

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: P931047

Luminaire Tested: DFN2DS-SQ3F0-120DS830-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931047
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-SQ3F0-120DS830-FLL
Description: 3 foot, Square Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

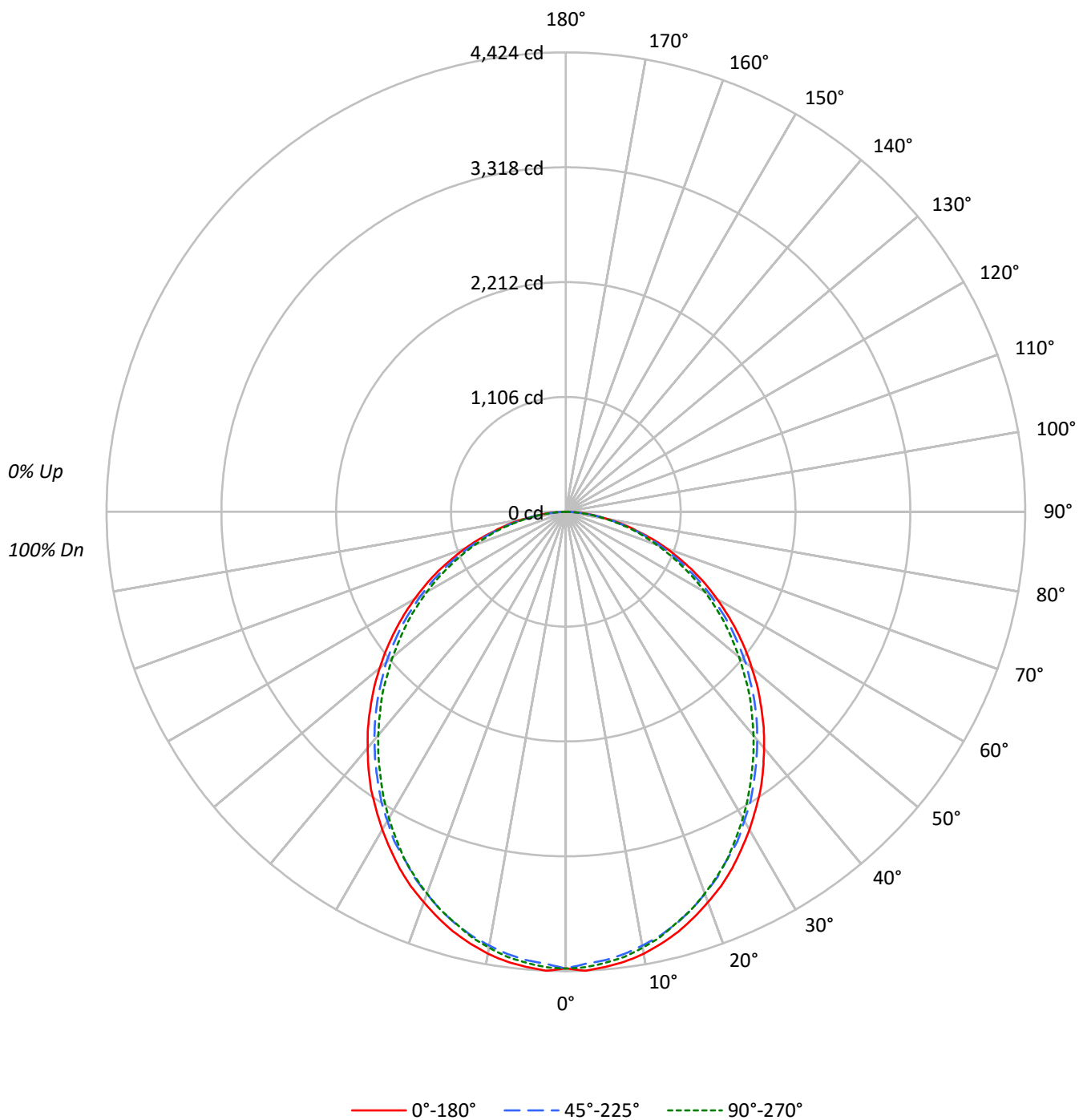
Lumens per Lamp: N/A
Luminaire Lumens: 11191.0 lumens
Efficiency: N/A
Efficacy: 85.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.06' x L: 3.06' x H: 0')
CIE Type: Direct

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



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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°	5040	5040	5040
5°	5059	4986	5016
10°	5029	4936	4960
15°	4967	4871	4867
20°	4878	4776	4771
25°	4791	4658	4658
30°	4678	4549	4510
35°	4573	4419	4354
40°	4441	4289	4207
45°	4311	4160	4057
50°	4169	4026	3883
55°	4022	3870	3726
60°	3857	3683	3548
65°	3682	3498	3337
70°	3458	3273	3118
75°	3145	3013	2940
80°	2792	2706	2567
85°	2277	2171	1947

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 4311 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	414.0	3.7
10°-20°	1164.8	10.4
20°-30°	1711.8	15.3
30°-40°	1988.1	17.8
40°-50°	1985.7	17.7
50°-60°	1731.4	15.5
60°-70°	1279.9	11.4
70°-80°	724.1	6.5
80°-90°	191.1	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°	3290.5	29.4
0°-40°	5278.7	47.2
0°-60°	8995.8	80.4
0°-90°	11191.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11191.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4398	4398	4398	4398	4398	
5°	4398	4382	4335	4369	4361	418
15°	4187	4162	4107	4124	4103	1179
25°	3790	3756	3684	3692	3684	1744
35°	3269	3227	3160	3134	3113	2042
45°	2660	2631	2567	2521	2504	2053
55°	2013	1988	1937	1886	1865	1800
65°	1358	1332	1290	1252	1231	1343
75°	710	702	681	656	664	758
85°	173	169	165	152	148	204
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4398.5	4398.5	4398.5	4398.5	4398.5
2.5°	4424.0	4402.9	4356.3	4398.5	4390.4
5°	4398.5	4381.8	4335.2	4368.8	4360.7
7.5°	4368.8	4343.7	4297.0	4331.1	4322.6
10°	4322.6	4293.0	4242.3	4275.9	4263.4
12.5°	4258.9	4233.7	4183.0	4204.1	4195.6
15°	4187.1	4161.9	4106.7	4123.8	4102.7
17.5°	4098.3	4073.1	4017.9	4039.0	4017.9
20°	4000.9	3975.7	3916.6	3929.1	3912.5
22.5°	3903.9	3865.8	3810.6	3810.6	3802.1
25°	3789.5	3755.8	3684.1	3692.2	3684.1
27.5°	3662.5	3632.9	3578.2	3565.6	3544.6
30°	3536.0	3501.9	3438.6	3426.1	3409.0
32.5°	3400.4	3375.4	3307.6	3282.0	3265.0
35°	3269.4	3227.3	3159.5	3133.9	3112.8
37.5°	3121.3	3083.3	3015.4	2985.9	2964.8
40°	2969.3	2935.2	2867.4	2829.7	2812.6
42.5°	2821.2	2787.1	2719.7	2677.2	2652.0
45°	2660.5	2630.9	2567.1	2521.0	2503.9
47.5°	2503.9	2474.3	2406.5	2359.9	2334.7
50°	2338.8	2317.7	2258.4	2199.2	2178.1
52.5°	2178.1	2148.5	2093.8	2047.1	2017.5
55°	2013.4	1987.9	1937.1	1886.4	1865.3
57.5°	1848.3	1827.2	1772.0	1721.3	1704.3
60°	1683.2	1666.6	1607.3	1560.7	1548.1
62.5°	1522.6	1492.9	1450.8	1408.6	1391.5
65°	1357.9	1332.3	1290.1	1251.9	1230.9
67.5°	1188.7	1167.1	1129.5	1099.9	1082.8
70°	1032.1	1015.0	976.9	947.3	930.7
72.5°	871.4	854.4	833.3	803.7	791.1
75°	710.4	702.3	680.7	655.6	664.1
77.5°	566.7	549.7	541.2	528.6	516.0
80°	423.1	418.6	410.1	397.6	389.0
82.5°	287.6	287.6	283.6	266.6	266.6
85°	173.2	169.2	165.1	152.1	148.1
87.5°	76.3	67.7	59.3	46.6	42.2
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	16.90	18.51	17.27	18.83	19.14	16.46	18.07	16.82	18.38	18.70
	3H	18.65	20.11	19.03	20.43	20.79	18.16	19.62	18.54	19.94	20.30
	4H	19.30	20.67	19.70	21.02	21.39	18.80	20.17	19.20	20.52	20.90
	6H	19.77	21.04	20.18	21.40	21.79	19.27	20.53	19.68	20.90	21.29
	8H	19.91	21.12	20.34	21.51	21.91	19.41	20.62	19.83	21.01	21.41
	12H	20.00	21.16	20.43	21.54	21.97	19.49	20.65	19.92	21.03	21.46
4H	2H	17.46	18.83	17.86	19.18	19.56	17.11	18.48	17.51	18.83	19.20
	3H	19.44	20.58	19.85	20.98	21.38	19.03	20.18	19.44	20.57	20.97
	4H	20.21	21.25	20.65	21.66	22.10	19.79	20.83	20.22	21.24	21.68
	6H	20.81	21.72	21.26	22.16	22.61	20.38	21.28	20.83	21.72	22.18
	8H	21.00	21.85	21.46	22.29	22.75	20.56	21.41	21.02	21.85	22.32
	12H	21.13	21.89	21.61	22.37	22.84	20.68	21.44	21.16	21.92	22.38
8H	4H	20.49	21.33	20.95	21.78	22.24	20.11	20.96	20.57	21.40	21.87
	6H	21.20	21.90	21.70	22.39	22.87	20.82	21.52	21.31	22.01	22.49
	8H	21.46	22.09	21.97	22.60	23.08	21.07	21.70	21.58	22.21	22.69
	12H	21.66	22.22	22.17	22.71	23.27	21.25	21.81	21.75	22.30	22.86
12H	4H	20.51	21.27	20.99	21.75	22.22	20.15	20.91	20.63	21.38	21.85
	6H	21.25	21.88	21.76	22.39	22.87	20.88	21.51	21.39	22.02	22.50
	8H	21.56	22.12	22.07	22.61	23.17	21.18	21.74	21.69	22.23	22.79