

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: P931058

Luminaire Tested: DFN2DS-SQ3F0-120DS930-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931058
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-SQ3F0-120DS930-RLL
Description: 3 foot, Square Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

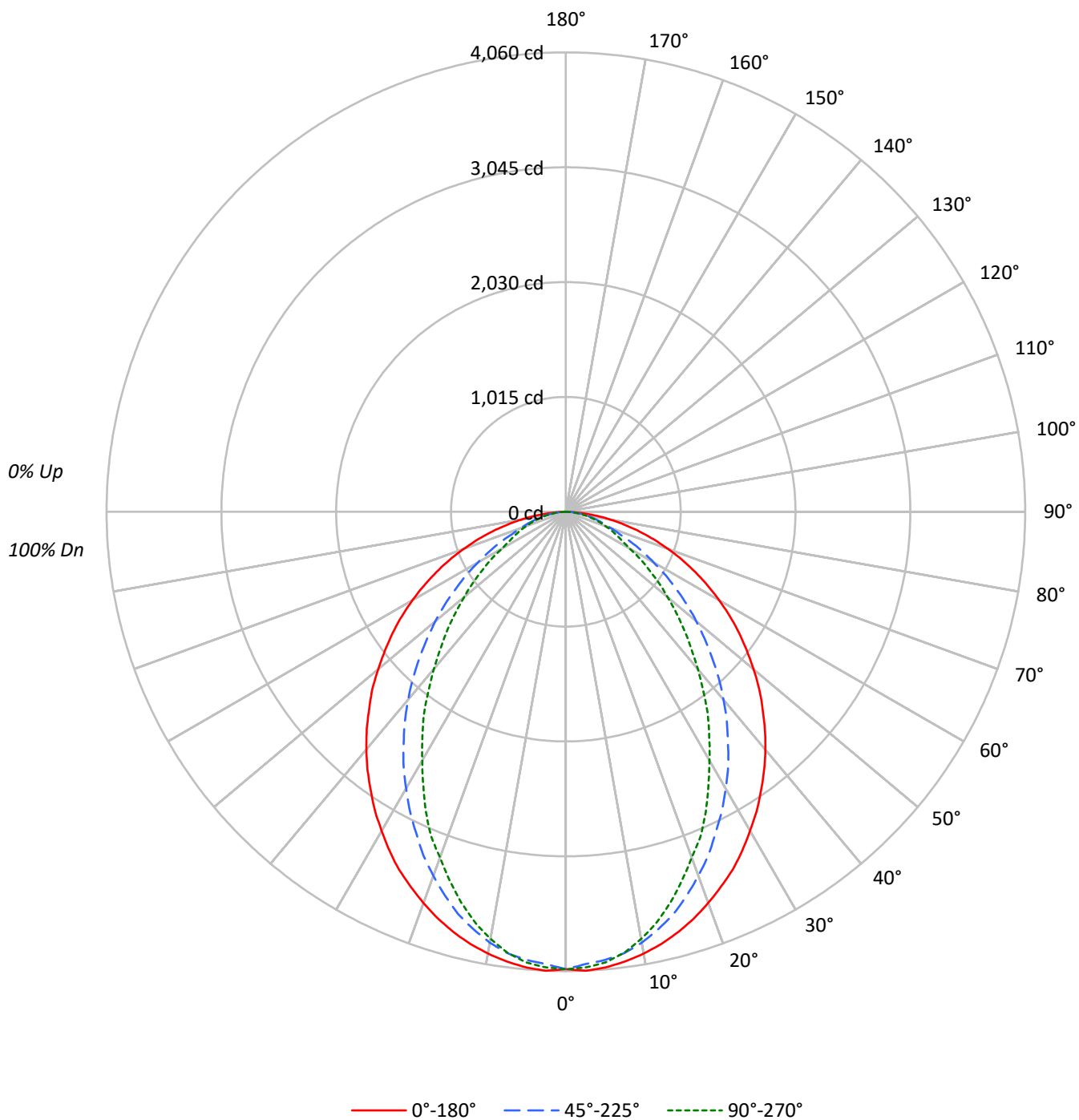
Lumens per Lamp: N/A
Luminaire Lumens: 8313.0 lumens
Efficiency: N/A
Efficacy: 63.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.06' x L: 3.06' x H: 0')
CIE Type: Direct

Input Watts (W): 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	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°	4631	4631	4631
5°	4649	4573	4599
10°	4613	4499	4460
15°	4560	4365	4240
20°	4487	4175	3965
25°	4412	3958	3700
30°	4308	3736	3359
35°	4206	3495	3060
40°	4104	3244	2714
45°	3983	2964	2400
50°	3860	2680	2093
55°	3734	2375	1798
60°	3588	2054	1493
65°	3422	1726	1359
70°	3223	1421	1249
75°	2979	1296	1167
80°	2630	1157	1062
85°	2067	912	912

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 3983 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	378.8	4.6
10°-20°	1040.0	12.5
20°-30°	1460.1	17.6
30°-40°	1591.6	19.1
40°-50°	1462.8	17.6
50°-60°	1148.8	13.8
60°-70°	747.8	9.0
70°-80°	384.9	4.6
80°-90°	98.3	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°	2878.9	34.6
0°-40°	4470.4	53.8
0°-60°	7082.1	85.2
0°-90°	8313.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8313.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4042	4042	4042	4042	4042	
5°	4042	4024	3976	4009	3998	383
15°	3844	3804	3680	3610	3574	1083
25°	3490	3373	3131	2981	2926	1605
35°	3007	2820	2498	2268	2187	1882
45°	2458	2213	1829	1569	1481	1898
55°	1869	1584	1189	969	900	1670
65°	1262	966	636	512	501	1251
75°	673	417	293	267	264	712
85°	157	80	69	69	69	188
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4042.1	4042.1	4042.1	4042.1	4042.1
2.5°	4060.3	4042.1	4001.7	4038.6	4031.2
5°	4042.1	4023.8	3976.1	4009.1	3998.2
7.5°	4009.1	3987.3	3936.1	3950.5	3932.2
10°	3965.2	3939.6	3866.6	3855.4	3833.7
12.5°	3910.5	3877.5	3778.5	3756.8	3716.5
15°	3844.5	3804.2	3680.0	3610.4	3574.0
17.5°	3767.7	3709.1	3555.4	3475.1	3416.5
20°	3680.0	3606.6	3423.8	3332.6	3251.8
22.5°	3584.9	3500.7	3288.4	3164.2	3109.5
25°	3489.8	3372.6	3131.1	2981.4	2926.3
27.5°	3376.5	3251.8	2984.9	2813.0	2728.7
30°	3255.8	3116.5	2823.8	2637.5	2538.6
32.5°	3138.6	2970.1	2670.5	2450.9	2359.3
35°	3007.0	2820.3	2498.5	2268.1	2187.3
37.5°	2878.9	2677.5	2337.5	2084.9	1993.7
40°	2743.5	2524.2	2169.1	1909.5	1814.4
42.5°	2604.5	2370.5	2001.1	1730.2	1639.0
45°	2458.2	2213.0	1829.1	1569.1	1481.3
47.5°	2319.2	2059.7	1664.6	1404.6	1324.2
50°	2165.6	1906.0	1503.5	1250.9	1174.4
52.5°	2015.4	1741.0	1349.8	1108.4	1039.0
55°	1869.1	1583.9	1188.8	969.4	900.0
57.5°	1719.2	1426.7	1046.3	841.4	782.8
60°	1565.6	1272.9	896.1	709.9	651.3
62.5°	1415.8	1123.2	768.1	592.7	563.5
65°	1262.1	965.6	636.5	512.3	501.1
67.5°	1115.8	819.2	512.3	449.8	439.0
70°	962.1	676.9	424.2	387.7	372.9
72.5°	815.8	544.9	354.7	325.6	318.3
75°	672.9	416.8	292.7	267.0	263.5
77.5°	530.6	296.1	230.6	215.8	208.4
80°	398.6	212.3	175.4	161.0	161.0
82.5°	277.9	142.8	120.7	113.3	113.3
85°	157.2	80.4	69.4	69.4	69.4
87.5°	58.6	29.1	29.1	25.6	25.6
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	16.56	18.08	16.93	18.40	18.71	12.52	14.04	12.89	14.36	14.67
	3H	18.33	19.69	18.70	20.02	20.38	13.79	15.15	14.16	15.48	15.84
	4H	18.99	20.27	19.39	20.62	21.00	14.29	15.57	14.69	15.92	16.30
	6H	19.48	20.66	19.89	21.03	21.42	14.67	15.85	15.08	16.22	16.61
	8H	19.65	20.77	20.07	21.16	21.56	14.79	15.92	15.22	16.31	16.71
	12H	19.75	20.83	20.18	21.21	21.64	14.87	15.95	15.30	16.33	16.76
4H	2H	16.66	17.95	17.06	18.29	18.67	13.22	14.50	13.62	14.85	15.22
	3H	18.60	19.66	19.01	20.06	20.46	14.66	15.72	15.07	16.12	16.52
	4H	19.35	20.30	19.78	20.72	21.16	15.26	16.22	15.69	16.63	17.07
	6H	19.94	20.77	20.40	21.21	21.67	15.75	16.58	16.20	17.02	17.48
	8H	20.15	20.93	20.62	21.37	21.84	15.91	16.69	16.37	17.13	17.60
	12H	20.31	21.00	20.79	21.48	21.95	16.03	16.72	16.51	17.20	17.67
8H	4H	19.37	20.15	19.83	20.59	21.06	15.61	16.39	16.08	16.83	17.30
	6H	20.01	20.65	20.51	21.14	21.62	16.20	16.84	16.70	17.33	17.81
	8H	20.26	20.84	20.77	21.35	21.83	16.42	17.00	16.93	17.51	17.99
	12H	20.46	20.97	20.97	21.47	22.03	16.60	17.11	17.11	17.60	18.17
12H	4H	19.36	20.05	19.84	20.53	21.00	15.66	16.35	16.14	16.83	17.30
	6H	19.99	20.57	20.50	21.08	21.57	16.26	16.84	16.78	17.35	17.84
	8H	20.27	20.78	20.78	21.28	21.84	16.54	17.05	17.05	17.54	18.10