

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: P931181

Luminaire Tested: DFN2DS-SQ4F0-120DS927-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931181
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P333812)
Test Lab: INNOVATION CENTER
Issue Date: 11/20/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DS-SQ4F0-120DS927-FLL
Description: 4 foot, Square Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

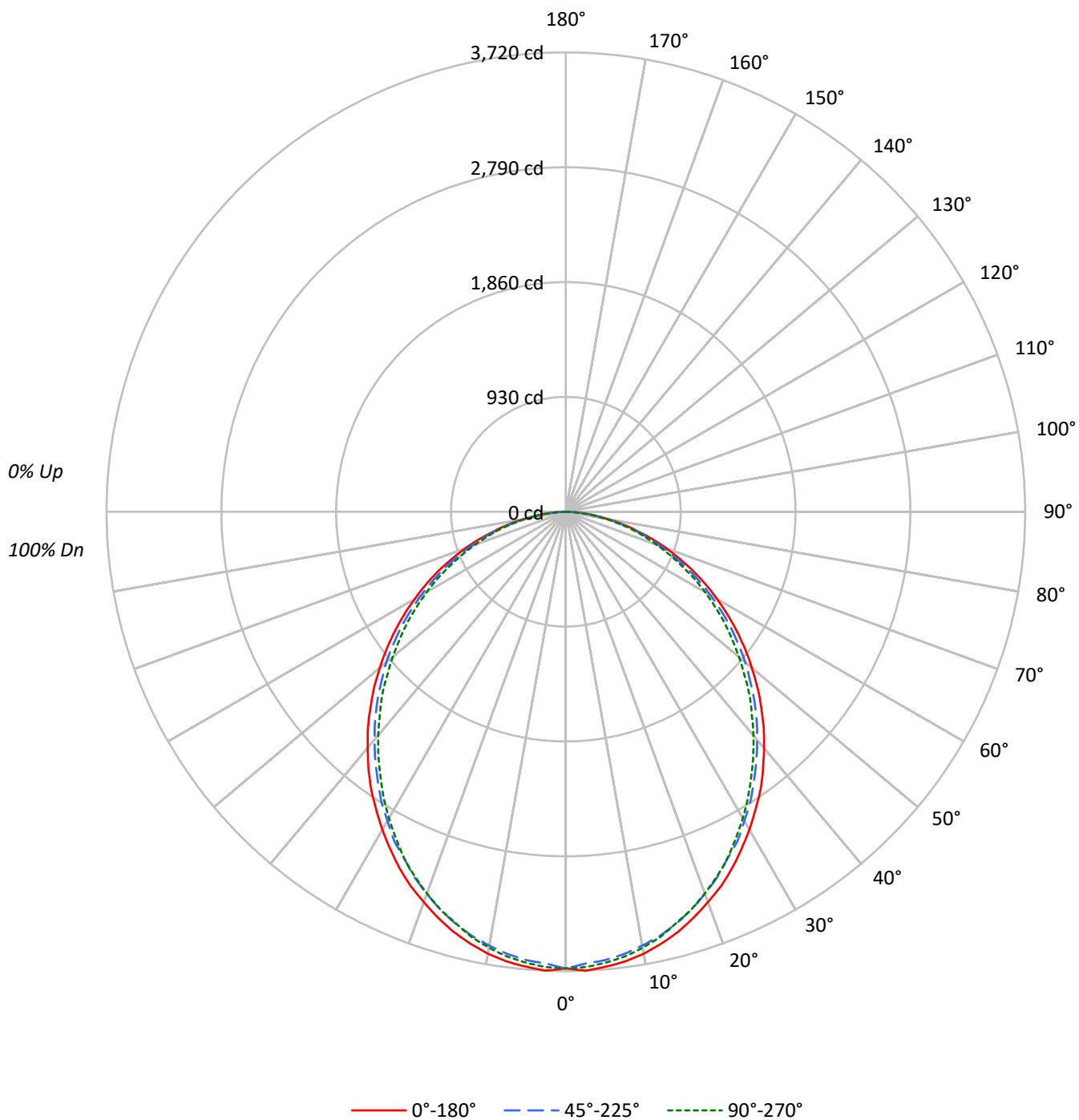
Lumens per Lamp: N/A
Luminaire Lumens: 9408.9 lumens
Efficiency: N/A
Efficacy: 75.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.92' x L: 3.92' x H: 0')
CIE Type: Direct

Input Watts (W): 125.5
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9933
Total Harmonic Distortion (THDi): 0.066
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P931181

CATALOG NUMBER: DFN2DS-SQ4F0-120DS927-FLL

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
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	109	104	100	96	106	102	98	95	98	95	92		94	91	89		90
2	99	91	85	79	97	89	83	78	86	81	76		83	78	74		80
3	91	80	72	66	88	79	71	65	76	69	64		73	68	63		71
4	83	71	63	56	81	70	62	56	68	61	55		65	59	54		63
5	77	64	55	49	75	63	55	48	61	53	48		59	52	47		57
6	71	58	49	43	69	57	48	42	55	48	42		53	47	42		52
7	66	52	44	38	64	52	43	38	50	43	37		49	42	37		47
8	61	48	40	34	60	47	39	34	46	39	33		45	38	33		44
9	57	44	36	30	56	43	36	30	42	35	30		41	35	30		40
10	54	41	33	28	53	40	33	28	39	32	27		38	32	27		37

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2595	2595	2595
5°	2605	2567	2582
10°	2589	2541	2554
15°	2557	2508	2506
20°	2512	2459	2456
25°	2467	2398	2398
30°	2409	2342	2322
35°	2355	2275	2242
40°	2287	2208	2166
45°	2220	2142	2089
50°	2147	2073	1999
55°	2071	1992	1919
60°	1986	1896	1827
65°	1896	1801	1718
70°	1780	1685	1605
75°	1619	1552	1514
80°	1438	1393	1322
85°	1172	1117	1002

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2220 cd/sqm

TEST NUMBER: P931181

CATALOG NUMBER: DFN2DS-SQ4F0-120DS927-FLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	348.1	3.7
10°-20°	979.3	10.4
20°-30°	1439.2	15.3
30°-40°	1671.6	17.8
40°-50°	1669.5	17.7
50°-60°	1455.7	15.5
60°-70°	1076.1	11.4
70°-80°	608.8	6.5
80°-90°	160.7	1.7
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°	2766.6	29.4
0°-40°	4438.1	47.2
0°-60°	7563.3	80.4
0°-90°	9408.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9408.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3698	3698	3698	3698	3698	
5°	3698	3684	3645	3673	3666	351
15°	3520	3499	3453	3467	3449	991
25°	3186	3158	3097	3104	3097	1466
35°	2749	2713	2656	2635	2617	1717
45°	2237	2212	2158	2120	2105	1726
55°	1693	1671	1629	1586	1568	1513
65°	1142	1120	1085	1053	1035	1129
75°	597	590	572	551	558	638
85°	146	142	139	128	124	171
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3698.1	3698.1	3698.1	3698.1	3698.1
2.5°	3719.5	3701.8	3662.6	3698.1	3691.3
5°	3698.1	3684.1	3644.9	3673.1	3666.3
7.5°	3673.1	3652.0	3612.8	3641.5	3634.3
10°	3634.3	3609.4	3566.8	3595.0	3584.5
12.5°	3580.7	3559.6	3517.0	3534.7	3527.5
15°	3520.4	3499.2	3452.8	3467.1	3449.4
17.5°	3445.7	3424.5	3378.1	3395.9	3378.1
20°	3363.8	3342.6	3292.9	3303.4	3289.5
22.5°	3282.3	3250.2	3203.8	3203.8	3196.7
25°	3186.1	3157.8	3097.4	3104.2	3097.4
27.5°	3079.3	3054.4	3008.4	2997.8	2980.1
30°	2972.9	2944.3	2891.0	2880.5	2866.2
32.5°	2859.0	2837.9	2780.9	2759.4	2745.1
35°	2748.8	2713.4	2656.4	2634.9	2617.2
37.5°	2624.3	2592.3	2535.3	2510.4	2492.7
40°	2496.5	2467.8	2410.8	2379.1	2364.8
42.5°	2372.0	2343.3	2286.7	2250.9	2229.7
45°	2236.8	2212.0	2158.4	2119.6	2105.2
47.5°	2105.2	2080.3	2023.3	1984.1	1963.0
50°	1966.4	1948.6	1898.8	1849.0	1831.3
52.5°	1831.3	1806.4	1760.4	1721.1	1696.2
55°	1692.8	1671.4	1628.7	1586.1	1568.3
57.5°	1554.0	1536.2	1489.8	1447.2	1432.9
60°	1415.1	1401.2	1351.4	1312.2	1301.6
62.5°	1280.1	1255.2	1219.8	1184.3	1169.9
65°	1141.7	1120.1	1084.6	1052.6	1034.9
67.5°	999.4	981.3	949.6	924.7	910.4
70°	867.7	853.4	821.3	796.4	782.5
72.5°	732.7	718.3	700.6	675.7	665.1
75°	597.2	590.4	572.3	551.2	558.4
77.5°	476.5	462.1	455.0	444.4	433.9
80°	355.8	352.0	344.8	334.3	327.1
82.5°	241.8	241.8	238.5	224.1	224.1
85°	145.6	142.2	138.8	127.9	124.5
87.5°	64.2	56.9	49.8	39.2	35.5
90°	0.0	0.0	0.0	0.0	0.0

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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	14.60	16.21	14.96	16.52	16.83	14.15	15.76	14.52	16.08	16.39
	3H	16.35	17.80	16.72	18.13	18.49	15.85	17.31	16.23	17.64	18.00
	4H	16.99	18.36	17.39	18.71	19.08	16.50	17.87	16.90	18.21	18.59
	6H	17.46	18.73	17.87	19.09	19.48	16.96	18.23	17.37	18.59	18.98
	8H	17.60	18.81	18.03	19.20	19.60	17.10	18.31	17.53	18.70	19.10
	12H	17.69	18.85	18.12	19.24	19.66	17.18	18.34	17.61	18.72	19.15
4H	2H	15.16	16.52	15.55	16.87	17.25	14.80	16.17	15.20	16.52	16.90
	3H	17.13	18.28	17.54	18.67	19.07	16.72	17.87	17.13	18.27	18.67
	4H	17.91	18.94	18.34	19.36	19.79	17.48	18.52	17.91	18.93	19.37
	6H	18.50	19.41	18.96	19.85	20.31	18.07	18.98	18.53	19.42	19.87
	8H	18.69	19.54	19.15	19.98	20.45	18.26	19.10	18.72	19.54	20.01
	12H	18.83	19.59	19.31	20.06	20.53	18.37	19.13	18.85	19.61	20.08
8H	4H	18.18	19.03	18.64	19.47	19.94	17.81	18.65	18.27	19.10	19.56
	6H	18.89	19.60	19.39	20.09	20.56	18.51	19.22	19.01	19.70	20.18
	8H	19.15	19.78	19.66	20.29	20.78	18.76	19.39	19.27	19.90	20.39
	12H	19.35	19.91	19.86	20.40	20.96	18.94	19.50	19.45	19.99	20.55
12H	4H	18.21	18.97	18.69	19.44	19.91	17.84	18.60	18.32	19.08	19.55
	6H	18.94	19.57	19.45	20.08	20.57	18.57	19.20	19.08	19.71	20.20
	8H	19.25	19.81	19.76	20.30	20.86	18.88	19.43	19.38	19.92	20.49