

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: P313352

Luminaire Tested: **24FCZ2-65HE-UNV-L83050-HRP-CP125-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: P313352
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-CP125-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" 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: 4762.0 lumens
Efficiency: N/A
Efficacy: 88.5 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

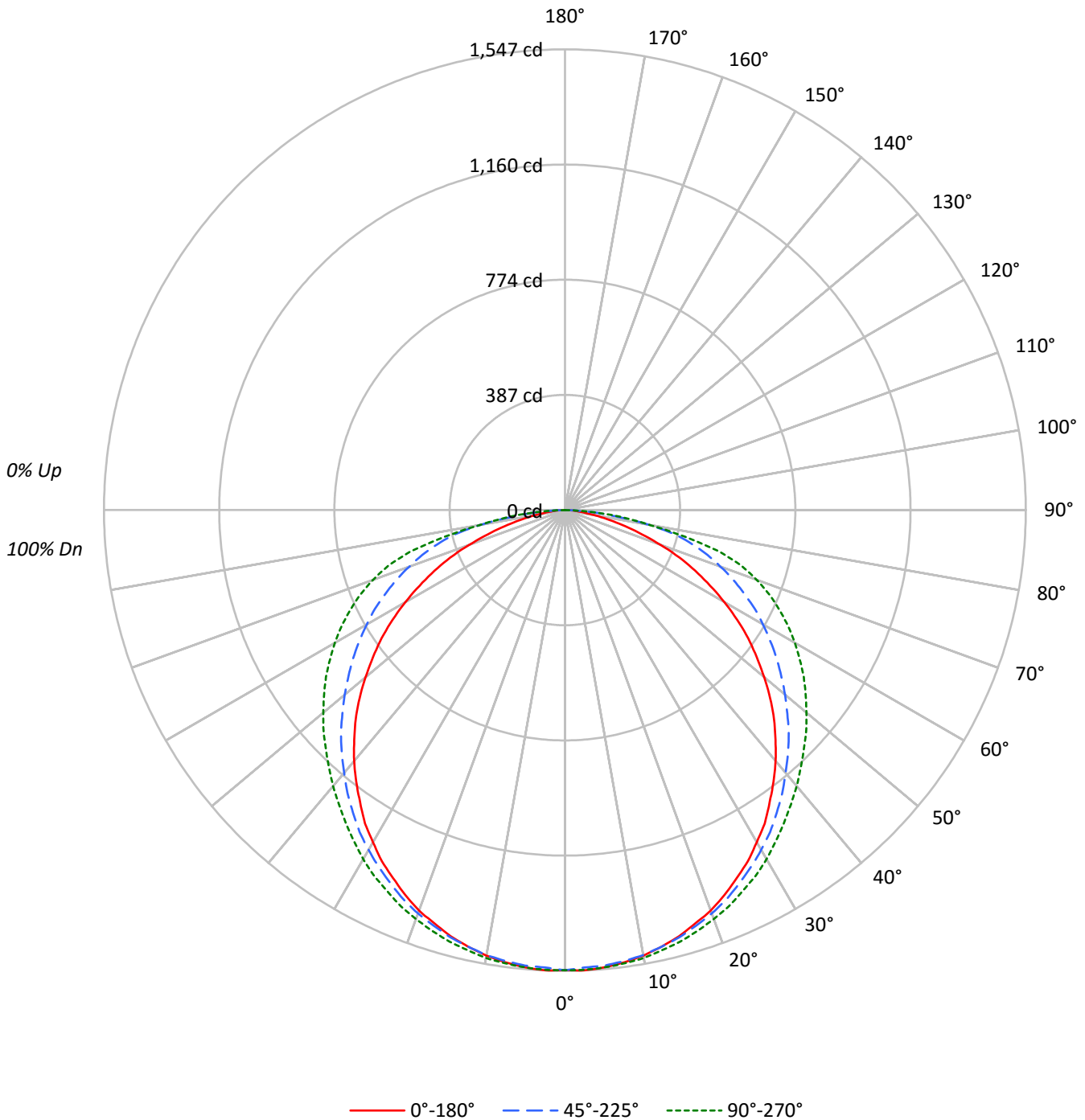
Input Watts (W): 53.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	2079	2079	2079
5°	2081	2073	2081
10°	2075	2073	2086
15°	2063	2069	2088
20°	2050	2064	2092
25°	2024	2054	2095
30°	2001	2047	2103
35°	1968	2037	2106
40°	1933	2024	2125
45°	1889	2022	2159
50°	1828	2020	2216
55°	1763	2034	2296
60°	1663	2065	2398
65°	1536	2114	2532
70°	1341	2188	2698
75°	1088	2301	2788
80°	804	2256	2256
85°	616	1663	1877



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	146.4	3.1
10°-20°	420.3	8.8
20°-30°	639.9	13.4
30°-40°	776.9	16.3
40°-50°	820.8	17.2
50°-60°	774.5	16.3
60°-70°	644.0	13.5
70°-80°	423.7	8.9
80°-90°	115.5	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°	1206.5	25.3
0°-40°	1983.5	41.7
0°-60°	3578.8	75.2
0°-90°	4762.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4762.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1545	1545	1545	1545	1545	
5°	1541	1541	1535	1541	1541	146
15°	1481	1483	1485	1499	1499	418
25°	1364	1372	1384	1408	1412	629
35°	1198	1212	1240	1272	1282	750
45°	993	1013	1063	1114	1134	765
55°	752	784	867	949	979	669
65°	482	538	664	762	795	477
75°	209	305	443	524	536	226
85°	40	88	108	120	122	49
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1545.0	1545.0	1545.0	1545.0	1545.0
2.5°	1547.0	1545.0	1537.1	1545.0	1545.0
5°	1541.0	1541.0	1535.1	1541.0	1541.0
7.5°	1531.1	1531.1	1527.1	1535.1	1535.1
10°	1519.1	1519.1	1517.1	1527.1	1527.1
12.5°	1501.2	1503.2	1501.2	1513.1	1513.1
15°	1481.2	1483.2	1485.2	1499.2	1499.2
17.5°	1455.3	1459.3	1463.3	1479.2	1481.2
20°	1431.4	1433.4	1441.4	1459.3	1461.3
22.5°	1399.5	1405.5	1415.5	1433.4	1439.4
25°	1363.6	1371.6	1383.6	1407.5	1411.5
27.5°	1329.7	1335.7	1351.7	1377.6	1385.5
30°	1287.9	1297.8	1317.8	1343.7	1353.6
32.5°	1248.0	1258.0	1281.9	1309.8	1317.8
35°	1198.1	1212.1	1240.0	1271.9	1281.9
37.5°	1150.3	1164.3	1198.1	1234.0	1246.0
40°	1100.5	1116.4	1152.3	1194.2	1210.1
42.5°	1046.6	1068.6	1108.4	1154.3	1172.2
45°	992.8	1012.7	1062.6	1114.4	1134.4
47.5°	935.0	958.9	1012.7	1074.5	1098.5
50°	873.2	903.1	964.9	1032.7	1058.6
52.5°	811.4	845.3	915.1	990.8	1018.7
55°	751.6	783.5	867.2	949.0	978.9
57.5°	685.8	725.7	817.4	905.1	935.0
60°	618.0	661.9	767.5	859.2	891.1
62.5°	550.2	600.1	719.7	811.4	845.3
65°	482.4	538.3	663.9	761.6	795.4
67.5°	416.7	478.5	612.0	709.7	743.6
70°	340.9	418.7	556.2	651.9	685.8
72.5°	271.1	360.8	502.4	592.1	622.0
75°	209.3	305.0	442.6	524.3	536.3
77.5°	153.5	249.2	380.8	408.7	410.7
80°	103.7	199.4	291.1	287.1	291.1
82.5°	67.8	149.5	183.4	205.3	207.3
85°	39.9	87.7	107.7	119.6	121.6
87.5°	19.9	29.9	37.9	39.9	43.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)