

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: P931026

Luminaire Tested: DFN2DS-SQ3F0-100DS940-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931026
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-SQ3F0-100DS940-RLL
Description: 3 foot, Square Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

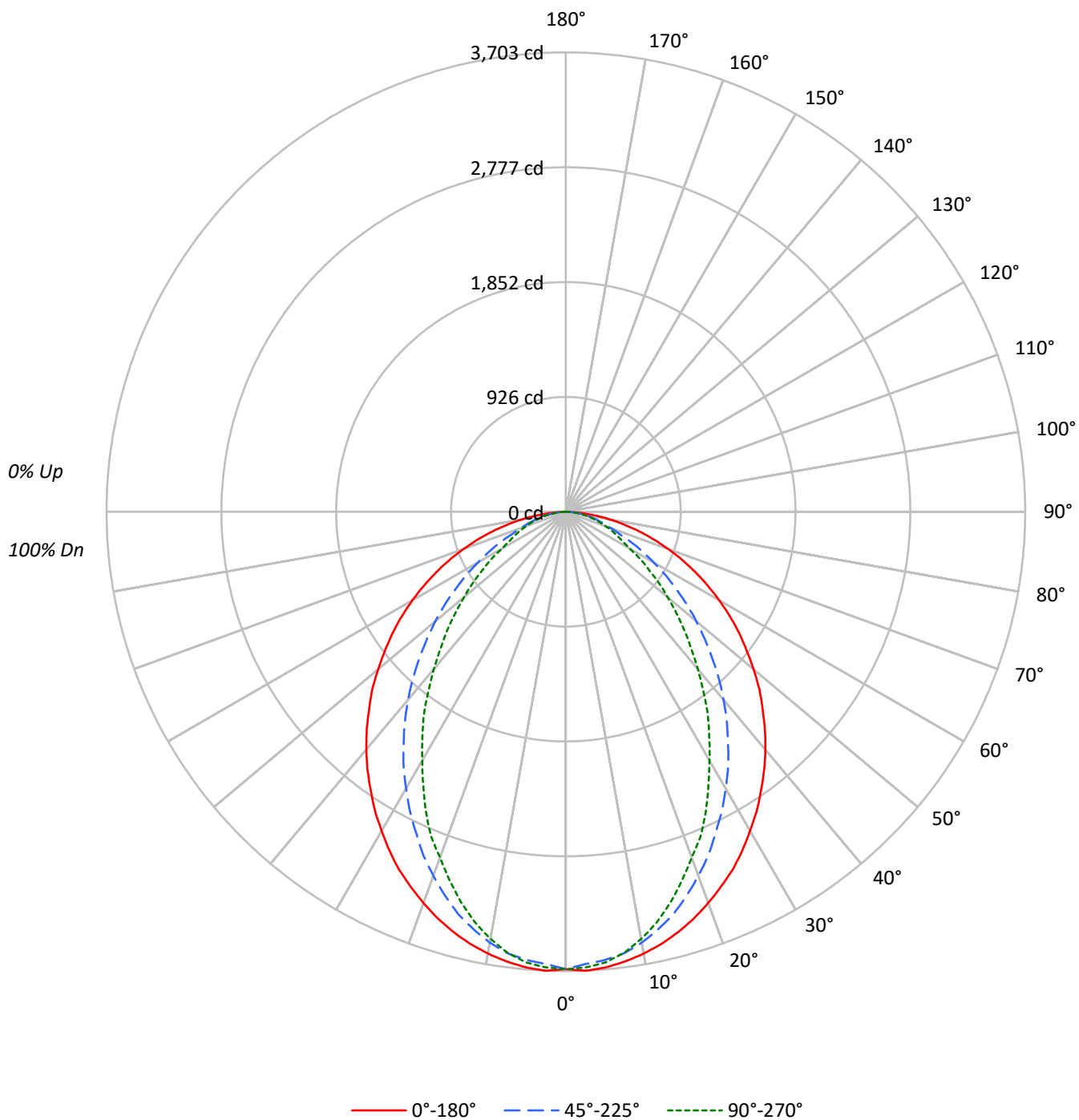
Lumens per Lamp: N/A
Luminaire Lumens: 7582.0 lumens
Efficiency: N/A
Efficacy: 72.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.06' x L: 3.06' x H: 0')
CIE Type: Direct

Input Watts (W): 104.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9781
Total Harmonic Distortion (THDi): 0.075
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°	4224	4224	4224
5°	4240	4171	4194
10°	4208	4103	4068
15°	4159	3981	3867
20°	4092	3808	3616
25°	4024	3610	3374
30°	3929	3408	3063
35°	3836	3188	2791
40°	3743	2959	2475
45°	3633	2703	2189
50°	3521	2444	1909
55°	3405	2166	1640
60°	3272	1873	1361
65°	3121	1574	1239
70°	2940	1296	1140
75°	2717	1182	1064
80°	2399	1056	969
85°	1884	832	832

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 3633 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	345.5	4.6
10°-20°	948.5	12.5
20°-30°	1331.7	17.6
30°-40°	1451.6	19.1
40°-50°	1334.2	17.6
50°-60°	1047.8	13.8
60°-70°	682.0	9.0
70°-80°	351.1	4.6
80°-90°	89.6	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°	2625.7	34.6
0°-40°	4077.3	53.8
0°-60°	6459.3	85.2
0°-90°	7582.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7582.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3687	3687	3687	3687	3687	
5°	3687	3670	3626	3657	3647	350
15°	3506	3470	3356	3293	3260	988
25°	3183	3076	2856	2719	2669	1464
35°	2742	2572	2279	2069	1995	1717
45°	2242	2018	1668	1431	1351	1731
55°	1705	1445	1084	884	821	1523
65°	1151	881	580	467	457	1141
75°	614	380	267	244	240	649
85°	143	73	63	63	63	172
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3686.6	3686.6	3686.6	3686.6	3686.6
2.5°	3703.2	3686.6	3649.8	3683.4	3676.7
5°	3686.6	3670.0	3626.4	3656.6	3646.6
7.5°	3656.6	3636.7	3589.9	3603.1	3586.5
10°	3616.5	3593.2	3526.6	3516.4	3496.6
12.5°	3566.7	3536.5	3446.2	3426.4	3389.6
15°	3506.5	3469.6	3356.3	3293.0	3259.7
17.5°	3436.3	3382.9	3242.8	3169.5	3116.0
20°	3356.3	3289.4	3122.7	3039.6	2965.9
22.5°	3269.6	3192.8	2999.2	2886.0	2836.0
25°	3182.9	3076.1	2855.8	2719.2	2669.0
27.5°	3079.5	2965.9	2722.4	2565.6	2488.8
30°	2969.5	2842.4	2575.5	2405.6	2315.4
32.5°	2862.6	2708.9	2435.7	2235.4	2151.8
35°	2742.5	2572.3	2278.9	2068.6	1995.0
37.5°	2625.8	2442.0	2132.0	1901.6	1818.3
40°	2502.2	2302.3	1978.4	1741.5	1654.8
42.5°	2375.5	2162.0	1825.1	1578.0	1494.8
45°	2242.0	2018.3	1668.3	1431.1	1351.1
47.5°	2115.4	1878.6	1518.2	1281.0	1207.8
50°	1975.2	1738.3	1371.3	1140.9	1071.1
52.5°	1838.1	1587.9	1231.1	1010.9	947.6
55°	1704.7	1444.6	1084.2	884.2	820.8
57.5°	1568.1	1301.2	954.4	767.4	714.0
60°	1427.9	1161.0	817.3	647.4	594.0
62.5°	1291.3	1024.4	700.5	540.6	514.0
65°	1151.1	880.7	580.5	467.2	457.0
67.5°	1017.7	747.2	467.2	410.2	400.3
70°	877.5	617.4	386.9	353.6	340.2
72.5°	744.0	496.9	323.5	296.9	290.3
75°	613.8	380.2	266.9	243.5	240.3
77.5°	483.9	270.1	210.2	196.8	190.1
80°	363.5	193.7	160.0	146.9	146.9
82.5°	253.4	130.2	110.1	103.4	103.4
85°	143.3	73.2	63.3	63.3	63.3
87.5°	53.4	26.6	26.6	23.4	23.4
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	16.24	17.76	16.61	18.08	18.39	12.20	13.72	12.57	14.04	14.35
	3H	18.01	19.37	18.38	19.70	20.06	13.47	14.83	13.84	15.16	15.52
	4H	18.67	19.95	19.07	20.30	20.68	13.97	15.25	14.37	15.60	15.98
	6H	19.16	20.34	19.57	20.71	21.10	14.35	15.53	14.76	15.90	16.29
	8H	19.33	20.45	19.75	20.84	21.24	14.47	15.60	14.90	15.99	16.39
	12H	19.43	20.51	19.86	20.89	21.32	14.55	15.63	14.98	16.01	16.44
4H	2H	16.34	17.63	16.74	17.97	18.35	12.90	14.18	13.30	14.53	14.90
	3H	18.28	19.34	18.69	19.74	20.14	14.34	15.40	14.75	15.80	16.20
	4H	19.03	19.98	19.46	20.40	20.84	14.94	15.90	15.37	16.31	16.75
	6H	19.62	20.45	20.08	20.89	21.35	15.43	16.26	15.88	16.70	17.16
	8H	19.83	20.61	20.30	21.06	21.52	15.59	16.37	16.05	16.81	17.28
	12H	19.99	20.68	20.47	21.16	21.63	15.71	16.40	16.19	16.88	17.35
8H	4H	19.05	19.83	19.51	20.27	20.74	15.29	16.07	15.76	16.51	16.98
	6H	19.69	20.33	20.19	20.82	21.30	15.88	16.52	16.38	17.01	17.49
	8H	19.94	20.52	20.45	21.03	21.51	16.10	16.68	16.61	17.19	17.68
	12H	20.14	20.65	20.65	21.15	21.71	16.28	16.79	16.79	17.28	17.85
12H	4H	19.04	19.73	19.52	20.21	20.68	15.34	16.03	15.82	16.51	16.98
	6H	19.67	20.25	20.18	20.76	21.25	15.94	16.52	16.46	17.03	17.52
	8H	19.95	20.46	20.46	20.96	21.52	16.22	16.73	16.73	17.22	17.78

END OF REPORT

FIELD PERFORMANCE MAY DIFFER FROM LABORATORY PERFORMANCE

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