

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: P931045

Luminaire Tested: DFN2DS-SQ3F0-110DS950-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931045
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-SQ3F0-110DS950-FLL
Description: 3 foot, Square Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

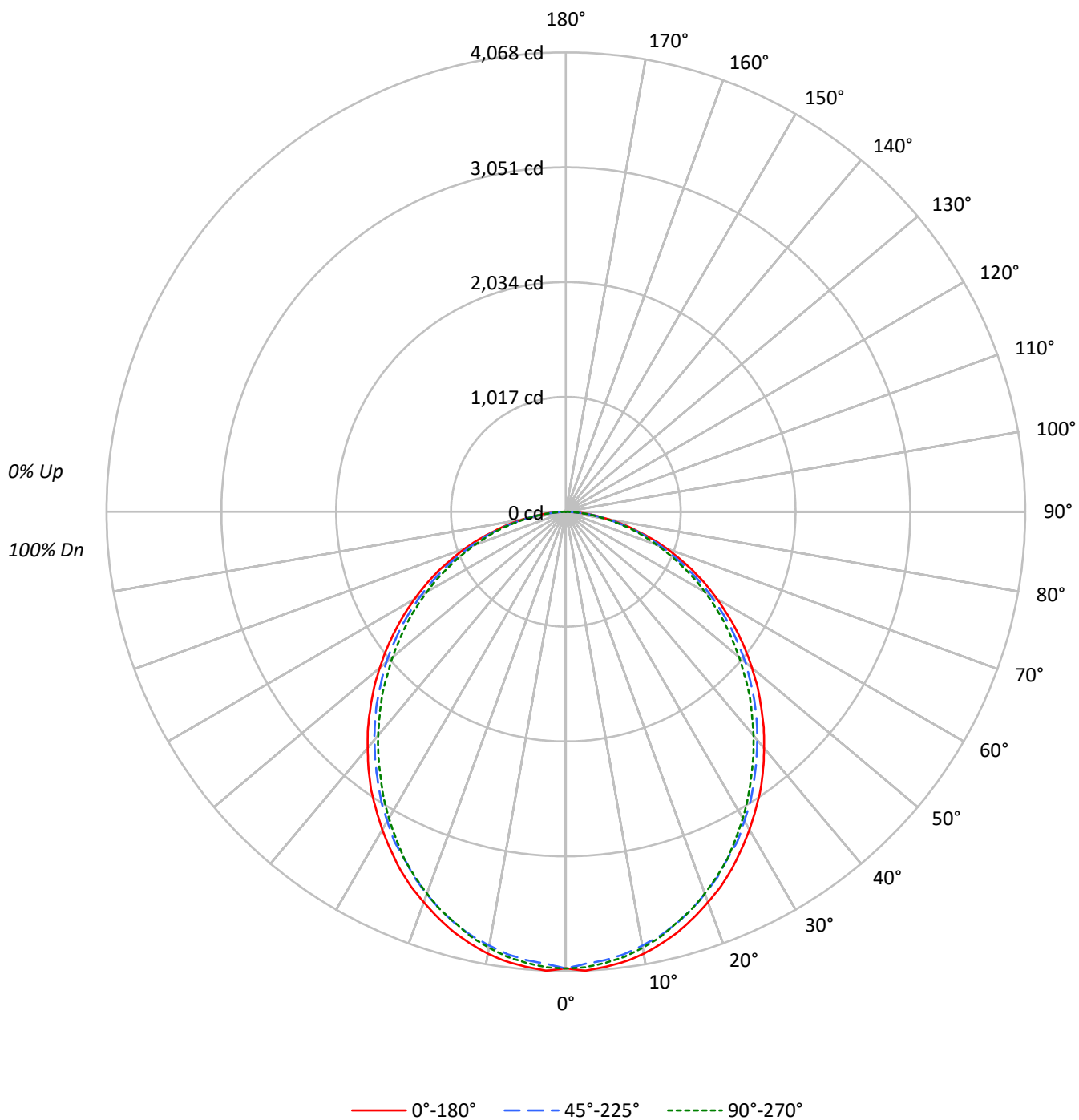
Lumens per Lamp: N/A
Luminaire Lumens: 10291.0 lumens
Efficiency: N/A
Efficacy: 87.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.06' x L: 3.06' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	4635	4635	4635
5°	4652	4585	4612
10°	4625	4539	4561
15°	4567	4480	4475
20°	4486	4392	4387
25°	4406	4283	4283
30°	4302	4184	4148
35°	4205	4064	4004
40°	4084	3944	3869
45°	3964	3825	3731
50°	3834	3702	3570
55°	3699	3559	3427
60°	3547	3387	3262
65°	3385	3217	3069
70°	3180	3009	2867
75°	2892	2771	2704
80°	2568	2488	2361
85°	2094	1997	1791

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
Vertical Angle: 45°
Luminance: 3964 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	380.7	3.7
10°-20°	1071.1	10.4
20°-30°	1574.1	15.3
30°-40°	1828.2	17.8
40°-50°	1826.0	17.7
50°-60°	1592.2	15.5
60°-70°	1177.0	11.4
70°-80°	665.9	6.5
80°-90°	175.8	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°	3025.9	29.4
0°-40°	4854.2	47.2
0°-60°	8272.4	80.4
0°-90°	10291.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10291.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4045	4045	4045	4045	4045	
5°	4045	4030	3987	4018	4010	384
15°	3850	3827	3776	3792	3773	1084
25°	3485	3454	3388	3395	3388	1604
35°	3006	2968	2905	2882	2862	1877
45°	2447	2419	2361	2318	2303	1888
55°	1852	1828	1781	1735	1715	1655
65°	1249	1225	1186	1151	1132	1235
75°	653	646	626	603	611	697
85°	159	156	152	140	136	187
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4044.8	4044.8	4044.8	4044.8	4044.8
2.5°	4068.2	4048.9	4005.9	4044.8	4037.3
5°	4044.8	4029.5	3986.6	4017.5	4010.1
7.5°	4017.5	3994.4	3951.5	3982.9	3975.0
10°	3975.0	3947.7	3901.1	3932.1	3920.5
12.5°	3916.5	3893.3	3846.7	3866.1	3858.2
15°	3850.4	3827.2	3776.5	3792.2	3772.8
17.5°	3768.7	3745.6	3694.9	3714.2	3694.9
20°	3679.2	3656.0	3601.6	3613.1	3597.9
22.5°	3590.1	3554.9	3504.2	3504.2	3496.3
25°	3484.8	3453.9	3387.8	3395.3	3387.8
27.5°	3368.0	3340.8	3290.4	3278.9	3259.5
30°	3251.7	3220.3	3162.1	3150.5	3134.8
32.5°	3127.0	3103.9	3041.6	3018.0	3002.4
35°	3006.5	2967.8	2905.4	2881.9	2862.5
37.5°	2870.3	2835.3	2773.0	2745.7	2726.3
40°	2730.5	2699.1	2636.8	2602.2	2586.5
42.5°	2594.3	2562.9	2501.0	2461.8	2438.8
45°	2446.6	2419.3	2360.7	2318.3	2302.6
47.5°	2302.6	2275.4	2213.0	2170.1	2146.9
50°	2150.7	2131.4	2076.8	2022.4	2003.0
52.5°	2003.0	1975.7	1925.4	1882.4	1855.2
55°	1851.5	1828.0	1781.4	1734.7	1715.4
57.5°	1699.7	1680.3	1629.6	1582.9	1567.2
60°	1547.8	1532.6	1478.1	1435.2	1423.6
62.5°	1400.1	1372.9	1334.1	1295.3	1279.6
65°	1248.6	1225.1	1186.4	1151.3	1131.9
67.5°	1093.1	1073.3	1038.6	1011.4	995.7
70°	949.1	933.4	898.3	871.1	855.8
72.5°	801.4	785.7	766.3	739.1	727.5
75°	653.2	645.8	626.0	602.9	610.8
77.5°	521.2	505.5	497.6	486.1	474.6
80°	389.2	385.0	377.1	365.6	357.8
82.5°	264.5	264.5	260.8	245.1	245.1
85°	159.3	155.5	151.9	139.9	136.2
87.5°	70.1	62.3	54.4	42.9	38.7
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	16.61	18.22	16.98	18.54	18.85	16.17	17.78	16.53	18.09	18.41
	3H	18.36	19.82	18.74	20.14	20.50	17.87	19.32	18.25	19.65	20.01
	4H	19.01	20.38	19.41	20.72	21.10	18.51	19.88	18.91	20.23	20.61
	6H	19.48	20.74	19.89	21.11	21.50	18.97	20.24	19.39	20.61	21.00
	8H	19.62	20.83	20.04	21.22	21.62	19.12	20.33	19.54	20.72	21.12
	12H	19.71	20.87	20.14	21.25	21.68	19.20	20.36	19.63	20.74	21.17
4H	2H	17.17	18.54	17.57	18.89	19.26	16.82	18.19	17.22	18.54	18.91
	3H	19.15	20.29	19.56	20.69	21.09	18.74	19.89	19.15	20.28	20.68
	4H	19.92	20.96	20.35	21.37	21.81	19.50	20.53	19.93	20.95	21.38
	6H	20.52	21.42	20.97	21.86	22.32	20.09	20.99	20.54	21.43	21.89
	8H	20.71	21.56	21.17	22.00	22.46	20.27	21.12	20.73	21.56	22.03
	12H	20.84	21.60	21.32	22.08	22.55	20.39	21.15	20.87	21.62	22.09
8H	4H	20.20	21.04	20.66	21.49	21.95	19.82	20.67	20.28	21.11	21.58
	6H	20.91	21.61	21.40	22.10	22.58	20.53	21.23	21.02	21.72	22.20
	8H	21.17	21.80	21.68	22.31	22.79	20.78	21.41	21.29	21.92	22.40
	12H	21.37	21.93	21.88	22.42	22.98	20.96	21.51	21.46	22.00	22.57
12H	4H	20.22	20.98	20.70	21.46	21.93	19.86	20.62	20.34	21.09	21.56
	6H	20.96	21.59	21.47	22.09	22.58	20.59	21.22	21.10	21.73	22.21
	8H	21.27	21.83	21.78	22.32	22.88	20.89	21.45	21.40	21.94	22.50