

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: P931040

Luminaire Tested: DFN2DS-SQ3F0-110DS930-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931040
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-SQ3F0-110DS930-RLL
Description: 3 foot, Square Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

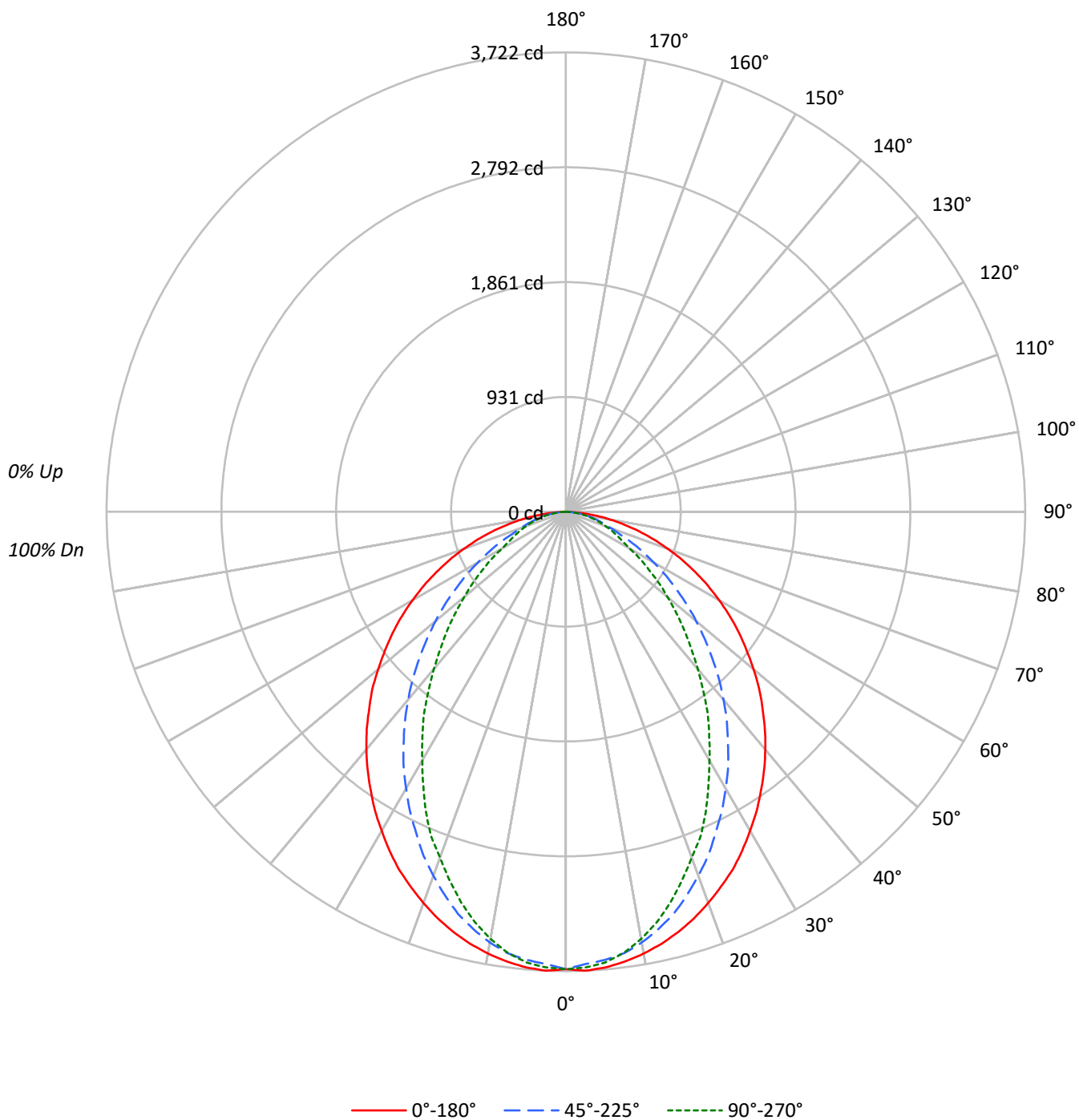
Lumens per Lamp: N/A
Luminaire Lumens: 7620.3 lumens
Efficiency: N/A
Efficacy: 64.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.06' x L: 3.06' x H: 0')
CIE Type: Direct

Input Watts (W): 117.7
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9977
Total Harmonic Distortion (THDi): 0.049
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 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
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°	4245	4245	4245
5°	4262	4192	4216
10°	4229	4124	4089
15°	4180	4001	3886
20°	4113	3827	3635
25°	4044	3629	3391
30°	3949	3425	3079
35°	3856	3204	2805
40°	3761	2974	2488
45°	3651	2717	2201
50°	3539	2457	1919
55°	3423	2177	1648
60°	3289	1882	1368
65°	3137	1582	1245
70°	2954	1303	1145
75°	2731	1187	1070
80°	2411	1061	975
85°	1894	837	837

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
Vertical Angle: 45°
Luminance: 3651 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	347.3	4.6
10°-20°	953.3	12.5
20°-30°	1338.4	17.6
30°-40°	1458.9	19.1
40°-50°	1340.9	17.6
50°-60°	1053.1	13.8
60°-70°	685.5	9.0
70°-80°	352.9	4.6
80°-90°	90.1	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°	2638.9	34.6
0°-40°	4097.9	53.8
0°-60°	6491.9	85.2
0°-90°	7620.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7620.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3705	3705	3705	3705	3705	
5°	3705	3688	3645	3675	3665	351
15°	3524	3487	3373	3310	3276	993
25°	3199	3092	2870	2733	2682	1471
35°	2756	2585	2290	2079	2005	1725
45°	2253	2028	1677	1438	1358	1740
55°	1713	1452	1090	889	825	1531
65°	1157	885	584	470	459	1147
75°	617	382	268	245	242	652
85°	144	74	64	64	64	173
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3705.2	3705.2	3705.2	3705.2	3705.2
2.5°	3721.9	3705.2	3668.2	3702.1	3695.3
5°	3705.2	3688.5	3644.8	3675.0	3665.1
7.5°	3675.0	3655.0	3608.1	3621.3	3604.5
10°	3634.8	3611.3	3544.4	3534.1	3514.2
12.5°	3584.6	3554.4	3463.7	3443.7	3406.7
15°	3524.1	3487.1	3373.3	3309.6	3276.1
17.5°	3453.7	3400.0	3259.1	3185.4	3131.7
20°	3373.3	3306.0	3138.5	3054.9	2980.9
22.5°	3286.2	3208.9	3014.4	2900.5	2850.3
25°	3199.0	3091.5	2870.3	2732.9	2682.4
27.5°	3095.1	2980.9	2736.1	2578.5	2501.3
30°	2984.4	2856.7	2588.5	2417.7	2327.0
32.5°	2877.0	2722.6	2447.9	2246.6	2162.7
35°	2756.4	2585.3	2290.4	2079.1	2005.1
37.5°	2639.1	2454.4	2142.7	1911.1	1827.6
40°	2514.8	2313.9	1988.4	1750.3	1663.2
42.5°	2387.5	2173.0	1834.3	1586.0	1502.4
45°	2253.4	2028.5	1676.7	1438.3	1358.0
47.5°	2126.0	1888.0	1525.8	1287.5	1213.9
50°	1985.1	1747.1	1378.2	1146.6	1076.5
52.5°	1847.4	1595.9	1237.3	1016.1	952.3
55°	1713.3	1451.8	1089.7	888.7	825.0
57.5°	1576.0	1307.7	959.1	771.3	717.5
60°	1435.1	1166.9	821.4	650.7	597.0
62.5°	1297.8	1029.6	704.1	543.3	516.5
65°	1156.9	885.1	583.5	469.6	459.3
67.5°	1022.8	751.0	469.6	412.3	402.4
70°	881.9	620.5	388.8	355.4	341.9
72.5°	747.8	499.5	325.2	298.5	291.7
75°	616.9	382.1	268.2	244.7	241.6
77.5°	486.3	271.5	211.3	197.8	191.0
80°	365.4	194.6	160.8	147.7	147.7
82.5°	254.7	130.9	110.7	103.9	103.9
85°	144.1	73.7	63.7	63.7	63.7
87.5°	53.7	26.7	26.7	23.5	23.5
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	16.26	17.78	16.62	18.09	18.41	12.22	13.74	12.58	14.05	14.37
	3H	18.02	19.39	18.40	19.72	20.08	13.48	14.85	13.86	15.18	15.54
	4H	18.69	19.97	19.09	20.32	20.70	13.99	15.27	14.39	15.61	15.99
	6H	19.18	20.36	19.59	20.73	21.12	14.37	15.55	14.78	15.92	16.31
	8H	19.34	20.47	19.77	20.86	21.26	14.49	15.62	14.92	16.01	16.41
	12H	19.45	20.53	19.88	20.91	21.34	14.57	15.65	15.00	16.03	16.46
4H	2H	16.36	17.64	16.76	17.99	18.37	12.91	14.20	13.31	14.54	14.92
	3H	18.30	19.36	18.71	19.76	20.16	14.36	15.42	14.77	15.82	16.22
	4H	19.04	20.00	19.48	20.42	20.86	14.96	15.91	15.39	16.33	16.77
	6H	19.64	20.47	20.09	20.91	21.37	15.45	16.28	15.90	16.72	17.18
	8H	19.85	20.63	20.31	21.07	21.54	15.61	16.38	16.07	16.83	17.30
	12H	20.00	20.70	20.49	21.18	21.65	15.72	16.42	16.21	16.90	17.37
8H	4H	19.07	19.85	19.53	20.29	20.76	15.31	16.09	15.77	16.53	17.00
	6H	19.71	20.35	20.20	20.84	21.32	15.90	16.54	16.39	17.03	17.51
	8H	19.96	20.53	20.47	21.04	21.53	16.12	16.70	16.63	17.20	17.69
	12H	20.16	20.67	20.67	21.16	21.73	16.30	16.81	16.81	17.30	17.86
12H	4H	19.05	19.75	19.54	20.23	20.70	15.35	16.05	15.84	16.53	17.00
	6H	19.69	20.26	20.20	20.77	21.26	15.96	16.54	16.47	17.05	17.54
	8H	19.97	20.48	20.48	20.97	21.54	16.23	16.74	16.74	17.24	17.80