

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: P931038

Luminaire Tested: DFN2DS-SQ3F0-110DS927-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931038
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-SQ3F0-110DS927-RLL
Description: 3 foot, Square Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

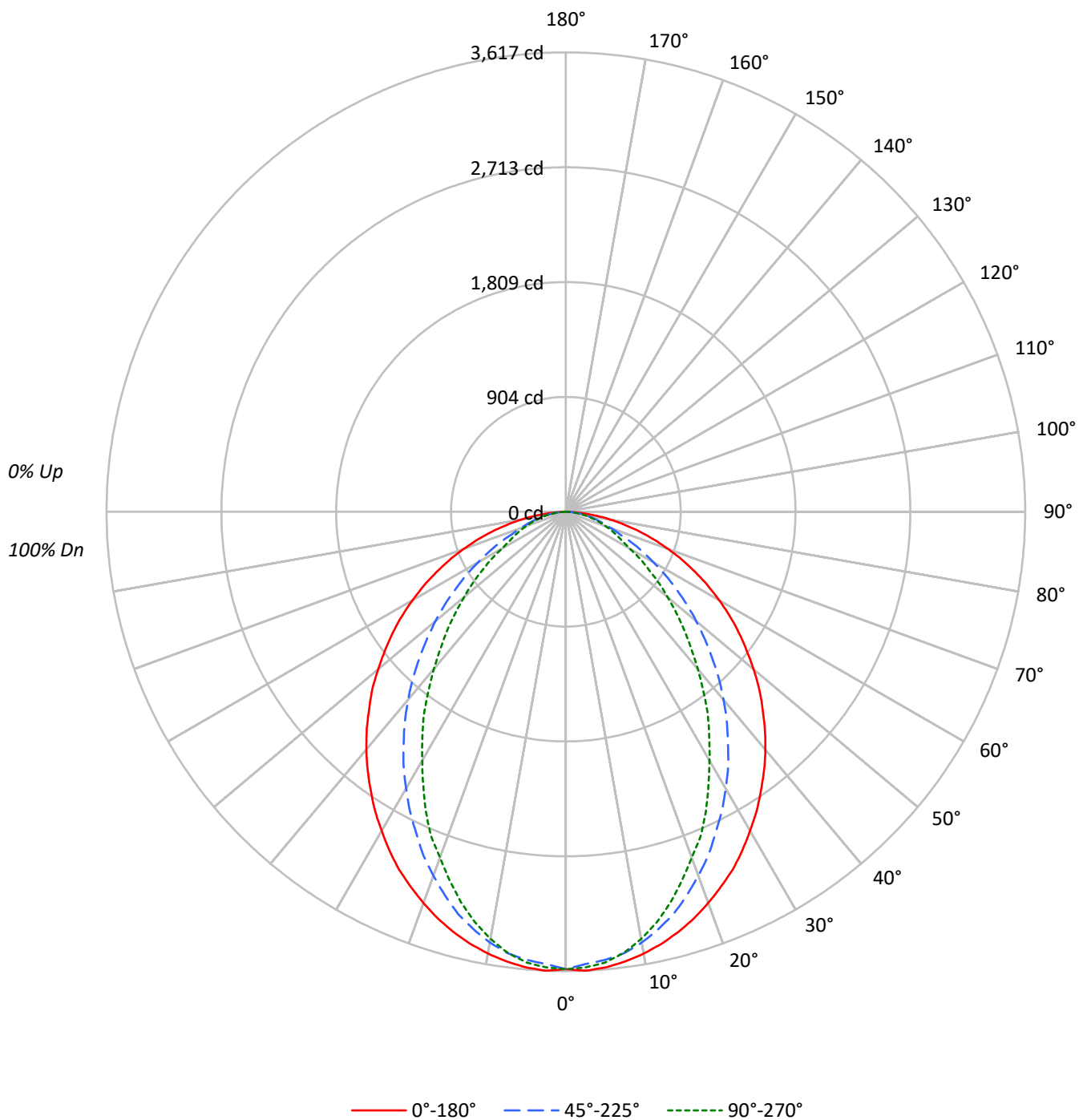
Lumens per Lamp: N/A
Luminaire Lumens: 7405.2 lumens
Efficiency: N/A
Efficacy: 62.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.06' x L: 3.06' x H: 0')
CIE Type: Direct

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°	4126	4126	4126
5°	4141	4074	4096
10°	4110	4007	3973
15°	4062	3889	3777
20°	3997	3719	3532
25°	3930	3526	3296
30°	3837	3328	2992
35°	3747	3113	2725
40°	3655	2890	2417
45°	3548	2640	2138
50°	3439	2388	1865
55°	3326	2115	1602
60°	3196	1829	1329
65°	3048	1537	1210
70°	2871	1266	1113
75°	2654	1154	1039
80°	2343	1031	947
85°	1841	814	814

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
Vertical Angle: 45°
Luminance: 3548 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	337.5	4.6
10°-20°	926.4	12.5
20°-30°	1300.6	17.6
30°-40°	1417.8	19.1
40°-50°	1303.1	17.6
50°-60°	1023.4	13.8
60°-70°	666.1	9.0
70°-80°	342.9	4.6
80°-90°	87.6	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°	2564.5	34.6
0°-40°	3982.2	53.8
0°-60°	6308.7	85.2
0°-90°	7405.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7405.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3601	3601	3601	3601	3601	
5°	3601	3584	3542	3571	3562	341
15°	3425	3389	3278	3216	3184	965
25°	3109	3004	2789	2656	2607	1430
35°	2679	2512	2226	2020	1948	1677
45°	2190	1971	1629	1398	1320	1691
55°	1665	1411	1059	864	802	1488
65°	1124	860	567	456	446	1115
75°	600	371	261	238	235	634
85°	140	72	62	62	62	168
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3600.7	3600.7	3600.7	3600.7	3600.7
2.5°	3616.9	3600.7	3564.7	3597.6	3591.0
5°	3600.7	3584.4	3541.9	3571.3	3561.6
7.5°	3571.3	3551.9	3506.3	3519.1	3502.8
10°	3532.2	3509.4	3444.4	3434.3	3415.0
12.5°	3483.5	3454.1	3365.9	3346.5	3310.6
15°	3424.7	3388.7	3278.1	3216.2	3183.7
17.5°	3356.3	3304.1	3167.1	3095.5	3043.3
20°	3278.1	3212.7	3049.9	2968.7	2896.7
22.5°	3193.4	3118.3	2929.3	2818.6	2769.9
25°	3108.7	3004.3	2789.3	2655.8	2606.7
27.5°	3007.8	2896.7	2658.9	2505.7	2430.7
30°	2900.2	2776.1	2515.5	2349.5	2261.3
32.5°	2795.8	2645.8	2378.9	2183.2	2101.7
35°	2678.6	2512.3	2225.8	2020.4	1948.5
37.5°	2564.6	2385.1	2082.2	1857.2	1776.0
40°	2443.9	2248.6	1932.2	1700.9	1616.2
42.5°	2320.1	2111.6	1782.6	1541.2	1460.0
45°	2189.8	1971.3	1629.4	1397.7	1319.6
47.5°	2066.0	1834.7	1482.8	1251.1	1179.6
50°	1929.1	1697.8	1339.4	1114.3	1046.2
52.5°	1795.3	1550.9	1202.4	987.4	925.5
55°	1664.9	1410.9	1058.9	863.6	801.7
57.5°	1531.6	1270.8	932.0	749.5	697.3
60°	1394.6	1134.0	798.3	632.3	580.1
62.5°	1261.2	1000.5	684.2	527.9	502.0
65°	1124.2	860.1	567.0	456.4	446.3
67.5°	994.0	729.8	456.4	400.7	391.0
70°	857.0	602.9	377.9	345.4	332.2
72.5°	726.7	485.4	316.0	290.0	283.5
75°	599.5	371.3	260.6	237.8	234.7
77.5°	472.6	263.8	205.4	192.2	185.6
80°	355.1	189.1	156.3	143.5	143.5
82.5°	247.5	127.2	107.6	101.0	101.0
85°	140.0	71.6	61.9	61.9	61.9
87.5°	52.2	25.9	25.9	22.8	22.8
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	16.16	17.68	16.52	17.99	18.31	12.12	13.64	12.48	13.95	14.27
	3H	17.92	19.29	18.30	19.62	19.98	13.38	14.75	13.76	15.08	15.44
	4H	18.59	19.87	18.99	20.22	20.60	13.89	15.17	14.29	15.52	15.89
	6H	19.08	20.26	19.49	20.63	21.02	14.27	15.45	14.68	15.82	16.21
	8H	19.24	20.37	19.67	20.76	21.16	14.39	15.52	14.82	15.91	16.31
	12H	19.35	20.43	19.78	20.81	21.24	14.47	15.55	14.90	15.93	16.36
4H	2H	16.26	17.54	16.66	17.89	18.27	12.81	14.10	13.21	14.44	14.82
	3H	18.20	19.26	18.61	19.66	20.06	14.26	15.32	14.67	15.72	16.12
	4H	18.95	19.90	19.38	20.32	20.76	14.86	15.81	15.29	16.23	16.67
	6H	19.54	20.37	19.99	20.81	21.27	15.35	16.18	15.80	16.62	17.08
	8H	19.75	20.53	20.21	20.97	21.44	15.51	16.28	15.97	16.73	17.20
	12H	19.90	20.60	20.39	21.08	21.55	15.62	16.32	16.11	16.80	17.27
8H	4H	18.97	19.75	19.43	20.19	20.66	15.21	15.99	15.67	16.43	16.90
	6H	19.61	20.25	20.10	20.74	21.22	15.80	16.44	16.29	16.93	17.41
	8H	19.86	20.43	20.37	20.94	21.43	16.02	16.60	16.53	17.11	17.59
	12H	20.06	20.57	20.57	21.06	21.63	16.20	16.71	16.71	17.20	17.76
12H	4H	18.95	19.65	19.44	20.13	20.60	15.25	15.95	15.74	16.43	16.90
	6H	19.59	20.17	20.10	20.68	21.16	15.86	16.44	16.37	16.95	17.44
	8H	19.87	20.38	20.38	20.87	21.44	16.13	16.64	16.64	17.14	17.70