

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: P931056

Luminaire Tested: DFN2DS-SQ3F0-120DS927-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931056
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-SQ3F0-120DS927-RLL
Description: 3 foot, Square Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

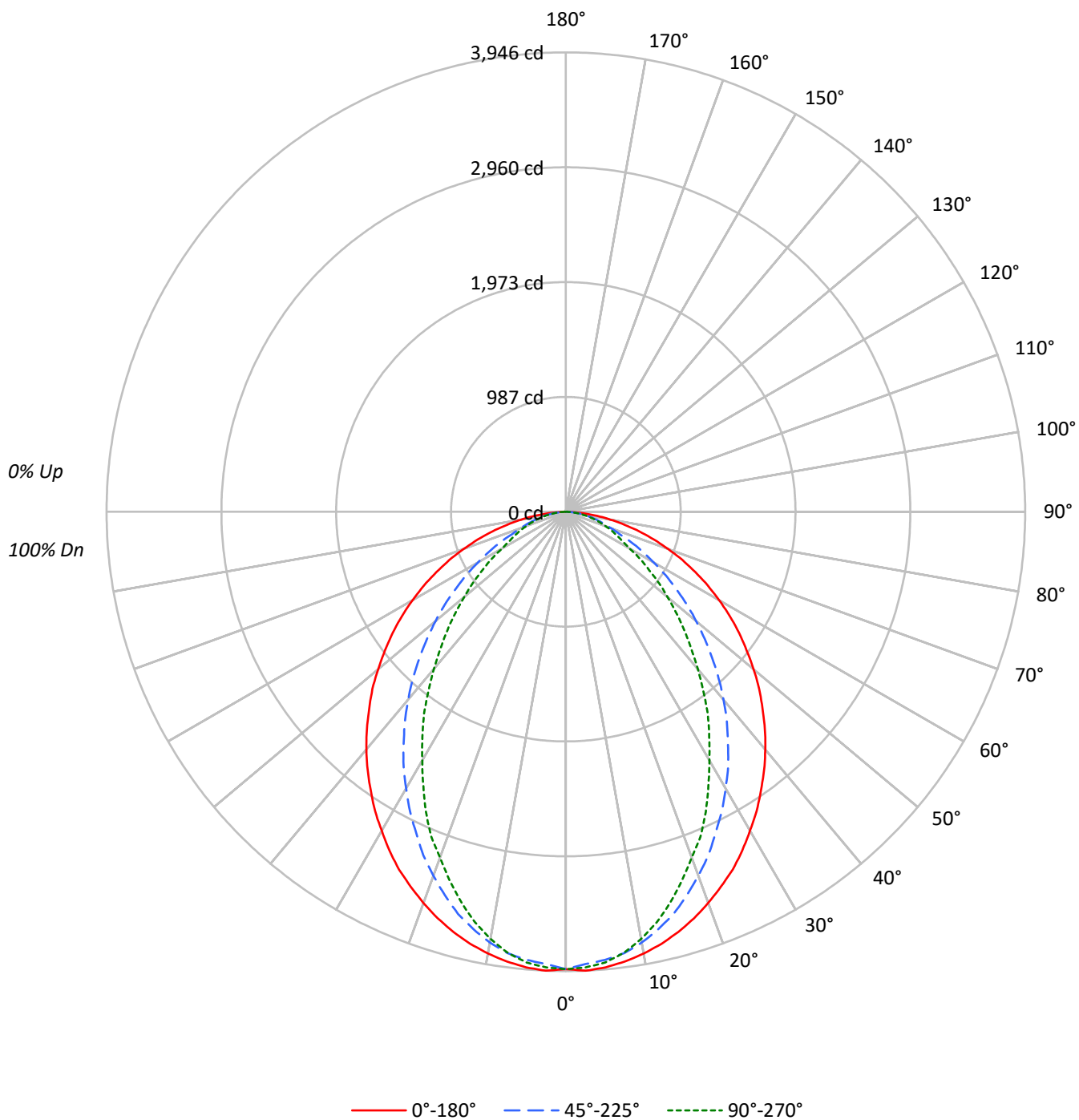
Lumens per Lamp: N/A
Luminaire Lumens: 8078.4 lumens
Efficiency: N/A
Efficacy: 61.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.06' x L: 3.06' x H: 0')
CIE Type: Direct

Input Watts (W): 131.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9957
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: P931056

CATALOG NUMBER: DFN2DS-SQ3F0-120DS927-RLL

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	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°	4501	4501	4501
5°	4518	4444	4469
10°	4483	4372	4335
15°	4432	4242	4120
20°	4360	4057	3853
25°	4287	3847	3595
30°	4186	3631	3264
35°	4087	3396	2973
40°	3988	3153	2637
45°	3871	2880	2333
50°	3751	2604	2034
55°	3629	2308	1747
60°	3486	1996	1450
65°	3325	1677	1320
70°	3132	1381	1214
75°	2895	1259	1134
80°	2556	1124	1033
85°	2009	887	887

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
Vertical Angle: 45°
Luminance: 3871 cd/sqm

TEST NUMBER: P931056

CATALOG NUMBER: DFN2DS-SQ3F0-120DS927-RLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	368.1	4.6
10°-20°	1010.6	12.5
20°-30°	1418.9	17.6
30°-40°	1546.6	19.1
40°-50°	1421.5	17.6
50°-60°	1116.4	13.8
60°-70°	726.7	9.0
70°-80°	374.1	4.6
80°-90°	95.5	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°	2797.6	34.6
0°-40°	4344.2	53.8
0°-60°	6882.2	85.2
0°-90°	8078.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8078.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3928	3928	3928	3928	3928	
5°	3928	3910	3864	3896	3885	372
15°	3736	3697	3576	3509	3473	1053
25°	3391	3277	3043	2897	2844	1560
35°	2922	2741	2428	2204	2126	1829
45°	2389	2150	1778	1525	1440	1845
55°	1816	1539	1155	942	875	1623
65°	1226	938	619	498	487	1216
75°	654	405	284	260	256	692
85°	153	78	68	68	68	183
90°	0	0	0	0	0	

TEST NUMBER: P931056

CATALOG NUMBER: DFN2DS-SQ3F0-120DS927-RLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3928.0	3928.0	3928.0	3928.0	3928.0
2.5°	3945.7	3928.0	3888.8	3924.6	3917.4
5°	3928.0	3910.3	3863.9	3895.9	3885.4
7.5°	3895.9	3874.8	3825.0	3839.0	3821.2
10°	3853.3	3828.4	3757.5	3746.6	3725.5
12.5°	3800.1	3768.1	3671.9	3650.8	3611.6
15°	3736.0	3696.8	3576.1	3508.6	3473.2
17.5°	3661.3	3604.4	3455.0	3377.0	3320.1
20°	3576.1	3504.8	3327.2	3238.6	3160.1
22.5°	3483.7	3401.9	3195.6	3074.9	3021.7
25°	3391.3	3277.4	3042.8	2897.2	2843.7
27.5°	3281.2	3160.1	2900.6	2733.6	2651.7
30°	3163.9	3028.5	2744.1	2563.1	2466.9
32.5°	3050.0	2886.3	2595.1	2381.7	2292.7
35°	2922.2	2740.7	2428.0	2204.1	2125.6
37.5°	2797.7	2602.0	2271.5	2026.0	1937.4
40°	2666.0	2453.0	2107.9	1855.6	1763.2
42.5°	2531.0	2303.6	1944.6	1681.3	1592.7
45°	2388.8	2150.5	1777.5	1524.8	1439.5
47.5°	2253.8	2001.5	1617.6	1364.9	1286.8
50°	2104.5	1852.2	1461.1	1215.6	1141.3
52.5°	1958.5	1691.9	1311.7	1077.1	1009.6
55°	1816.4	1539.2	1155.2	942.1	874.6
57.5°	1670.7	1386.4	1016.8	817.7	760.7
60°	1521.4	1237.0	870.8	689.8	632.9
62.5°	1375.9	1091.5	746.4	575.9	547.6
65°	1226.5	938.4	618.6	497.9	486.9
67.5°	1084.3	796.1	497.9	437.1	426.6
70°	935.0	657.8	412.2	376.8	362.4
72.5°	792.8	529.5	344.7	316.4	309.3
75°	654.0	405.0	284.4	259.5	256.1
77.5°	515.6	287.7	224.1	209.7	202.5
80°	387.4	206.3	170.4	156.5	156.5
82.5°	270.1	138.8	117.3	110.1	110.1
85°	152.8	78.1	67.5	67.5	67.5
87.5°	56.9	28.3	28.3	24.9	24.9
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	16.46	17.98	16.83	18.30	18.61	12.42	13.94	12.79	14.26	14.57
	3H	18.23	19.59	18.60	19.92	20.28	13.69	15.05	14.06	15.38	15.74
	4H	18.89	20.17	19.29	20.52	20.90	14.19	15.47	14.59	15.82	16.20
	6H	19.38	20.56	19.79	20.93	21.32	14.57	15.75	14.98	16.12	16.51
	8H	19.55	20.67	19.97	21.06	21.46	14.69	15.82	15.12	16.21	16.61
	12H	19.65	20.73	20.08	21.11	21.54	14.78	15.85	15.21	16.24	16.66
4H	2H	16.56	17.85	16.96	18.19	18.57	13.12	14.40	13.52	14.75	15.13
	3H	18.50	19.56	18.91	19.96	20.36	14.56	15.62	14.97	16.02	16.42
	4H	19.25	20.20	19.68	20.62	21.06	15.16	16.12	15.59	16.53	16.97
	6H	19.84	20.67	20.30	21.11	21.57	15.65	16.48	16.11	16.92	17.38
	8H	20.05	20.83	20.52	21.28	21.74	15.81	16.59	16.27	17.03	17.50
	12H	20.21	20.90	20.69	21.38	21.85	15.93	16.62	16.41	17.10	17.57
8H	4H	19.27	20.05	19.74	20.49	20.96	15.51	16.29	15.98	16.74	17.20
	6H	19.91	20.55	20.41	21.04	21.52	16.10	16.74	16.60	17.23	17.71
	8H	20.16	20.74	20.67	21.25	21.73	16.32	16.90	16.83	17.41	17.90
	12H	20.36	20.87	20.87	21.37	21.93	16.50	17.01	17.01	17.50	18.07
12H	4H	19.26	19.95	19.74	20.43	20.90	15.56	16.25	16.04	16.73	17.20
	6H	19.89	20.47	20.40	20.98	21.47	16.16	16.74	16.68	17.25	17.74
	8H	20.17	20.68	20.68	21.18	21.74	16.44	16.95	16.95	17.44	18.00