

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: P931063

Luminaire Tested: DFN2DS-SQ3F0-120DS950-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931063
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-SQ3F0-120DS950-FLL
Description: 3 foot, Square Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

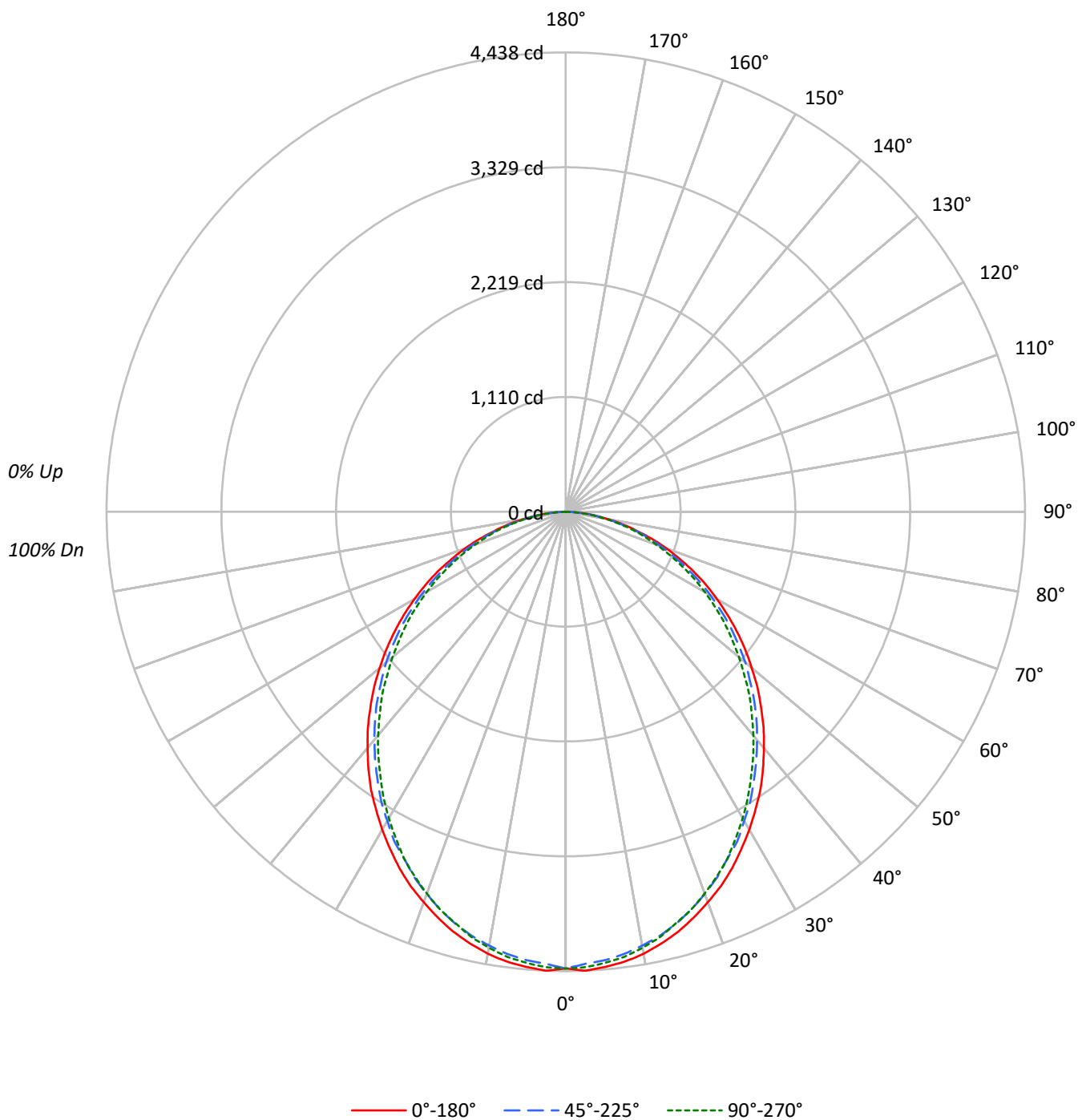
Lumens per Lamp: N/A
Luminaire Lumens: 11226.6 lumens
Efficiency: N/A
Efficacy: 85.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.06' x L: 3.06' x H: 0')
CIE Type: Direct

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°	5056	5056	5056
5°	5075	5002	5032
10°	5045	4952	4976
15°	4983	4887	4882
20°	4894	4791	4786
25°	4806	4672	4672
30°	4693	4564	4525
35°	4588	4433	4368
40°	4455	4302	4220
45°	4325	4173	4070
50°	4182	4039	3895
55°	4035	3882	3738
60°	3869	3695	3559
65°	3693	3509	3348
70°	3468	3283	3128
75°	3155	3023	2949
80°	2801	2715	2575
85°	2285	2178	1954

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 4325 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	415.3	3.7
10°-20°	1168.5	10.4
20°-30°	1717.2	15.3
30°-40°	1994.5	17.8
40°-50°	1992.0	17.7
50°-60°	1736.9	15.5
60°-70°	1284.0	11.4
70°-80°	726.4	6.5
80°-90°	191.7	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°	3301.0	29.4
0°-40°	5295.5	47.2
0°-60°	9024.4	80.4
0°-90°	11226.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11226.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4412	4412	4412	4412	4412	
5°	4412	4396	4349	4383	4375	419
15°	4200	4175	4120	4137	4116	1183
25°	3802	3768	3696	3704	3696	1749
35°	3280	3238	3170	3144	3123	2048
45°	2669	2639	2575	2529	2512	2060
55°	2020	1994	1943	1892	1871	1806
65°	1362	1336	1294	1256	1235	1347
75°	713	704	683	658	666	761
85°	174	170	166	153	149	204
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4412.5	4412.5	4412.5	4412.5	4412.5
2.5°	4438.1	4416.9	4370.2	4412.5	4404.4
5°	4412.5	4395.8	4349.0	4382.7	4374.6
7.5°	4382.7	4357.5	4310.7	4344.9	4336.4
10°	4336.4	4306.6	4255.8	4289.5	4277.0
12.5°	4272.4	4247.2	4196.4	4217.5	4208.9
15°	4200.4	4175.2	4119.8	4136.9	4115.8
17.5°	4111.3	4086.1	4030.7	4051.9	4030.7
20°	4013.6	3988.4	3929.0	3941.6	3925.0
22.5°	3916.4	3878.1	3822.7	3822.7	3814.2
25°	3801.5	3767.8	3695.8	3703.9	3695.8
27.5°	3674.2	3644.5	3589.6	3576.9	3555.8
30°	3547.2	3513.0	3449.5	3437.0	3419.9
32.5°	3411.3	3386.1	3318.1	3292.5	3275.4
35°	3279.8	3237.6	3169.5	3143.9	3122.8
37.5°	3131.3	3093.1	3025.0	2995.4	2974.2
40°	2978.7	2944.5	2876.5	2838.7	2821.6
42.5°	2830.2	2796.0	2728.4	2685.7	2660.5
45°	2669.0	2639.3	2575.3	2529.0	2511.9
47.5°	2511.9	2482.1	2414.2	2367.4	2342.2
50°	2346.2	2325.1	2265.6	2206.2	2185.0
52.5°	2185.0	2155.4	2100.5	2053.6	2023.9
55°	2019.8	1994.2	1943.3	1892.5	1871.3
57.5°	1854.2	1833.0	1777.6	1726.8	1709.7
60°	1688.5	1671.9	1612.5	1565.7	1553.0
62.5°	1527.4	1497.6	1455.4	1413.1	1396.0
65°	1362.2	1336.5	1294.2	1255.9	1234.8
67.5°	1192.5	1170.9	1133.1	1103.4	1086.3
70°	1035.3	1018.2	980.0	950.3	933.7
72.5°	874.2	857.1	835.9	806.3	793.6
75°	712.6	704.5	682.9	657.7	666.2
77.5°	568.5	551.4	542.9	530.2	517.7
80°	424.5	420.0	411.5	398.9	390.3
82.5°	288.5	288.5	284.5	267.4	267.4
85°	173.8	169.7	165.7	152.6	148.6
87.5°	76.5	67.9	59.4	46.8	42.3
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	16.91	18.52	17.28	18.84	19.15	16.47	18.08	16.83	18.39	18.71
	3H	18.66	20.12	19.04	20.44	20.80	18.17	19.63	18.55	19.95	20.31
	4H	19.31	20.68	19.71	21.03	21.40	18.81	20.18	19.21	20.53	20.91
	6H	19.78	21.05	20.19	21.41	21.80	19.28	20.55	19.69	20.91	21.30
	8H	19.92	21.13	20.35	21.52	21.92	19.42	20.63	19.84	21.02	21.42
	12H	20.01	21.17	20.44	21.55	21.98	19.50	20.66	19.93	21.04	21.47
4H	2H	17.47	18.84	17.87	19.19	19.57	17.12	18.49	17.52	18.84	19.21
	3H	19.45	20.59	19.86	20.99	21.39	19.04	20.19	19.45	20.59	20.99
	4H	20.22	21.26	20.66	21.67	22.11	19.80	20.84	20.23	21.25	21.69
	6H	20.82	21.73	21.28	22.17	22.62	20.39	21.29	20.84	21.73	22.19
	8H	21.01	21.86	21.47	22.30	22.77	20.57	21.42	21.03	21.86	22.33
	12H	21.14	21.90	21.62	22.38	22.85	20.69	21.45	21.17	21.93	22.40
8H	4H	20.50	21.34	20.96	21.79	22.25	20.12	20.97	20.58	21.41	21.88
	6H	21.21	21.92	21.71	22.40	22.88	20.83	21.53	21.32	22.02	22.50
	8H	21.47	22.10	21.98	22.61	23.10	21.08	21.71	21.59	22.22	22.70
	12H	21.67	22.23	22.18	22.72	23.28	21.26	21.82	21.77	22.31	22.87
12H	4H	20.52	21.28	21.00	21.76	22.23	20.16	20.92	20.64	21.40	21.86
	6H	21.26	21.89	21.77	22.40	22.88	20.89	21.52	21.40	22.03	22.51
	8H	21.57	22.13	22.08	22.62	23.18	21.19	21.75	21.70	22.24	22.80