

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P930030

Luminaire Tested: DFN2DS-4P4F0-080DS927-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930030
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P333882)
Test Lab: INNOVATION CENTER
Issue Date: 11/20/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DS-4P4F0-080DS927-RLL
Description: 4 foot, 90deg - 4way Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

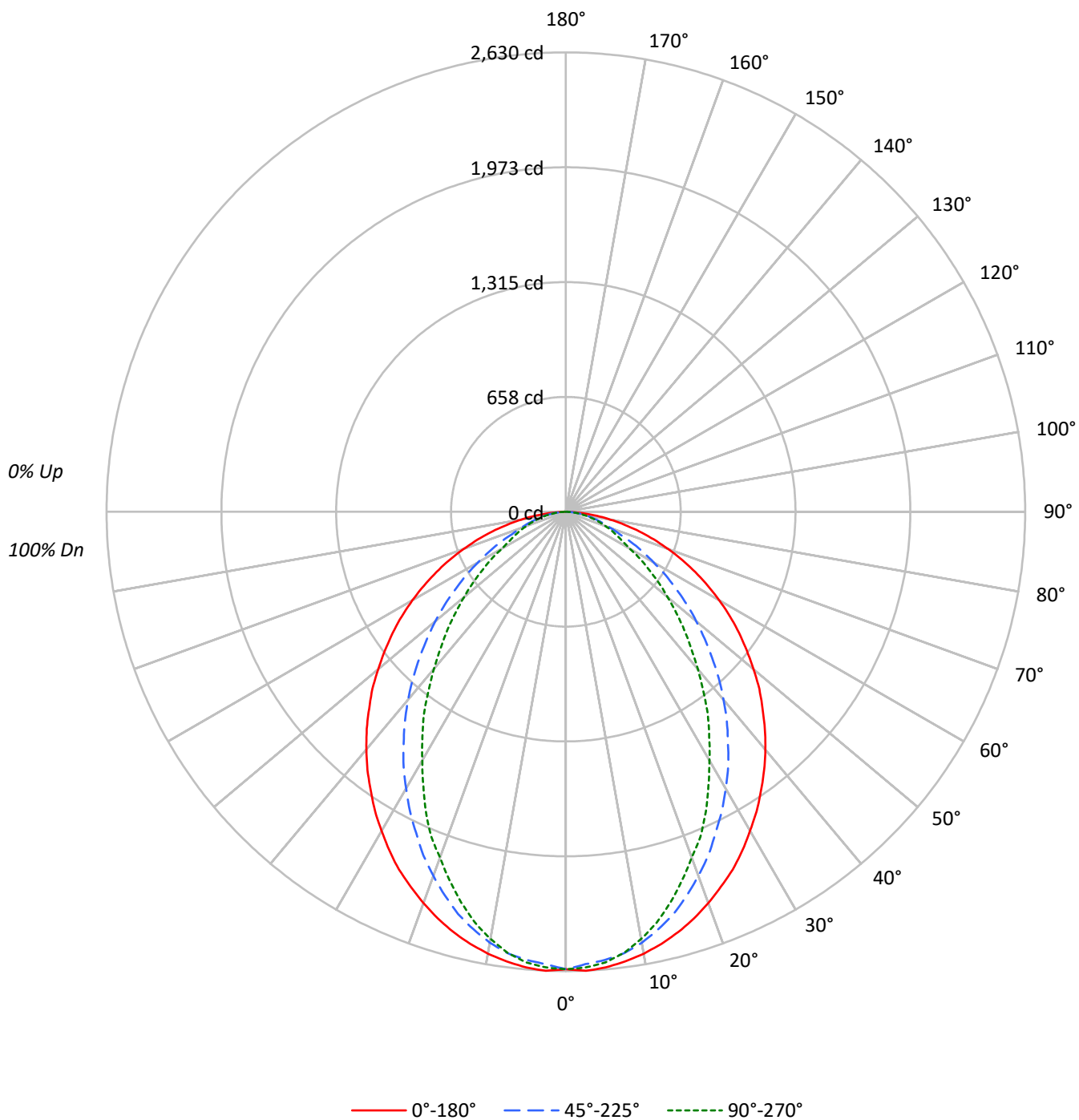
Lumens per Lamp: N/A
Luminaire Lumens: 5385.6 lumens
Efficiency: N/A
Efficacy: 62.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 4.07' x L: 4.07' x H: 0')
CIE Type: Direct

Input Watts (W): 86.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9971
Total Harmonic Distortion (THDi): 0.049
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P930030

CATALOG NUMBER: DFN2DS-4P4F0-080DS927-RLL

Luminous Intensity Polar Plot



TEST NUMBER: P930030

CATALOG NUMBER: DFN2DS-4P4F0-080DS927-RLL

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20
RC	80				70				50				30				10
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	110	106	102	98	107	103	100	97	99	96	94		95	93	91		92
2	101	94	87	82	98	92	86	81	88	83	79		85	81	78		82
3	93	83	76	70	90	82	75	69	79	73	68		76	71	67		74
4	86	75	66	60	83	73	66	60	71	64	59		69	63	58		66
5	79	67	59	53	77	66	58	52	64	57	52		62	56	51		60
6	74	61	53	47	72	60	52	46	58	51	46		57	50	46		55
7	68	56	47	42	67	55	47	42	53	46	41		52	46	41		51
8	64	51	43	38	62	51	43	37	49	42	37		48	42	37		47
9	60	47	39	34	59	47	39	34	46	39	34		44	38	34		44
10	56	44	36	31	55	43	36	31	42	36	31		41	35	31		41

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1699	1699	1699
5°	1705	1677	1687
10°	1692	1650	1636
15°	1673	1601	1555
20°	1646	1531	1454
25°	1618	1452	1357
30°	1580	1370	1232
35°	1543	1282	1122
40°	1505	1190	995
45°	1461	1087	880
50°	1416	983	768
55°	1370	871	660
60°	1316	753	547
65°	1255	633	498
70°	1182	521	458
75°	1093	475	428
80°	965	425	390
85°	758	335	335

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1461 cd/sqm

TEST NUMBER: P930030

CATALOG NUMBER: DFN2DS-4P4F0-080DS927-RLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	245.4	4.6
10°-20°	673.7	12.5
20°-30°	945.9	17.6
30°-40°	1031.1	19.1
40°-50°	947.7	17.6
50°-60°	744.3	13.8
60°-70°	484.4	9.0
70°-80°	249.4	4.6
80°-90°	63.7	1.2
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°	1865.1	34.6
0°-40°	2896.2	53.8
0°-60°	4588.1	85.2
0°-90°	5385.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5385.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2619	2619	2619	2619	2619	
5°	2619	2607	2576	2597	2590	248
15°	2491	2464	2384	2339	2315	702
25°	2261	2185	2028	1932	1896	1040
35°	1948	1827	1619	1469	1417	1219
45°	1593	1434	1185	1016	960	1230
55°	1211	1026	770	628	583	1082
65°	818	626	412	332	325	811
75°	436	270	190	173	171	461
85°	102	52	45	45	45	122
90°	0	0	0	0	0	

TEST NUMBER: P930030

CATALOG NUMBER: DFN2DS-4P4F0-080DS927-RLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2618.7	2618.7	2618.7	2618.7	2618.7
2.5°	2630.5	2618.7	2592.5	2616.4	2611.6
5°	2618.7	2606.9	2575.9	2597.3	2590.2
7.5°	2597.3	2583.2	2550.0	2559.3	2547.5
10°	2568.9	2552.3	2505.0	2497.7	2483.6
12.5°	2533.4	2512.1	2447.9	2433.8	2407.7
15°	2490.7	2464.5	2384.1	2339.1	2315.4
17.5°	2440.9	2402.9	2303.4	2251.3	2213.3
20°	2384.1	2336.6	2218.2	2159.1	2106.7
22.5°	2322.5	2267.9	2130.4	2049.9	2014.5
25°	2260.8	2185.0	2028.5	1931.5	1895.8
27.5°	2187.4	2106.7	1933.7	1822.4	1767.8
30°	2109.3	2019.0	1829.4	1708.7	1644.6
32.5°	2033.3	1924.2	1730.1	1587.8	1528.5
35°	1948.1	1827.1	1618.7	1469.4	1417.0
37.5°	1865.1	1734.6	1514.4	1350.7	1291.6
40°	1777.4	1635.3	1405.2	1237.0	1175.4
42.5°	1687.4	1535.8	1296.3	1120.9	1061.8
45°	1592.6	1433.7	1185.0	1016.5	959.7
47.5°	1502.6	1334.4	1078.4	909.9	857.9
50°	1402.9	1234.8	974.1	810.4	760.8
52.5°	1305.7	1127.9	874.4	718.1	673.1
55°	1210.9	1026.1	770.1	628.1	583.1
57.5°	1113.9	924.3	677.9	545.1	507.1
60°	1014.2	824.7	580.5	459.8	421.9
62.5°	917.2	727.6	497.6	384.0	365.1
65°	817.7	625.5	412.3	331.9	324.6
67.5°	722.9	530.8	331.9	291.4	284.4
70°	623.3	438.5	274.8	251.1	241.6
72.5°	528.5	353.0	229.8	211.0	206.2
75°	436.0	270.1	189.6	173.0	170.8
77.5°	343.7	191.8	149.4	139.8	135.0
80°	258.2	137.6	113.7	104.3	104.3
82.5°	180.0	92.5	78.2	73.4	73.4
85°	101.9	52.0	45.0	45.0	45.0
87.5°	37.9	18.8	18.8	16.6	16.6
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P930030

CATALOG NUMBER: DFN2DS-4P4F0-080DS927-RLL

CIE UGR TABLE:

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	13.08	14.60	13.44	14.91	15.23	9.04	10.56	9.40	10.87	11.19
	3H	14.84	16.21	15.22	16.53	16.90	10.30	11.67	10.68	11.99	12.36
	4H	15.51	16.79	15.91	17.14	17.52	10.80	12.08	11.20	12.43	12.81
	6H	16.00	17.18	16.41	17.55	17.94	11.18	12.37	11.60	12.73	13.13
	8H	16.16	17.29	16.59	17.68	18.08	11.31	12.44	11.74	12.82	13.23
	12H	16.27	17.34	16.70	17.73	18.15	11.39	12.47	11.82	12.85	13.28
4H	2H	13.18	14.46	13.58	14.81	15.19	9.73	11.01	10.13	11.36	11.74
	3H	15.11	16.18	15.52	16.58	16.98	11.17	12.24	11.59	12.64	13.04
	4H	15.86	16.82	16.30	17.24	17.67	11.77	12.73	12.21	13.15	13.59
	6H	16.45	17.29	16.91	17.73	18.19	12.26	13.09	12.72	13.54	14.00
	8H	16.67	17.45	17.13	17.89	18.36	12.42	13.20	12.89	13.65	14.11
	12H	16.82	17.52	17.30	18.00	18.47	12.54	13.24	13.02	13.71	14.19
8H	4H	15.89	16.66	16.35	17.11	17.58	12.13	12.91	12.59	13.35	13.82
	6H	16.52	17.17	17.02	17.66	18.14	12.71	13.36	13.21	13.85	14.33
	8H	16.77	17.35	17.29	17.86	18.35	12.94	13.51	13.45	14.02	14.51
	12H	16.98	17.49	17.49	17.98	18.55	13.11	13.62	13.62	14.12	14.68
12H	4H	15.87	16.57	16.35	17.04	17.52	12.17	12.87	12.65	13.34	13.82
	6H	16.51	17.08	17.02	17.59	18.08	12.78	13.36	13.29	13.87	14.35
	8H	16.79	17.30	17.30	17.79	18.36	13.05	13.56	13.56	14.05	14.62