

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: P931021

Luminaire Tested: DFN2DS-SQ3F0-100DS930-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931021
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-SQ3F0-100DS930-FLL
Description: 3 foot, Square Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

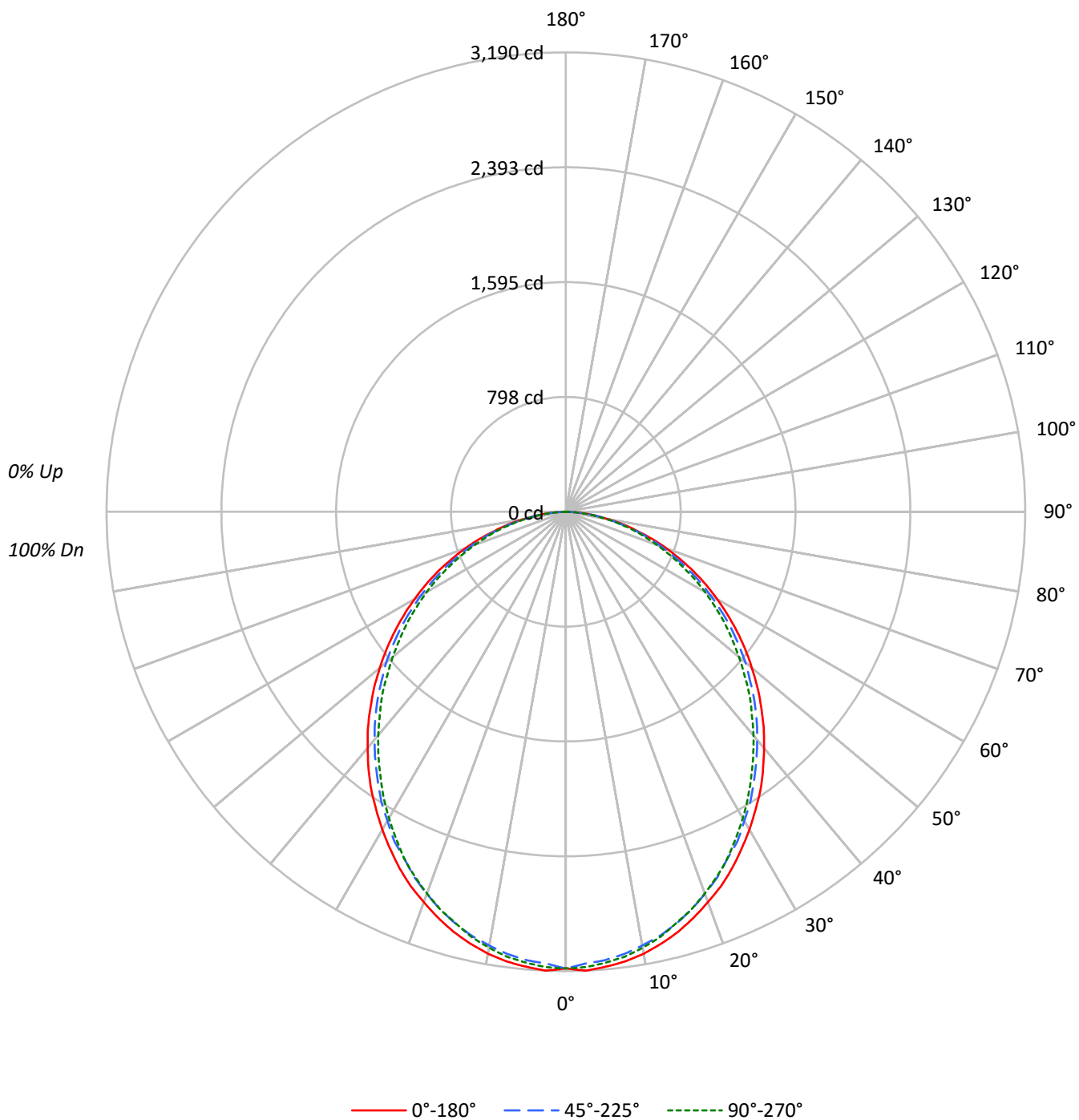
Lumens per Lamp: N/A
Luminaire Lumens: 8068.5 lumens
Efficiency: N/A
Efficacy: 77.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.06' x L: 3.06' x H: 0')
CIE Type: Direct

Input Watts (W): 104.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9781
Total Harmonic Distortion (THDi): 0.075
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			0
RW	70	50	30	10	70	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	100
1	109	104	100	96	106	102	98	95	98	95	92		94	91	89		90	88	86	84
2	99	91	85	79	97	89	83	78	86	81	76		83	78	74		80	76	73	71
3	91	80	72	66	88	79	71	65	76	69	64		73	68	63		71	66	62	60
4	83	71	63	56	81	70	62	56	68	61	55		65	59	54		63	58	54	51
5	77	64	55	49	75	63	55	48	61	53	48		59	52	47		57	51	47	45
6	71	58	49	43	69	57	48	42	55	48	42		53	47	42		52	46	41	39
7	66	52	44	38	64	52	43	38	50	43	37		49	42	37		47	41	37	35
8	61	48	40	34	60	47	39	34	46	39	33		45	38	33		44	38	33	31
9	57	44	36	30	56	43	36	30	42	35	30		41	35	30		40	34	30	28
10	54	41	33	28	53	40	33	28	39	32	27		38	32	27		37	32	27	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3634	3634	3634
5°	3647	3595	3616
10°	3626	3559	3576
15°	3581	3512	3509
20°	3517	3443	3440
25°	3454	3358	3358
30°	3373	3280	3252
35°	3297	3186	3139
40°	3202	3092	3033
45°	3108	2999	2925
50°	3006	2903	2799
55°	2900	2790	2687
60°	2781	2656	2558
65°	2654	2522	2406
70°	2493	2359	2248
75°	2267	2173	2120
80°	2013	1951	1851
85°	1642	1566	1404

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 3108 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	298.5	3.7
10°-20°	839.8	10.4
20°-30°	1234.2	15.3
30°-40°	1433.4	17.8
40°-50°	1431.6	17.7
50°-60°	1248.3	15.5
60°-70°	922.8	11.4
70°-80°	522.1	6.5
80°-90°	137.8	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°	2372.4	29.4
0°-40°	3805.8	47.2
0°-60°	6485.8	80.4
0°-90°	8068.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8068.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3171	3171	3171	3171	3171	
5°	3171	3159	3126	3150	3144	301
15°	3019	3001	2961	2973	2958	850
25°	2732	2708	2656	2662	2656	1257
35°	2357	2327	2278	2260	2244	1472
45°	1918	1897	1851	1818	1805	1480
55°	1452	1433	1397	1360	1345	1298
65°	979	961	930	903	888	968
75°	512	506	491	473	479	547
85°	125	122	119	110	107	147
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3171.2	3171.2	3171.2	3171.2	3171.2
2.5°	3189.7	3174.4	3140.8	3171.2	3165.4
5°	3171.2	3159.3	3125.6	3149.9	3144.0
7.5°	3149.9	3131.7	3098.1	3122.7	3116.6
10°	3116.6	3095.2	3058.6	3082.9	3073.9
12.5°	3070.6	3052.5	3015.9	3031.1	3025.0
15°	3018.8	3000.7	2960.9	2973.2	2958.0
17.5°	2954.8	2936.7	2896.8	2912.1	2896.8
20°	2884.5	2866.4	2823.7	2832.8	2820.8
22.5°	2814.7	2787.2	2747.4	2747.4	2741.3
25°	2732.2	2707.9	2656.2	2662.0	2656.2
27.5°	2640.6	2619.2	2579.8	2570.8	2555.5
30°	2549.4	2524.8	2479.1	2470.1	2457.8
32.5°	2451.7	2433.6	2384.7	2366.3	2354.0
35°	2357.2	2326.8	2277.9	2259.5	2244.3
37.5°	2250.5	2222.9	2174.1	2152.7	2137.5
40°	2140.8	2116.1	2067.3	2040.2	2027.9
42.5°	2034.0	2009.4	1960.9	1930.2	1912.1
45°	1918.2	1896.8	1850.9	1817.5	1805.3
47.5°	1805.3	1784.0	1735.1	1701.4	1683.3
50°	1686.2	1671.0	1628.3	1585.6	1570.4
52.5°	1570.4	1549.1	1509.5	1476.0	1454.6
55°	1451.7	1433.3	1396.7	1360.1	1344.9
57.5°	1332.6	1317.4	1277.6	1241.1	1228.8
60°	1213.5	1201.6	1158.8	1125.2	1116.1
62.5°	1097.7	1076.4	1046.0	1015.6	1003.3
65°	979.0	960.6	930.2	902.6	887.5
67.5°	857.1	841.5	814.3	793.0	780.7
70°	744.1	731.8	704.3	683.0	671.0
72.5°	628.3	616.0	600.8	579.5	570.3
75°	512.1	506.4	490.8	472.7	478.8
77.5°	408.6	396.3	390.1	381.1	372.0
80°	305.1	301.9	295.7	286.6	280.5
82.5°	207.4	207.4	204.5	192.2	192.2
85°	124.9	122.0	119.1	109.7	106.8
87.5°	55.0	48.8	42.7	33.7	30.4
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	15.77	17.38	16.13	17.69	18.00	15.32	16.93	15.69	17.25	17.56
	3H	17.52	18.97	17.89	19.30	19.66	17.02	18.48	17.40	18.81	19.17
	4H	18.16	19.53	18.56	19.88	20.25	17.67	19.04	18.07	19.38	19.76
	6H	18.63	19.90	19.04	20.26	20.65	18.13	19.40	18.54	19.76	20.15
	8H	18.77	19.98	19.20	20.37	20.77	18.27	19.48	18.70	19.87	20.27
	12H	18.86	20.02	19.29	20.41	20.83	18.35	19.51	18.78	19.89	20.32
4H	2H	16.33	17.69	16.72	18.04	18.42	15.97	17.34	16.37	17.69	18.07
	3H	18.30	19.45	18.71	19.84	20.24	17.89	19.04	18.30	19.44	19.84
	4H	19.08	20.11	19.51	20.53	20.96	18.65	19.69	19.09	20.10	20.54
	6H	19.67	20.58	20.13	21.02	21.48	19.24	20.15	19.70	20.59	21.04
	8H	19.86	20.71	20.32	21.15	21.62	19.43	20.27	19.89	20.71	21.18
	12H	20.00	20.76	20.48	21.23	21.70	19.54	20.30	20.02	20.78	21.25
8H	4H	19.35	20.20	19.81	20.64	21.11	18.98	19.82	19.44	20.27	20.73
	6H	20.07	20.77	20.56	21.26	21.73	19.68	20.39	20.18	20.87	21.35
	8H	20.32	20.96	20.83	21.46	21.95	19.93	20.56	20.44	21.07	21.56
	12H	20.52	21.08	21.03	21.57	22.13	20.11	20.67	20.62	21.16	21.72
12H	4H	19.38	20.14	19.86	20.61	21.08	19.01	19.77	19.49	20.25	20.72
	6H	20.11	20.74	20.62	21.25	21.74	19.74	20.37	20.25	20.88	21.37
	8H	20.42	20.98	20.93	21.47	22.03	20.05	20.60	20.55	21.09	21.66