

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: P309661

Luminaire Tested: **24FCZ2-60HE-UNV-L82765-HRP-CP125-W2A-U-6500K**

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: P309661
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: 24FCZ2-60HE-UNV-L82765-HRP-CP125-W2A-U-6500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" POLYCARB SHEET
Light Source: (336) 6500K 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: 4273.0 lumens
Efficiency: N/A
Efficacy: 86.0 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

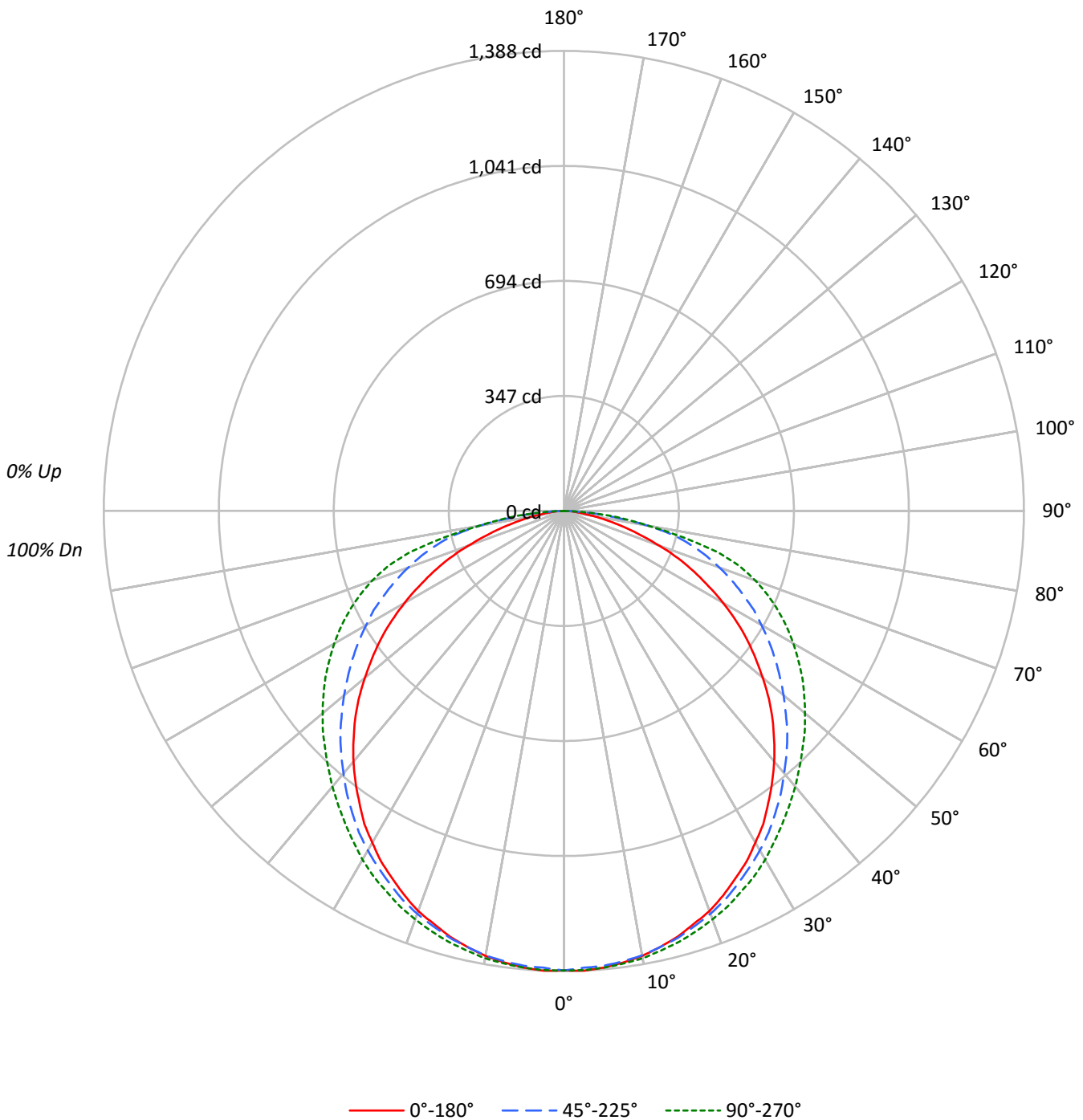
Input Watts (W): 49.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1865	1865	1865
5°	1868	1860	1868
10°	1862	1860	1872
15°	1851	1856	1874
20°	1839	1852	1877
25°	1817	1843	1880
30°	1795	1837	1887
35°	1766	1828	1889
40°	1734	1816	1907
45°	1695	1814	1937
50°	1640	1812	1988
55°	1582	1825	2060
60°	1492	1853	2152
65°	1378	1897	2273
70°	1203	1963	2421
75°	976	2064	2502
80°	721	2024	2024
85°	553	1491	1684



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	131.3	3.1
10°-20°	377.1	8.8
20°-30°	574.1	13.4
30°-40°	697.1	16.3
40°-50°	736.5	17.2
50°-60°	695.0	16.3
60°-70°	577.9	13.5
70°-80°	380.2	8.9
80°-90°	103.6	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°	1082.6	25.3
0°-40°	1779.8	41.7
0°-60°	3211.3	75.2
0°-90°	4273.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4273.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1386	1386	1386	1386	1386	
5°	1383	1383	1377	1383	1383	131
15°	1329	1331	1333	1345	1345	375
25°	1224	1231	1242	1263	1266	564
35°	1075	1088	1113	1141	1150	673
45°	891	909	954	1000	1018	686
55°	674	703	778	852	878	601
65°	433	483	596	683	714	428
75°	188	274	397	470	481	202
85°	36	79	97	107	109	44
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1386.4	1386.4	1386.4	1386.4	1386.4
2.5°	1388.2	1386.4	1379.2	1386.4	1386.4
5°	1382.8	1382.8	1377.4	1382.8	1382.8
7.5°	1373.9	1373.9	1370.3	1377.4	1377.4
10°	1363.1	1363.1	1361.3	1370.3	1370.3
12.5°	1347.0	1348.8	1347.0	1357.8	1357.8
15°	1329.1	1330.9	1332.7	1345.2	1345.2
17.5°	1305.9	1309.5	1313.0	1327.3	1329.1
20°	1284.4	1286.2	1293.4	1309.5	1311.2
22.5°	1255.8	1261.2	1270.1	1286.2	1291.6
25°	1223.6	1230.7	1241.5	1262.9	1266.5
27.5°	1193.2	1198.5	1212.9	1236.1	1243.3
30°	1155.6	1164.6	1182.4	1205.7	1214.6
32.5°	1119.8	1128.8	1150.2	1175.3	1182.4
35°	1075.1	1087.6	1112.7	1141.3	1150.2
37.5°	1032.2	1044.7	1075.1	1107.3	1118.0
40°	987.5	1001.8	1034.0	1071.5	1085.8
42.5°	939.2	958.8	994.6	1035.8	1051.9
45°	890.9	908.7	953.5	1000.0	1017.9
47.5°	839.0	860.4	908.7	964.2	985.7
50°	783.5	810.4	865.8	926.6	949.9
52.5°	728.1	758.5	821.1	889.1	914.1
55°	674.4	703.0	778.2	851.5	878.3
57.5°	615.4	651.2	733.4	812.1	839.0
60°	554.6	593.9	688.7	771.0	799.6
62.5°	493.7	538.5	645.8	728.1	758.5
65°	432.9	483.0	595.7	683.4	713.8
67.5°	373.9	429.3	549.2	636.8	667.3
70°	305.9	375.7	499.1	585.0	615.4
72.5°	243.3	323.8	450.8	531.3	558.1
75°	187.8	273.7	397.1	470.5	481.2
77.5°	137.7	223.6	341.7	366.7	368.5
80°	93.0	178.9	261.2	257.6	261.2
82.5°	60.8	134.2	164.6	184.3	186.0
85°	35.8	78.7	96.6	107.3	109.1
87.5°	17.9	26.8	34.0	35.8	39.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)