

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: P309694

Luminaire Tested: **24FCZ2-65HE-UNV-L82765-HRP-CA125-W2A-U-5000K**

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: P309694
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-L82765-HRP-CA125-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" ACRYLIC SHEET
Light Source: (336) 5000K 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: 4651.0 lumens
Efficiency: N/A
Efficacy: 86.4 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

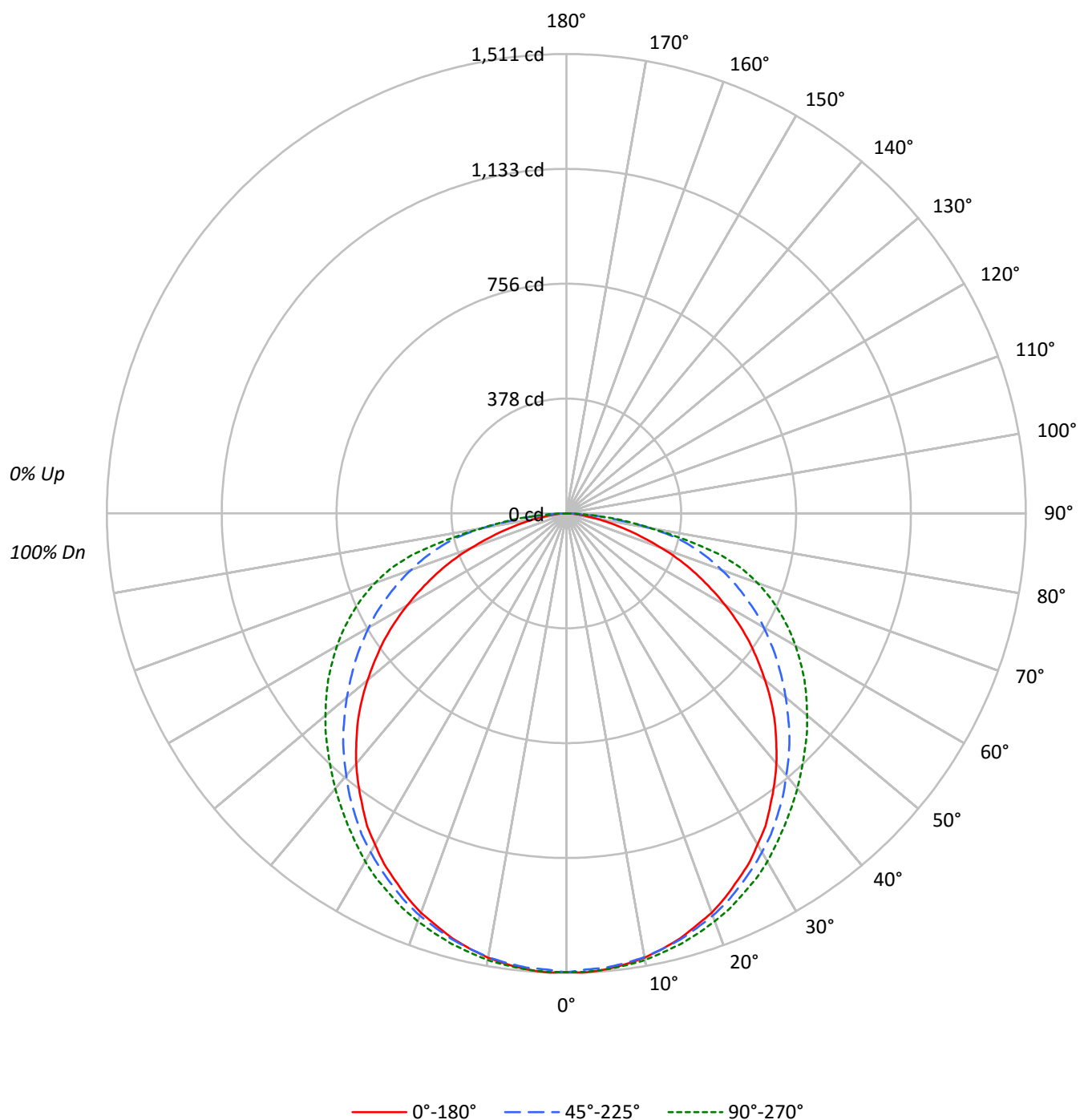
Input Watts (W): 53.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2030	2030	2030
5°	2033	2025	2033
10°	2027	2025	2038
15°	2015	2021	2040
20°	2002	2016	2044
25°	1977	2006	2047
30°	1954	2000	2054
35°	1922	1989	2056
40°	1888	1977	2076
45°	1845	1975	2108
50°	1785	1973	2164
55°	1722	1987	2243
60°	1624	2017	2342
65°	1500	2064	2473
70°	1310	2137	2635
75°	1063	2247	2723
80°	785	2203	2203
85°	601	1623	1834



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	142.9	3.1
10°-20°	410.5	8.8
20°-30°	624.9	13.4
30°-40°	758.8	16.3
40°-50°	801.7	17.2
50°-60°	756.5	16.3
60°-70°	629.0	13.5
70°-80°	413.8	8.9
80°-90°	112.8	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°	1178.4	25.3
0°-40°	1937.2	41.7
0°-60°	3495.4	75.2
0°-90°	4651.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4651.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1509	1509	1509	1509	1509	
5°	1505	1505	1499	1505	1505	143
15°	1447	1449	1451	1464	1464	408
25°	1332	1340	1351	1375	1379	614
35°	1170	1184	1211	1242	1252	733
45°	970	989	1038	1088	1108	747
55°	734	765	847	927	956	654
65°	471	526	648	744	777	466
75°	204	298	432	512	524	220
85°	39	86	105	117	119	48
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1509.0	1509.0	1509.0	1509.0	1509.0
2.5°	1511.0	1509.0	1501.2	1509.0	1509.0
5°	1505.1	1505.1	1499.3	1505.1	1505.1
7.5°	1495.4	1495.4	1491.5	1499.3	1499.3
10°	1483.7	1483.7	1481.8	1491.5	1491.5
12.5°	1466.2	1468.1	1466.2	1477.9	1477.9
15°	1446.7	1448.7	1450.6	1464.2	1464.2
17.5°	1421.4	1425.3	1429.2	1444.8	1446.7
20°	1398.0	1400.0	1407.8	1425.3	1427.2
22.5°	1366.9	1372.7	1382.5	1400.0	1405.8
25°	1331.8	1339.6	1351.3	1374.7	1378.6
27.5°	1298.7	1304.6	1320.1	1345.5	1353.3
30°	1257.8	1267.6	1287.0	1312.4	1322.1
32.5°	1218.9	1228.6	1252.0	1279.3	1287.0
35°	1170.2	1183.9	1211.1	1242.3	1252.0
37.5°	1123.5	1137.1	1170.2	1205.3	1217.0
40°	1074.8	1090.4	1125.4	1166.3	1181.9
42.5°	1022.2	1043.7	1082.6	1127.4	1144.9
45°	969.7	989.1	1037.8	1088.4	1107.9
47.5°	913.2	936.6	989.1	1049.5	1072.9
50°	852.8	882.0	942.4	1008.6	1033.9
52.5°	792.5	825.6	893.7	967.7	995.0
55°	734.1	765.2	847.0	926.8	956.0
57.5°	669.8	708.8	798.3	884.0	913.2
60°	603.6	646.4	749.6	839.2	870.4
62.5°	537.4	586.1	702.9	792.5	825.6
65°	471.2	525.7	648.4	743.8	776.9
67.5°	406.9	467.3	597.8	693.2	726.3
70°	333.0	408.9	543.2	636.7	669.8
72.5°	264.8	352.4	490.7	578.3	607.5
75°	204.4	297.9	432.3	512.1	523.8
77.5°	149.9	243.4	371.9	399.2	401.1
80°	101.3	194.7	284.3	280.4	284.3
82.5°	66.2	146.0	179.1	200.6	202.5
85°	38.9	85.7	105.1	116.8	118.8
87.5°	19.5	29.2	37.0	38.9	42.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)