

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: P931049

Luminaire Tested: DFN2DS-SQ3F0-120DS835-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931049
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-SQ3F0-120DS835-FLL
Description: 3 foot, Square Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

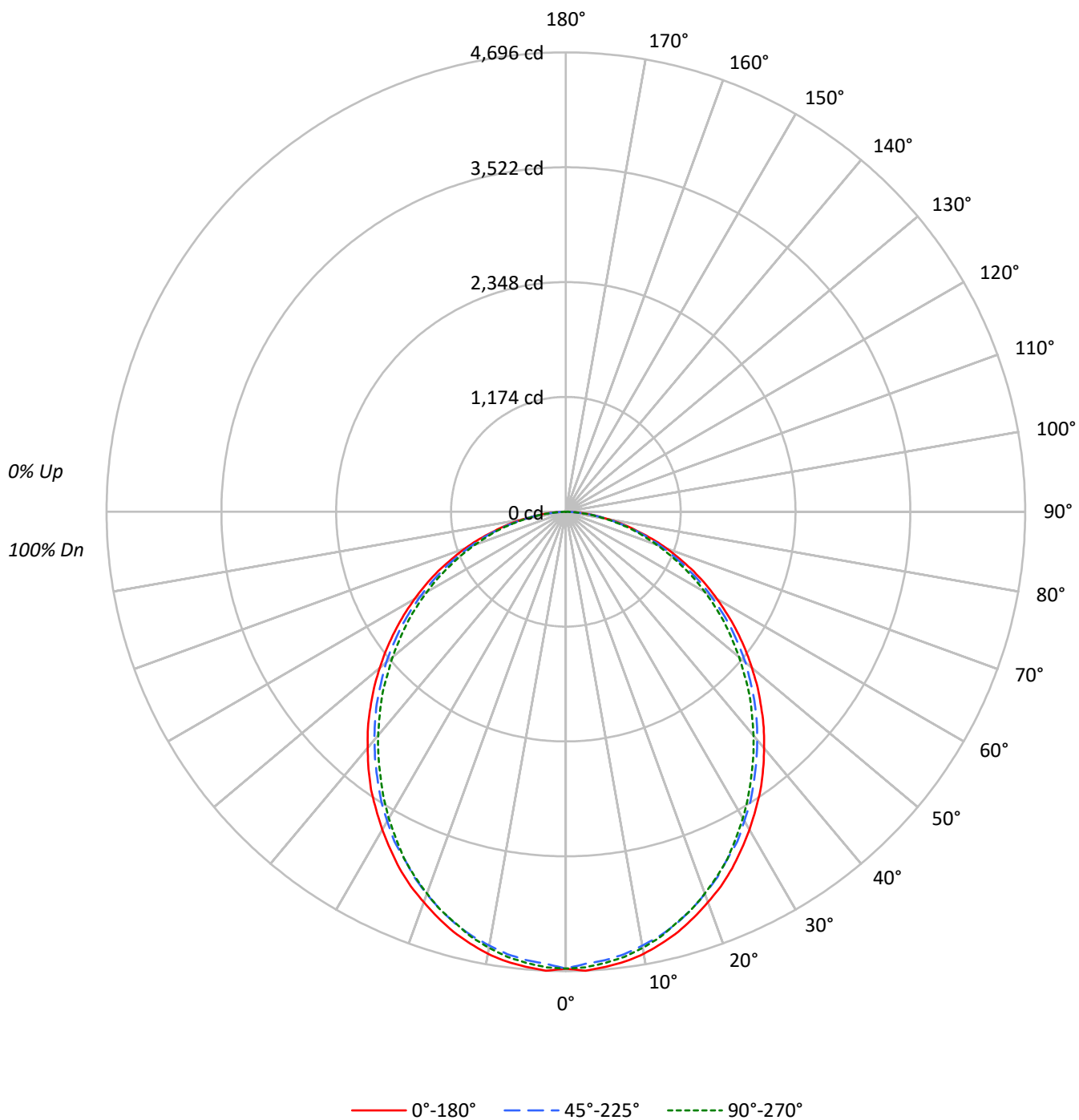
Lumens per Lamp: N/A
Luminaire Lumens: 11880.0 lumens
Efficiency: N/A
Efficacy: 90.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.06' x L: 3.06' x H: 0')
CIE Type: Direct

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°	5350	5350	5350
5°	5371	5293	5324
10°	5339	5240	5266
15°	5273	5171	5166
20°	5179	5070	5064
25°	5086	4944	4944
30°	4966	4830	4788
35°	4855	4691	4622
40°	4715	4553	4466
45°	4577	4416	4307
50°	4426	4274	4122
55°	4270	4108	3956
60°	4095	3910	3766
65°	3908	3713	3543
70°	3670	3474	3310
75°	3338	3199	3121
80°	2964	2873	2725
85°	2418	2305	2067

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 4577 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	439.5	3.7
10°-20°	1236.5	10.4
20°-30°	1817.2	15.3
30°-40°	2110.5	17.8
40°-50°	2107.9	17.7
50°-60°	1838.0	15.5
60°-70°	1358.7	11.4
70°-80°	768.7	6.5
80°-90°	202.9	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°	3493.1	29.4
0°-40°	5603.7	47.2
0°-60°	9549.6	80.4
0°-90°	11880.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11880.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4669	4669	4669	4669	4669	
5°	4669	4652	4602	4638	4629	443
15°	4445	4418	4360	4378	4355	1252
25°	4023	3987	3911	3920	3911	1851
35°	3471	3426	3354	3327	3304	2167
45°	2824	2793	2725	2676	2658	2180
55°	2137	2110	2056	2003	1980	1911
65°	1442	1414	1370	1329	1307	1425
75°	754	746	723	696	705	805
85°	184	180	175	162	157	216
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4669.3	4669.3	4669.3	4669.3	4669.3
2.5°	4696.4	4674.0	4624.5	4669.3	4660.7
5°	4669.3	4651.6	4602.1	4637.8	4629.2
7.5°	4637.8	4611.1	4561.6	4597.8	4588.8
10°	4588.8	4557.3	4503.5	4539.2	4525.9
12.5°	4521.1	4494.4	4440.6	4463.0	4453.9
15°	4444.9	4418.2	4359.6	4377.7	4355.3
17.5°	4350.6	4323.9	4265.3	4287.7	4265.3
20°	4247.2	4220.5	4157.7	4171.0	4153.4
22.5°	4144.3	4103.8	4045.2	4045.2	4036.2
25°	4022.8	3987.1	3910.9	3919.5	3910.9
27.5°	3888.0	3856.6	3798.5	3785.1	3762.8
30°	3753.7	3717.5	3650.3	3637.0	3618.9
32.5°	3609.8	3583.2	3511.2	3484.1	3466.0
35°	3470.7	3426.0	3354.0	3326.9	3304.5
37.5°	3313.5	3273.1	3201.1	3169.7	3147.3
40°	3152.1	3115.9	3043.9	3003.9	2985.8
42.5°	2994.9	2958.7	2887.2	2842.0	2815.3
45°	2824.3	2792.9	2725.2	2676.2	2658.1
47.5°	2658.1	2626.6	2554.7	2505.2	2478.5
50°	2482.8	2460.4	2397.5	2334.6	2312.2
52.5°	2312.2	2280.8	2222.7	2173.1	2141.7
55°	2137.4	2110.3	2056.4	2002.6	1980.2
57.5°	1962.1	1939.7	1881.1	1827.3	1809.2
60°	1786.8	1769.2	1706.3	1656.8	1643.4
62.5°	1616.3	1584.8	1540.1	1495.3	1477.2
65°	1441.5	1414.3	1369.5	1329.0	1306.7
67.5°	1261.9	1239.0	1199.0	1167.6	1149.5
70°	1095.6	1077.5	1037.0	1005.6	988.0
72.5°	925.1	907.0	884.6	853.2	839.8
75°	754.1	745.5	722.6	696.0	705.0
77.5°	601.6	583.5	574.5	561.1	547.8
80°	449.2	444.4	435.4	422.1	413.0
82.5°	305.3	305.3	301.1	283.0	283.0
85°	183.9	179.6	175.3	161.5	157.2
87.5°	81.0	71.9	62.9	49.5	44.8
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	17.11	18.72	17.47	19.03	19.35	16.67	18.28	17.03	18.59	18.90
	3H	18.86	20.31	19.24	20.64	21.00	18.37	19.82	18.75	20.15	20.51
	4H	19.51	20.87	19.90	21.22	21.60	19.01	20.38	19.41	20.73	21.10
	6H	19.97	21.24	20.39	21.61	22.00	19.47	20.74	19.88	21.11	21.50
	8H	20.12	21.33	20.54	21.72	22.12	19.62	20.83	20.04	21.21	21.61
	12H	20.21	21.37	20.64	21.75	22.18	19.70	20.86	20.13	21.24	21.67
4H	2H	17.67	19.04	18.07	19.39	19.76	17.32	18.69	17.72	19.03	19.41
	3H	19.65	20.79	20.05	21.19	21.59	19.24	20.38	19.65	20.78	21.18
	4H	20.42	21.46	20.85	21.87	22.31	20.00	21.03	20.43	21.45	21.88
	6H	21.02	21.92	21.47	22.36	22.82	20.59	21.49	21.04	21.93	22.39
	8H	21.21	22.05	21.67	22.50	22.96	20.77	21.62	21.23	22.06	22.52
	12H	21.34	22.10	21.82	22.57	23.04	20.89	21.65	21.37	22.12	22.59
8H	4H	20.69	21.54	21.16	21.98	22.45	20.32	21.17	20.78	21.61	22.08
	6H	21.41	22.11	21.90	22.60	23.08	21.03	21.73	21.52	22.22	22.69
	8H	21.67	22.30	22.18	22.81	23.29	21.28	21.91	21.79	22.41	22.90
	12H	21.87	22.43	22.38	22.92	23.48	21.46	22.01	21.96	22.50	23.06
12H	4H	20.72	21.48	21.20	21.96	22.43	20.36	21.12	20.84	21.59	22.06
	6H	21.45	22.09	21.96	22.59	23.08	21.09	21.72	21.60	22.22	22.71
	8H	21.77	22.33	22.28	22.82	23.38	21.39	21.95	21.90	22.44	23.00