

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: P309693

Luminaire Tested: **24FCZ2-65HE-UNV-L82765-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: P309693
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-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: 4589.0 lumens
Efficiency: N/A
Efficacy: 85.6 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

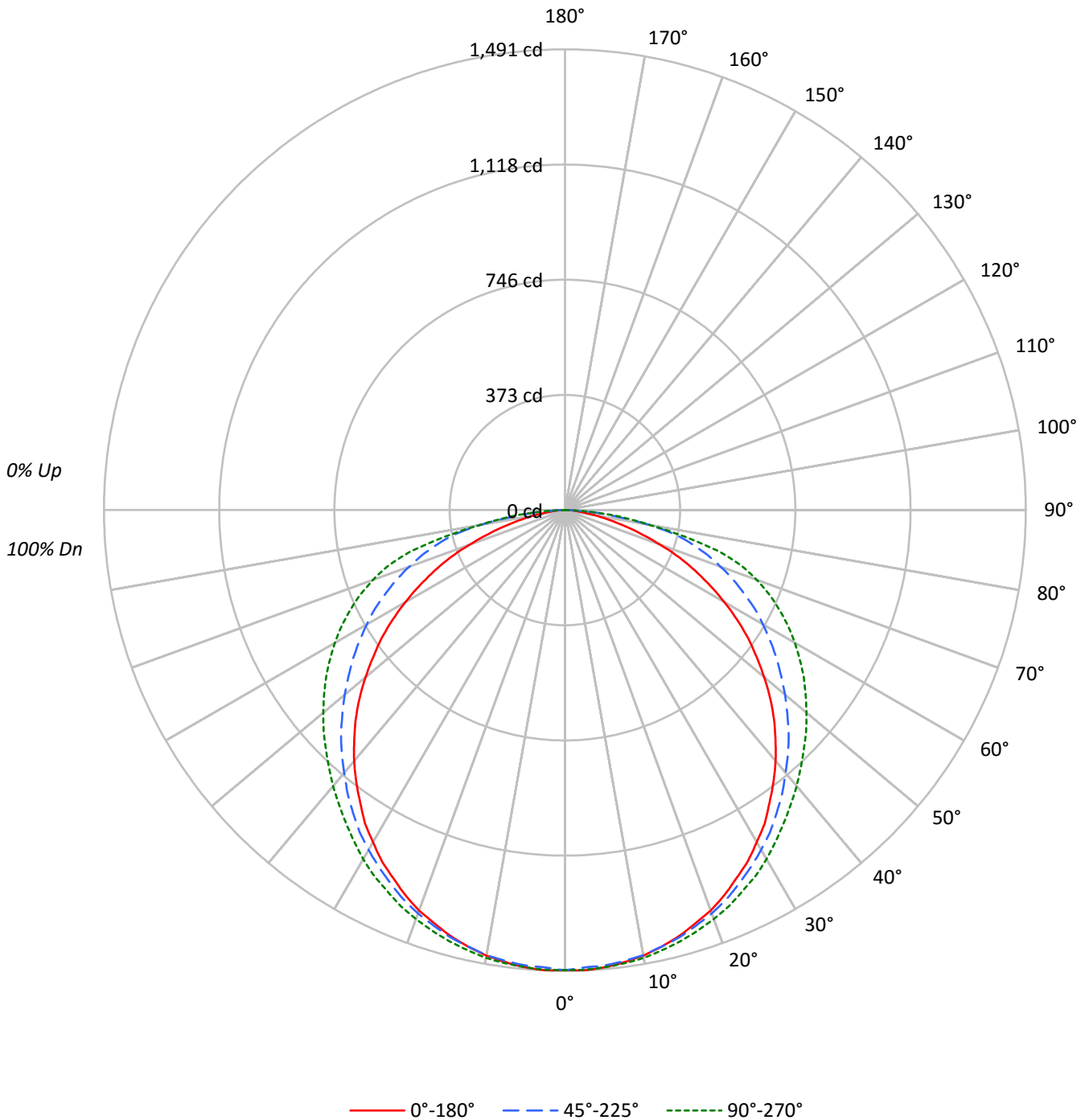
Input Watts (W): 53.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2003	2003	2003
5°	2006	1998	2006
10°	2000	1997	2011
15°	1988	1994	2012
20°	1975	1989	2016
25°	1951	1979	2019
30°	1928	1973	2027
35°	1896	1963	2029
40°	1863	1950	2048
45°	1820	1948	2080
50°	1761	1946	2135
55°	1699	1960	2213
60°	1603	1990	2311
65°	1480	2037	2440
70°	1292	2109	2600
75°	1049	2217	2687
80°	774	2173	2173
85°	593	1601	1809



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	141.0	3.1
10°-20°	405.0	8.8
20°-30°	616.6	13.4
30°-40°	748.7	16.3
40°-50°	791.0	17.2
50°-60°	746.4	16.3
60°-70°	620.6	13.5
70°-80°	408.3	8.9
80°-90°	111.3	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°	1162.7	25.3
0°-40°	1911.4	41.7
0°-60°	3448.8	75.2
0°-90°	4589.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4589.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1489	1489	1489	1489	1489	
5°	1485	1485	1479	1485	1485	141
15°	1427	1429	1431	1445	1445	403
25°	1314	1322	1333	1356	1360	606
35°	1155	1168	1195	1226	1235	723
45°	957	976	1024	1074	1093	737
55°	724	755	836	914	943	645
65°	465	519	640	734	766	460
75°	202	294	426	505	517	217
85°	38	84	104	115	117	47
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1488.9	1488.9	1488.9	1488.9	1488.9
2.5°	1490.8	1488.9	1481.2	1488.9	1488.9
5°	1485.1	1485.1	1479.3	1485.1	1485.1
7.5°	1475.5	1475.5	1471.6	1479.3	1479.3
10°	1463.9	1463.9	1462.0	1471.6	1471.6
12.5°	1446.6	1448.6	1446.6	1458.2	1458.2
15°	1427.4	1429.3	1431.3	1444.7	1444.7
17.5°	1402.5	1406.3	1410.1	1425.5	1427.4
20°	1379.4	1381.3	1389.0	1406.3	1408.2
22.5°	1348.7	1354.4	1364.0	1381.3	1387.1
25°	1314.1	1321.8	1333.3	1356.3	1360.2
27.5°	1281.4	1287.2	1302.6	1327.5	1335.2
30°	1241.1	1250.7	1269.9	1294.9	1304.5
32.5°	1202.7	1212.3	1235.3	1262.2	1269.9
35°	1154.6	1168.1	1195.0	1225.7	1235.3
37.5°	1108.5	1122.0	1154.6	1189.2	1200.7
40°	1060.5	1075.9	1110.4	1150.8	1166.1
42.5°	1008.6	1029.7	1068.2	1112.4	1129.6
45°	956.7	976.0	1024.0	1073.9	1093.1
47.5°	901.0	924.1	976.0	1035.5	1058.6
50°	841.5	870.3	929.8	995.2	1020.1
52.5°	781.9	814.6	881.8	954.8	981.7
55°	724.3	755.0	835.7	914.5	943.3
57.5°	660.9	699.3	787.7	872.2	901.0
60°	595.6	637.8	739.6	828.0	858.8
62.5°	530.2	578.3	693.5	781.9	814.6
65°	464.9	518.7	639.7	733.9	766.5
67.5°	401.5	461.1	589.8	683.9	716.6
70°	328.5	403.4	536.0	628.2	660.9
72.5°	261.3	347.7	484.1	570.6	599.4
75°	201.7	293.9	426.5	505.3	516.8
77.5°	147.9	240.1	366.9	393.8	395.8
80°	99.9	192.1	280.5	276.6	280.5
82.5°	65.3	144.1	176.7	197.9	199.8
85°	38.4	84.5	103.7	115.3	117.2
87.5°	19.2	28.8	36.5	38.4	42.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)