

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: P309695

Luminaire Tested: **24FCZ2-65HE-UNV-L82765-HRP-CA125-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: P309695
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-5500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" ACRYLIC 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: 4697.0 lumens
Efficiency: N/A
Efficacy: 86.8 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

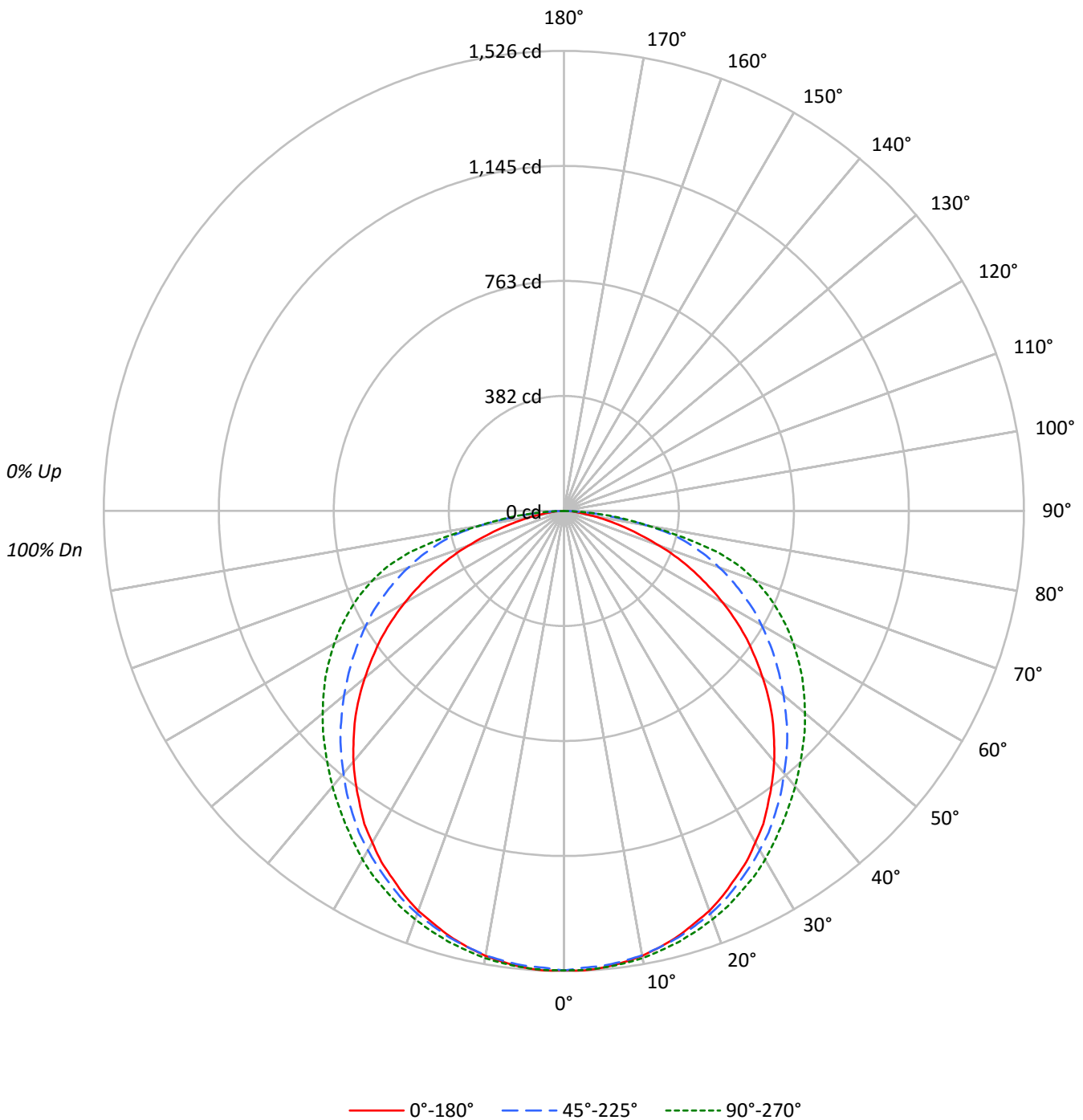
Input Watts (W): 54.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	2050	2050	2050
5°	2053	2045	2053
10°	2047	2044	2058
15°	2035	2041	2060
20°	2022	2036	2064
25°	1997	2026	2067
30°	1974	2019	2074
35°	1941	2009	2077
40°	1906	1996	2096
45°	1863	1994	2129
50°	1803	1992	2186
55°	1739	2007	2265
60°	1640	2037	2365
65°	1515	2085	2498
70°	1323	2158	2661
75°	1074	2269	2750
80°	793	2225	2225
85°	607	1639	1851



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	144.4	3.1
10°-20°	414.6	8.8
20°-30°	631.1	13.4
30°-40°	766.3	16.3
40°-50°	809.6	17.2
50°-60°	764.0	16.3
60°-70°	635.2	13.5
70°-80°	417.9	8.9
80°-90°	113.9	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°	1190.1	25.3
0°-40°	1956.4	41.7
0°-60°	3530.0	75.2
0°-90°	4697.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4697.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1524	1524	1524	1524	1524	
5°	1520	1520	1514	1520	1520	144
15°	1461	1463	1465	1479	1479	412
25°	1345	1353	1365	1388	1392	620
35°	1182	1196	1223	1255	1264	740
45°	979	999	1048	1099	1119	754
55°	741	773	855	936	966	660
65°	476	531	655	751	785	470
75°	206	301	436	517	529	222
85°	39	86	106	118	120	48
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1523.9	1523.9	1523.9	1523.9	1523.9
2.5°	1525.9	1523.9	1516.1	1523.9	1523.9
5°	1520.0	1520.0	1514.1	1520.0	1520.0
7.5°	1510.2	1510.2	1506.2	1514.1	1514.1
10°	1498.4	1498.4	1496.4	1506.2	1506.2
12.5°	1480.7	1482.7	1480.7	1492.5	1492.5
15°	1461.0	1463.0	1465.0	1478.7	1478.7
17.5°	1435.5	1439.4	1443.3	1459.1	1461.0
20°	1411.9	1413.8	1421.7	1439.4	1441.4
22.5°	1380.4	1386.3	1396.1	1413.8	1419.7
25°	1345.0	1352.9	1364.7	1388.3	1392.2
27.5°	1311.6	1317.5	1333.2	1358.8	1366.6
30°	1270.3	1280.1	1299.8	1325.3	1335.2
32.5°	1231.0	1240.8	1264.4	1291.9	1299.8
35°	1181.8	1195.6	1223.1	1254.6	1264.4
37.5°	1134.6	1148.4	1181.8	1217.2	1229.0
40°	1085.4	1101.2	1136.6	1177.9	1193.6
42.5°	1032.4	1054.0	1093.3	1138.5	1156.2
45°	979.3	998.9	1048.1	1099.2	1118.9
47.5°	922.2	945.8	998.9	1059.9	1083.5
50°	861.3	890.8	951.7	1018.6	1044.1
52.5°	800.3	833.7	902.6	977.3	1004.8
55°	741.3	772.8	855.4	936.0	965.5
57.5°	676.4	715.8	806.2	892.7	922.2
60°	609.6	652.8	757.1	847.5	879.0
62.5°	542.7	591.9	709.9	800.3	833.7
65°	475.9	530.9	654.8	751.2	784.6
67.5°	411.0	471.9	603.7	700.0	733.5
70°	336.3	412.9	548.6	643.0	676.4
72.5°	267.4	355.9	495.5	584.0	613.5
75°	206.5	300.9	436.5	517.2	529.0
77.5°	151.4	245.8	375.6	403.1	405.1
80°	102.3	196.6	287.1	283.2	287.1
82.5°	66.9	147.5	180.9	202.5	204.5
85°	39.3	86.5	106.2	118.0	119.9
87.5°	19.7	29.5	37.4	39.3	43.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)