

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: P930616

Luminaire Tested: DFN2DS-PN3F0-090DS830-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930616
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P333882)
Test Lab: INNOVATION CENTER
Issue Date: 11/20/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DS-PN3F0-090DS830-RLL
Description: 3 foot, Pentagon Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

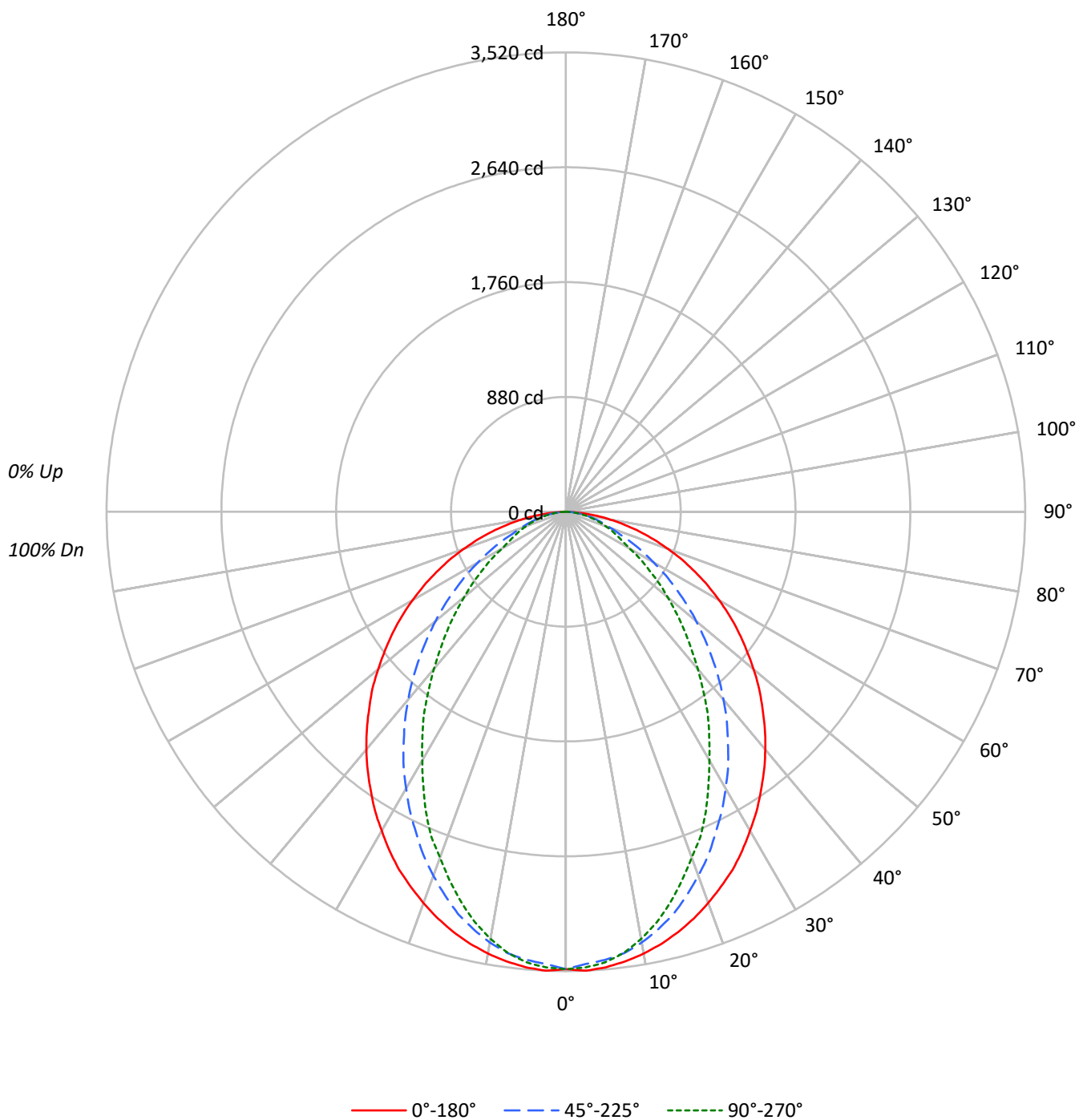
Lumens per Lamp: N/A
Luminaire Lumens: 7206.4 lumens
Efficiency: N/A
Efficacy: 74.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.11' x L: 2.96' x H: 0')
CIE Type: Direct

Input Watts (W): 97.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9954
Total Harmonic Distortion (THDi): 0.076
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	110	106	102	98	107	103	100	97	99	96	94		95	93	91		92
2	101	94	87	82	98	92	86	81	88	83	79		85	81	78		82
3	93	83	76	70	90	82	75	69	79	73	68		76	71	67		74
4	86	75	66	60	83	73	66	60	71	64	59		69	63	58		66
5	79	67	59	53	77	66	58	52	64	57	52		62	56	51		60
6	74	61	53	47	72	60	52	46	58	51	46		57	50	46		55
7	68	56	47	42	67	55	47	42	53	46	41		52	46	41		51
8	64	51	43	38	62	51	43	37	49	42	37		48	42	37		47
9	60	47	39	34	59	47	39	34	46	39	34		44	38	34		44
10	56	44	36	31	55	43	36	31	42	36	31		41	35	31		41

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4096	4096	4096
5°	4112	4045	4067
10°	4080	3979	3945
15°	4033	3861	3750
20°	3968	3692	3507
25°	3902	3501	3272
30°	3810	3304	2970
35°	3720	3091	2706
40°	3629	2869	2400
45°	3523	2621	2123
50°	3414	2370	1851
55°	3302	2100	1590
60°	3173	1816	1320
65°	3026	1526	1202
70°	2851	1257	1105
75°	2635	1146	1032
80°	2326	1023	940
85°	1827	807	807

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
Vertical Angle: 45°
Luminance: 3523 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	328.4	4.6
10°-20°	901.5	12.5
20°-30°	1265.7	17.6
30°-40°	1379.7	19.1
40°-50°	1268.1	17.6
50°-60°	995.9	13.8
60°-70°	648.2	9.0
70°-80°	333.7	4.6
80°-90°	85.2	1.2
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°	2495.6	34.6
0°-40°	3875.3	53.8
0°-60°	6139.3	85.2
0°-90°	7206.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7206.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3504	3504	3504	3504	3504	
5°	3504	3488	3447	3475	3466	332
15°	3333	3298	3190	3130	3098	939
25°	3025	2924	2714	2584	2537	1391
35°	2607	2445	2166	1966	1896	1632
45°	2131	1918	1586	1360	1284	1646
55°	1620	1373	1030	840	780	1448
65°	1094	837	552	444	434	1085
75°	583	361	254	231	228	617
85°	136	70	60	60	60	163
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3504.0	3504.0	3504.0	3504.0	3504.0
2.5°	3519.8	3504.0	3468.9	3500.9	3494.5
5°	3504.0	3488.1	3446.8	3475.3	3465.9
7.5°	3475.3	3456.5	3412.1	3424.5	3408.7
10°	3437.4	3415.1	3351.9	3342.1	3323.3
12.5°	3389.9	3361.3	3275.5	3256.7	3221.6
15°	3332.7	3297.8	3190.1	3129.8	3098.2
17.5°	3266.1	3215.3	3082.0	3012.4	2961.6
20°	3190.1	3126.5	2968.0	2888.9	2818.9
22.5°	3107.7	3034.7	2850.6	2742.9	2695.5
25°	3025.2	2923.6	2714.4	2584.5	2536.7
27.5°	2927.0	2818.9	2587.5	2438.5	2365.5
30°	2822.3	2701.6	2447.9	2286.4	2200.6
32.5°	2720.7	2574.7	2315.0	2124.6	2045.2
35°	2606.7	2444.9	2165.9	1966.1	1896.2
37.5°	2495.6	2321.1	2026.3	1807.3	1728.3
40°	2378.3	2188.2	1880.3	1655.3	1572.9
42.5°	2257.8	2055.0	1734.6	1499.9	1420.7
45°	2131.0	1918.4	1585.6	1360.2	1284.1
47.5°	2010.5	1785.5	1443.0	1217.5	1147.9
50°	1877.3	1652.2	1303.4	1084.3	1018.0
52.5°	1747.1	1509.3	1170.2	960.8	900.6
55°	1620.2	1373.0	1030.5	840.5	780.2
57.5°	1490.4	1236.8	907.1	729.4	678.6
60°	1357.1	1103.5	776.9	615.3	564.5
62.5°	1227.3	973.7	665.8	513.8	488.5
65°	1094.0	837.1	551.7	444.1	434.4
67.5°	967.2	710.2	444.1	389.9	380.5
70°	834.0	586.8	367.8	336.1	323.3
72.5°	707.2	472.3	307.5	282.2	275.9
75°	583.4	361.4	253.7	231.4	228.4
77.5°	459.9	256.7	199.8	187.1	180.7
80°	345.5	184.1	152.0	139.6	139.6
82.5°	240.9	123.8	104.7	98.3	98.3
85°	136.2	69.6	60.2	60.2	60.2
87.5°	50.8	25.2	25.2	22.2	22.2
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	16.13	17.66	16.50	17.97	18.28	12.09	13.62	12.46	13.93	14.24
	3H	17.90	19.26	18.28	19.59	19.95	13.36	14.72	13.74	15.05	15.41
	4H	18.57	19.85	18.97	20.19	20.57	13.86	15.14	14.26	15.49	15.87
	6H	19.05	20.24	19.47	20.60	21.00	14.24	15.42	14.65	15.79	16.18
	8H	19.22	20.35	19.65	20.74	21.14	14.37	15.49	14.79	15.88	16.28
	12H	19.32	20.40	19.75	20.78	21.21	14.45	15.53	14.88	15.91	16.34
4H	2H	16.24	17.52	16.64	17.87	18.25	12.79	14.07	13.19	14.42	14.80
	3H	18.17	19.23	18.58	19.63	20.03	14.23	15.30	14.64	15.70	16.10
	4H	18.92	19.88	19.35	20.29	20.73	14.83	15.79	15.26	16.20	16.64
	6H	19.51	20.34	19.97	20.79	21.25	15.32	16.15	15.78	16.59	17.05
	8H	19.73	20.50	20.19	20.95	21.42	15.48	16.26	15.95	16.70	17.17
	12H	19.88	20.57	20.36	21.05	21.52	15.60	16.29	16.08	16.77	17.24
8H	4H	18.94	19.72	19.41	20.17	20.63	15.19	15.96	15.65	16.41	16.87
	6H	19.58	20.22	20.08	20.72	21.19	15.77	16.41	16.27	16.91	17.38
	8H	19.83	20.41	20.35	20.92	21.41	15.99	16.57	16.51	17.08	17.57
	12H	20.04	20.55	20.55	21.04	21.60	16.17	16.68	16.68	17.17	17.74
12H	4H	18.93	19.62	19.41	20.10	20.57	15.23	15.92	15.71	16.40	16.87
	6H	19.56	20.14	20.08	20.65	21.14	15.84	16.41	16.35	16.92	17.41
	8H	19.85	20.36	20.36	20.85	21.41	16.11	16.62	16.62	17.11	17.68