

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: P931031

Luminaire Tested: DFN2DS-SQ3F0-110DS835-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931031
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-SQ3F0-110DS835-FLL
Description: 3 foot, Square Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

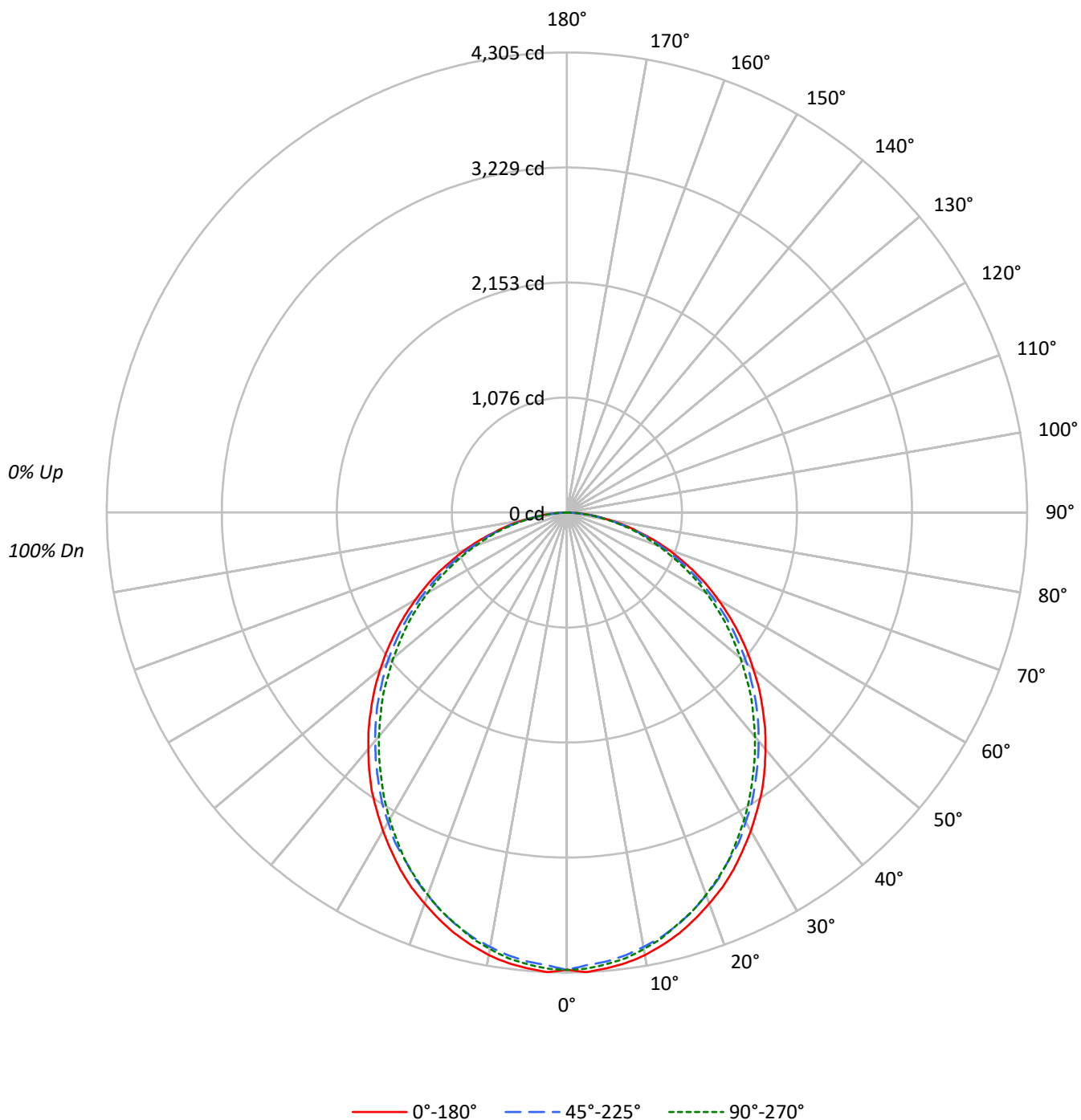
Lumens per Lamp: N/A
Luminaire Lumens: 10890.0 lumens
Efficiency: N/A
Efficacy: 92.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.06' x L: 3.06' x H: 0')
CIE Type: Direct

Input Watts (W): 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	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°	4904	4904	4904
5°	4923	4852	4881
10°	4894	4803	4827
15°	4833	4740	4736
20°	4747	4647	4642
25°	4662	4532	4532
30°	4553	4427	4389
35°	4450	4301	4237
40°	4322	4174	4094
45°	4195	4048	3948
50°	4057	3918	3778
55°	3914	3766	3626
60°	3753	3584	3452
65°	3582	3404	3247
70°	3365	3185	3034
75°	3060	2932	2861
80°	2717	2633	2498
85°	2217	2113	1894

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 4195 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	402.8	3.7
10°-20°	1133.5	10.4
20°-30°	1665.7	15.3
30°-40°	1934.7	17.8
40°-50°	1932.3	17.7
50°-60°	1684.9	15.5
60°-70°	1245.5	11.4
70°-80°	704.7	6.5
80°-90°	186.0	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°	3202.1	29.4
0°-40°	5136.7	47.2
0°-60°	8753.8	80.4
0°-90°	10890.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10890.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4280	4280	4280	4280	4280	
5°	4280	4264	4219	4251	4244	406
15°	4074	4050	3996	4013	3992	1148
25°	3688	3655	3585	3593	3585	1697
35°	3182	3140	3074	3050	3029	1987
45°	2589	2560	2498	2453	2437	1998
55°	1959	1934	1885	1836	1815	1752
65°	1321	1296	1255	1218	1198	1306
75°	691	683	662	638	646	738
85°	169	165	161	148	144	198
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4280.2	4280.2	4280.2	4280.2	4280.2
2.5°	4305.0	4284.5	4239.1	4280.2	4272.3
5°	4280.2	4264.0	4218.6	4251.3	4243.5
7.5°	4251.3	4226.9	4181.5	4214.7	4206.4
10°	4206.4	4177.5	4128.2	4160.9	4148.7
12.5°	4144.4	4119.9	4070.6	4091.1	4082.8
15°	4074.5	4050.0	3996.3	4012.9	3992.4
17.5°	3988.0	3963.6	3909.9	3930.4	3909.9
20°	3893.3	3868.8	3811.2	3823.4	3807.3
22.5°	3799.0	3761.8	3708.1	3708.1	3699.8
25°	3687.6	3654.9	3585.0	3592.9	3585.0
27.5°	3564.0	3535.2	3481.9	3469.7	3449.2
30°	3440.9	3407.7	3346.1	3333.9	3317.3
32.5°	3309.0	3284.6	3218.6	3193.7	3177.1
35°	3181.5	3140.5	3074.5	3049.6	3029.1
37.5°	3037.4	3000.3	2934.4	2905.5	2885.0
40°	2889.4	2856.2	2790.3	2753.6	2737.0
42.5°	2745.3	2712.1	2646.6	2605.1	2580.7
45°	2589.0	2560.1	2498.1	2453.2	2436.6
47.5°	2436.6	2407.8	2341.8	2296.4	2271.9
50°	2275.9	2255.4	2197.7	2140.1	2119.6
52.5°	2119.6	2090.7	2037.5	1992.0	1963.2
55°	1959.3	1934.4	1885.1	1835.7	1815.2
57.5°	1798.6	1778.1	1724.4	1675.0	1658.4
60°	1637.9	1621.8	1564.1	1518.7	1506.5
62.5°	1481.6	1452.8	1411.7	1370.7	1354.1
65°	1321.3	1296.4	1255.4	1218.3	1197.8
67.5°	1156.7	1135.8	1099.1	1070.3	1053.7
70°	1004.3	987.7	950.6	921.8	905.6
72.5°	848.0	831.4	810.9	782.1	769.8
75°	691.2	683.4	662.4	638.0	646.3
77.5°	551.5	534.9	526.6	514.4	502.2
80°	411.8	407.4	399.1	386.9	378.6
82.5°	279.9	279.9	276.0	259.4	259.4
85°	168.6	164.6	160.7	148.0	144.1
87.5°	74.2	65.9	57.6	45.4	41.0
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	16.81	18.42	17.17	18.73	19.05	16.36	17.97	16.73	18.29	18.60
	3H	18.56	20.01	18.93	20.34	20.70	18.07	19.52	18.44	19.85	20.21
	4H	19.20	20.57	19.60	20.92	21.30	18.71	20.08	19.11	20.43	20.80
	6H	19.67	20.94	20.08	21.31	21.70	19.17	20.44	19.58	20.80	21.20
	8H	19.82	21.03	20.24	21.42	21.81	19.31	20.52	19.74	20.91	21.31
	12H	19.91	21.07	20.34	21.45	21.88	19.39	20.55	19.82	20.94	21.36
4H	2H	17.37	18.74	17.77	19.08	19.46	17.01	18.38	17.41	18.73	19.11
	3H	19.34	20.49	19.75	20.89	21.29	18.94	20.08	19.35	20.48	20.88
	4H	20.12	21.16	20.55	21.57	22.00	19.70	20.73	20.13	21.14	21.58
	6H	20.72	21.62	21.17	22.06	22.52	20.28	21.19	20.74	21.63	22.09
	8H	20.91	21.75	21.37	22.19	22.66	20.47	21.31	20.93	21.76	22.22
	12H	21.04	21.80	21.52	22.27	22.74	20.58	21.34	21.07	21.82	22.29
8H	4H	20.39	21.24	20.85	21.68	22.15	20.02	20.86	20.48	21.31	21.77
	6H	21.11	21.81	21.60	22.30	22.77	20.73	21.43	21.22	21.92	22.39
	8H	21.37	22.00	21.88	22.50	22.99	20.97	21.61	21.48	22.11	22.60
	12H	21.57	22.12	22.07	22.61	23.18	21.15	21.71	21.66	22.20	22.76
12H	4H	20.42	21.18	20.90	21.65	22.12	20.05	20.81	20.53	21.29	21.76
	6H	21.15	21.78	21.66	22.29	22.78	20.78	21.42	21.29	21.92	22.41
	8H	21.47	22.02	21.97	22.51	23.08	21.09	21.65	21.60	22.14	22.70