

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: P931057

Luminaire Tested: DFN2DS-SQ3F0-120DS930-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931057
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-SQ3F0-120DS930-FLL
Description: 3 foot, Square Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

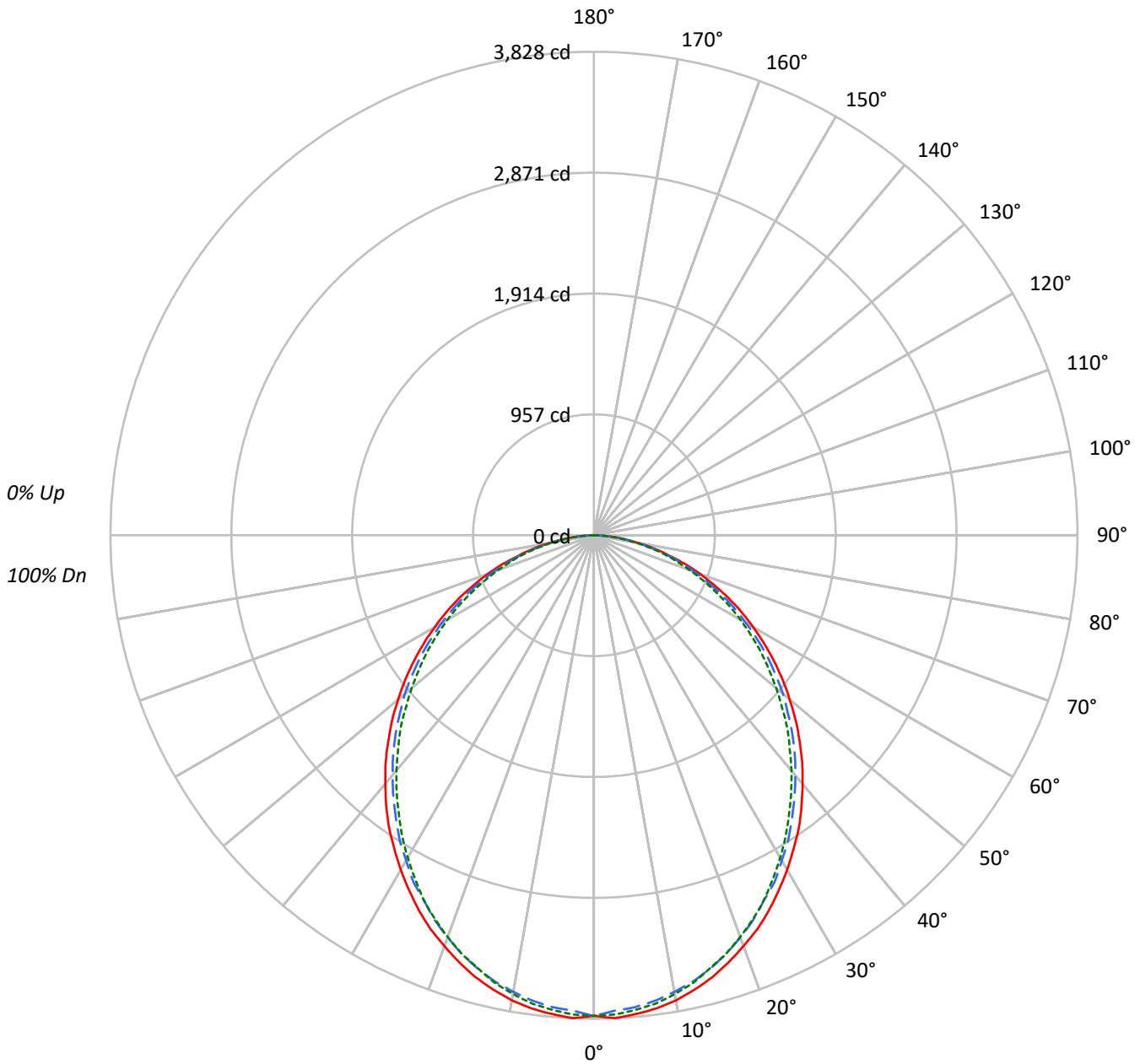
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9682.2 lumens
Efficiency: N/A
Efficacy: 73.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
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

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Luminous Intensity Polar Plot



— 0°-180° - - 45°-225° - - - 90°-270°



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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									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	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	102	102	102	102	102	102	102	102	102	102	100																	
	1	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	86	86	86	86	86	86	86	86	86	86	84																	
	2	99	91	85	79	97	89	83	78	86	81	76	83	78	74	80	76	73	73	73	73	73	73	73	73	73	73	73	71																	
	3	91	80	72	66	88	79	71	65	76	69	64	73	68	63	71	66	62	62	62	62	62	62	62	62	62	62	62	60																	
	4	83	71	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	54	54	54	54	54	54	54	54	54	54	51																	
	5	77	64	55	49	75	63	55	48	61	53	48	59	52	47	57	51	47	47	47	47	47	47	47	47	47	47	47	45																	
	6	71	58	49	43	69	57	48	42	55	48	42	53	47	42	52	46	41	41	41	41	41	41	41	41	41	41	41	39																	
	7	66	52	44	38	64	52	43	38	50	43	37	49	42	37	47	41	37	37	37	37	37	37	37	37	37	37	37	35																	
	8	61	48	40	34	60	47	39	34	46	39	33	45	38	33	44	38	33	33	33	33	33	33	33	33	33	33	33	31																	
	9	57	44	36	30	56	43	36	30	42	35	30	41	35	30	40	34	30	30	30	30	30	30	30	30	30	30	30	28																	
	10	54	41	33	28	53	40	33	28	39	32	27	38	32	27	37	32	27	27	27	27	27	27	27	27	27	27	27	26																	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4360	4360	4360
5°	4377	4314	4339
10°	4351	4270	4292
15°	4297	4215	4211
20°	4221	4132	4127
25°	4145	4030	4030
30°	4048	3936	3902
35°	3957	3824	3767
40°	3843	3711	3640
45°	3730	3599	3510
50°	3607	3483	3359
55°	3480	3348	3224
60°	3337	3187	3069
65°	3185	3026	2887
70°	2991	2832	2697
75°	2721	2607	2544
80°	2416	2342	2221
85°	1971	1879	1684

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3730 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	358.2	3.7
10°-20°	1007.7	10.4
20°-30°	1481.0	15.3
30°-40°	1720.1	17.8
40°-50°	1718.0	17.7
50°-60°	1498.0	15.5
60°-70°	1107.4	11.4
70°-80°	626.5	6.5
80°-90°	165.4	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°	2846.9	29.4
0°-40°	4567.0	47.2
0°-60°	7783.0	80.4
0°-90°	9682.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9682.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3806	3806	3806	3806	3806	
5°	3806	3791	3751	3780	3773	361
15°	3623	3601	3553	3568	3550	1020
25°	3279	3250	3187	3194	3187	1509
35°	2829	2792	2734	2711	2693	1766
45°	2302	2276	2221	2181	2166	1776
55°	1742	1720	1676	1632	1614	1557
65°	1175	1153	1116	1083	1065	1162
75°	615	608	589	567	575	656
85°	150	146	143	132	128	176
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3805.5	3805.5	3805.5	3805.5	3805.5
2.5°	3827.6	3809.3	3769.0	3805.5	3798.5
5°	3805.5	3791.1	3750.7	3779.8	3772.8
7.5°	3779.8	3758.0	3717.7	3747.2	3739.9
10°	3739.9	3714.2	3670.4	3699.4	3688.6
12.5°	3684.7	3662.9	3619.1	3637.3	3629.9
15°	3622.6	3600.8	3553.1	3567.8	3549.6
17.5°	3545.7	3524.0	3476.2	3494.5	3476.2
20°	3461.5	3439.7	3388.5	3399.4	3385.0
22.5°	3377.6	3344.6	3296.8	3296.8	3289.5
25°	3278.6	3249.5	3187.4	3194.4	3187.4
27.5°	3168.7	3143.1	3095.8	3084.9	3066.7
30°	3059.3	3029.8	2975.0	2964.2	2949.4
32.5°	2942.0	2920.3	2861.6	2839.5	2824.8
35°	2828.6	2792.2	2733.5	2711.4	2693.2
37.5°	2700.5	2667.6	2608.9	2583.3	2565.0
40°	2569.0	2539.5	2480.8	2448.2	2433.4
42.5°	2440.8	2411.3	2353.1	2316.2	2294.5
45°	2301.8	2276.2	2221.0	2181.1	2166.4
47.5°	2166.4	2140.7	2082.1	2041.7	2020.0
50°	2023.5	2005.2	1954.0	1902.7	1884.4
52.5°	1884.4	1858.9	1811.5	1771.1	1745.5
55°	1742.0	1719.9	1676.0	1632.1	1613.9
57.5°	1599.1	1580.9	1533.1	1489.2	1474.5
60°	1456.2	1441.9	1390.6	1350.3	1339.4
62.5°	1317.3	1291.6	1255.2	1218.7	1203.9
65°	1174.8	1152.7	1116.1	1083.1	1065.0
67.5°	1028.4	1009.8	977.2	951.6	936.8
70°	892.9	878.2	845.2	819.6	805.2
72.5°	754.0	739.2	720.9	695.4	684.4
75°	614.6	607.6	588.9	567.2	574.6
77.5°	490.3	475.6	468.2	457.3	446.5
80°	366.1	362.2	354.9	344.0	336.6
82.5°	248.8	248.8	245.4	230.6	230.6
85°	149.9	146.4	142.9	131.6	128.1
87.5°	66.0	58.6	51.3	40.3	36.5
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	16.40	18.01	16.76	18.32	18.64	15.95	17.56	16.32	17.88	18.19
	3H	18.15	19.60	18.53	19.93	20.29	17.66	19.11	18.03	19.44	19.80
	4H	18.80	20.16	19.19	20.51	20.89	18.30	19.67	18.70	20.02	20.39
	6H	19.26	20.53	19.68	20.90	21.29	18.76	20.03	19.17	20.40	20.79
	8H	19.41	20.62	19.83	21.01	21.41	18.90	20.12	19.33	20.50	20.90
	12H	19.50	20.66	19.93	21.04	21.47	18.99	20.15	19.41	20.53	20.96
4H	2H	16.96	18.33	17.36	18.68	19.05	16.61	17.98	17.00	18.32	18.70
	3H	18.93	20.08	19.34	20.48	20.88	18.53	19.67	18.94	20.07	20.47
	4H	19.71	20.75	20.14	21.16	21.60	19.29	20.32	19.72	20.74	21.17
	6H	20.31	21.21	20.76	21.65	22.11	19.87	20.78	20.33	21.22	21.68
	8H	20.50	21.34	20.96	21.79	22.25	20.06	20.91	20.52	21.35	21.81
	12H	20.63	21.39	21.11	21.86	22.33	20.18	20.94	20.66	21.41	21.88
8H	4H	19.98	20.83	20.44	21.27	21.74	19.61	20.46	20.07	20.90	21.36
	6H	20.70	21.40	21.19	21.89	22.37	20.32	21.02	20.81	21.51	21.98
	8H	20.96	21.59	21.47	22.09	22.58	20.57	21.20	21.08	21.70	22.19
	12H	21.16	21.72	21.66	22.21	22.77	20.74	21.30	21.25	21.79	22.35
12H	4H	20.01	20.77	20.49	21.25	21.72	19.65	20.41	20.13	20.88	21.35
	6H	20.74	21.38	21.25	21.88	22.37	20.37	21.01	20.88	21.51	22.00
	8H	21.06	21.62	21.56	22.11	22.67	20.68	21.24	21.19	21.73	22.29