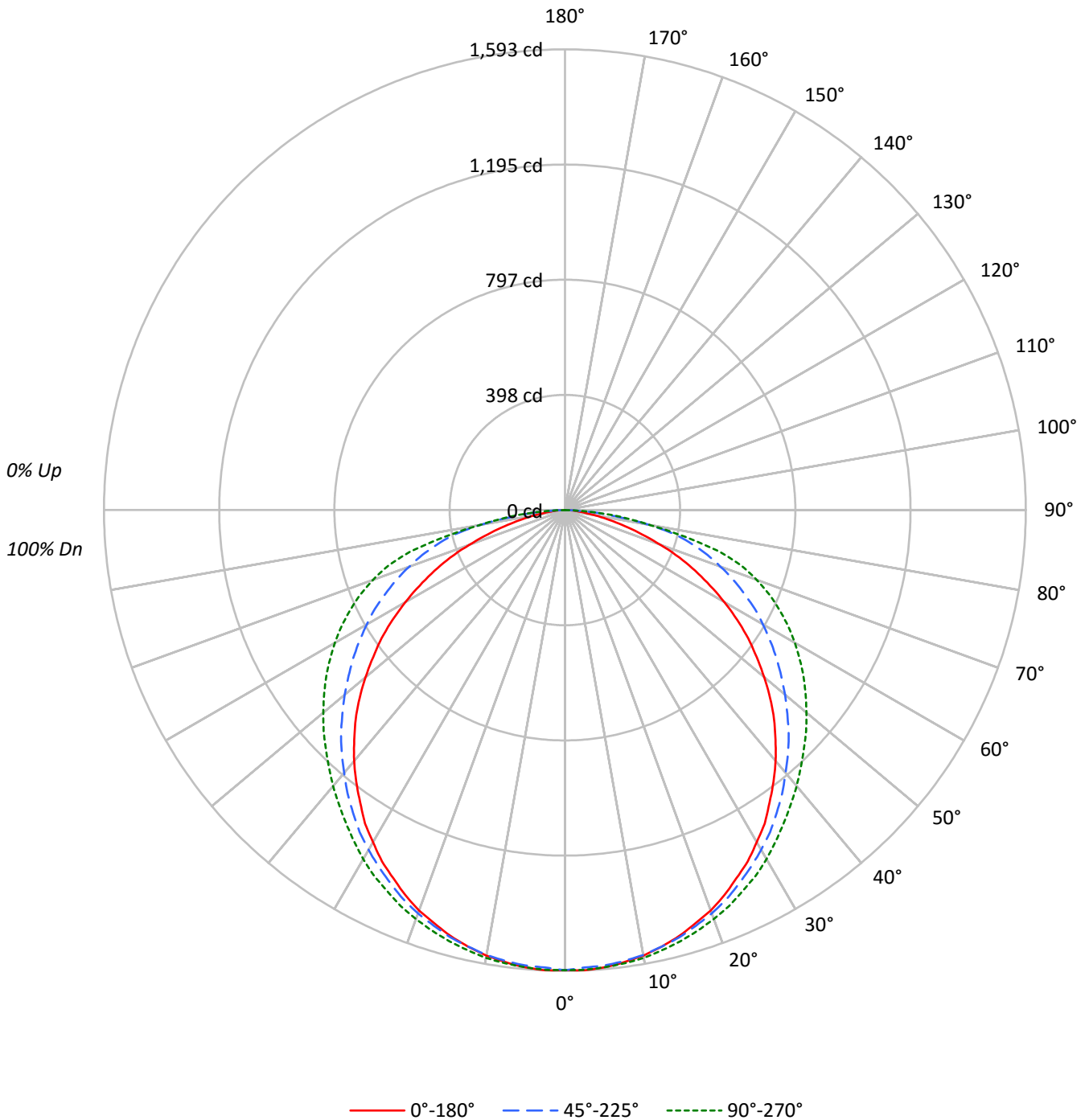
Input Watts (W): 55.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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					10	0
RW	70	50	30	10	70	50	30	10	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	101	96	93	96	93	90	92	90	87	89	86	84	82				
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67				
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56				
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48				
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41				
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36				
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31				
8	59	45	36	30	57	44	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	24	35	29	24	23				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2140	2140	2140
5°	2143	2135	2143
10°	2137	2134	2148
15°	2124	2130	2150
20°	2110	2125	2154
25°	2084	2115	2158
30°	2060	2108	2165
35°	2026	2097	2168
40°	1990	2084	2188
45°	1945	2082	2222
50°	1882	2080	2281
55°	1815	2095	2364
60°	1712	2127	2469
65°	1581	2176	2607
70°	1381	2253	2778
75°	1120	2369	2871
80°	827	2322	2322
85°	634	1711	1933



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	150.7	3.1
10°-20°	432.7	8.8
20°-30°	658.8	13.4
30°-40°	799.9	16.3
40°-50°	845.1	17.2
50°-60°	797.5	16.3
60°-70°	663.1	13.5
70°-80°	436.2	8.9
80°-90°	118.9	2.4
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°	1242.2	25.3
0°-40°	2042.2	41.7
0°-60°	3684.8	75.2
0°-90°	4903.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4903.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1591	1591	1591	1591	1591	
5°	1587	1587	1580	1587	1587	151
15°	1525	1527	1529	1544	1544	430
25°	1404	1412	1424	1449	1453	648
35°	1234	1248	1277	1310	1320	772
45°	1022	1043	1094	1147	1168	787
55°	774	807	893	977	1008	689
65°	497	554	684	784	819	491
75°	216	314	456	540	552	232
85°	41	90	111	123	125	50
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1590.8	1590.8	1590.8	1590.8	1590.8
2.5°	1592.8	1590.8	1582.6	1590.8	1590.8
5°	1586.7	1586.7	1580.5	1586.7	1586.7
7.5°	1576.4	1576.4	1572.3	1580.5	1580.5
10°	1564.1	1564.1	1562.0	1572.3	1572.3
12.5°	1545.6	1547.7	1545.6	1557.9	1557.9
15°	1525.1	1527.2	1529.2	1543.6	1543.6
17.5°	1498.4	1502.5	1506.6	1523.0	1525.1
20°	1473.8	1475.8	1484.0	1502.5	1504.6
22.5°	1440.9	1447.1	1457.4	1475.8	1482.0
25°	1404.0	1412.2	1424.5	1449.2	1453.3
27.5°	1369.1	1375.3	1391.7	1418.4	1426.6
30°	1326.0	1336.3	1356.8	1383.5	1393.7
32.5°	1284.9	1295.2	1319.8	1348.6	1356.8
35°	1233.6	1248.0	1276.7	1309.6	1319.8
37.5°	1184.4	1198.7	1233.6	1270.6	1282.9
40°	1133.0	1149.5	1186.4	1229.5	1245.9
42.5°	1077.6	1100.2	1141.3	1188.5	1206.9
45°	1022.2	1042.7	1094.0	1147.4	1167.9
47.5°	962.7	987.3	1042.7	1106.4	1131.0
50°	899.0	929.8	993.5	1063.3	1089.9
52.5°	835.4	870.3	942.2	1020.2	1048.9
55°	773.8	806.7	892.9	977.0	1007.8
57.5°	706.1	747.2	841.6	931.9	962.7
60°	636.3	681.5	790.3	884.7	917.5
62.5°	566.5	617.8	741.0	835.4	870.3
65°	496.7	554.2	683.5	784.1	819.0
67.5°	429.0	492.6	630.2	730.7	765.6
70°	351.0	431.1	572.7	671.2	706.1
72.5°	279.2	371.5	517.3	609.6	640.4
75°	215.5	314.1	455.7	539.8	552.2
77.5°	158.1	256.6	392.1	420.8	422.8
80°	106.7	205.3	299.7	295.6	299.7
82.5°	69.8	153.9	188.8	211.4	213.5
85°	41.1	90.3	110.8	123.2	125.2
87.5°	20.5	30.8	39.0	41.1	45.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)