

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: P930878

Luminaire Tested: DFN2DS-SQ2F0-070DS930-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930878
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-SQ2F0-070DS930-RLL
Description: 2 foot, Square Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

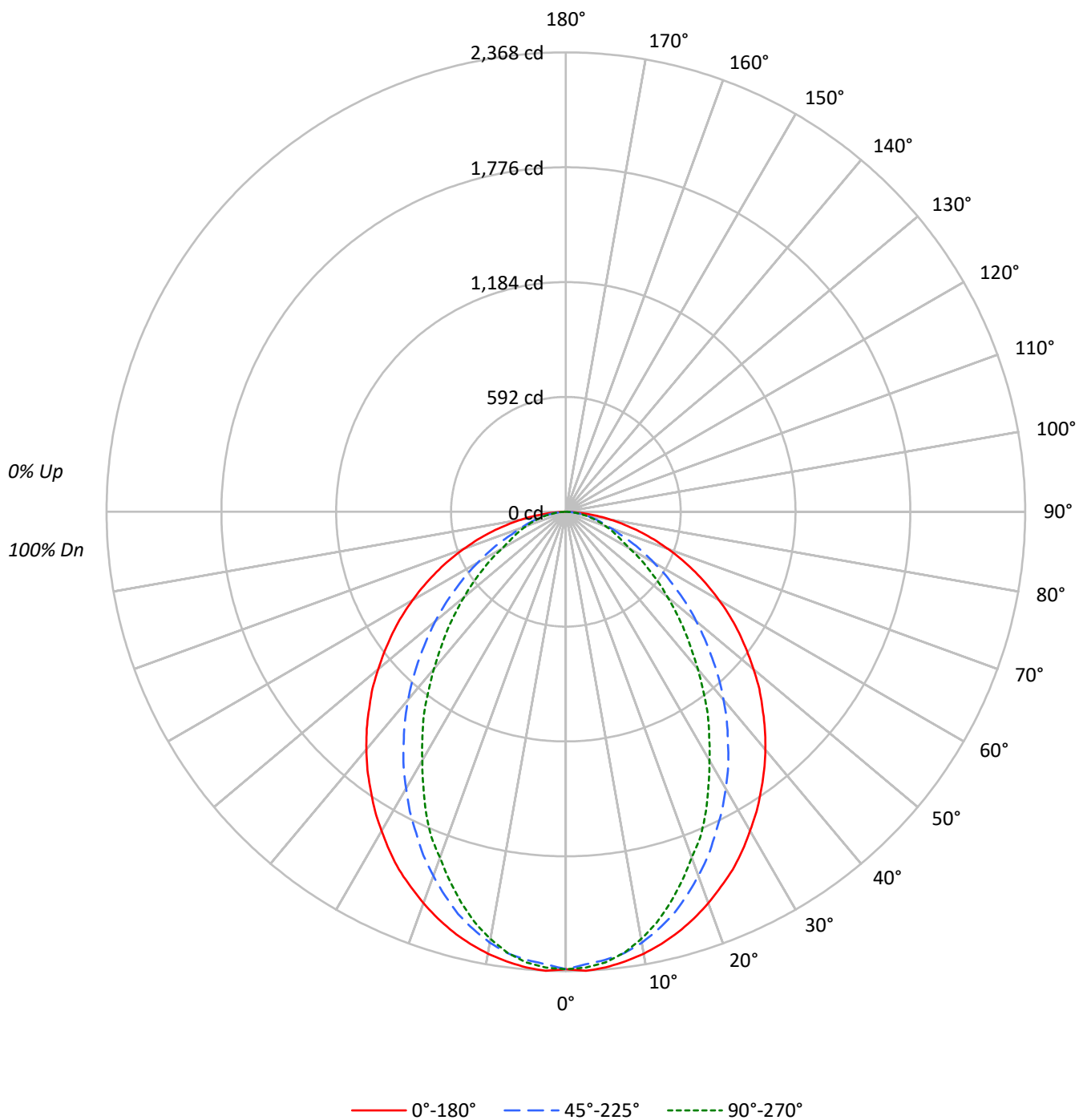
Lumens per Lamp: N/A
Luminaire Lumens: 4849.2 lumens
Efficiency: N/A
Efficacy: 67.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 2.21' x L: 2.21' x H: 0')
CIE Type: Direct

Input Watts (W): 71.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9977
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°	5185	5185	5185
5°	5205	5120	5148
10°	5165	5036	4993
15°	5105	4887	4746
20°	5023	4673	4439
25°	4939	4431	4142
30°	4822	4182	3760
35°	4708	3912	3425
40°	4594	3632	3038
45°	4459	3318	2687
50°	4321	3000	2344
55°	4180	2658	2013
60°	4016	2299	1671
65°	3830	1932	1521
70°	3608	1591	1398
75°	3335	1450	1306
80°	2944	1297	1190
85°	2314	1022	1022

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 4459 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	221.0	4.6
10°-20°	606.6	12.5
20°-30°	851.7	17.6
30°-40°	928.4	19.1
40°-50°	853.3	17.6
50°-60°	670.1	13.8
60°-70°	436.2	9.0
70°-80°	224.5	4.6
80°-90°	57.3	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°	1679.3	34.6
0°-40°	2607.7	53.8
0°-60°	4131.2	85.2
0°-90°	4849.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4849.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2358	2358	2358	2358	2358	
5°	2358	2347	2319	2339	2332	224
15°	2243	2219	2147	2106	2085	632
25°	2036	1967	1826	1739	1707	936
35°	1754	1645	1458	1323	1276	1098
45°	1434	1291	1067	915	864	1107
55°	1090	924	693	566	525	974
65°	736	563	371	299	292	730
75°	393	243	171	156	154	415
85°	92	47	40	40	40	110
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2357.9	2357.9	2357.9	2357.9	2357.9
2.5°	2368.5	2357.9	2334.3	2355.8	2351.5
5°	2357.9	2347.2	2319.4	2338.6	2332.3
7.5°	2338.6	2325.9	2296.1	2304.4	2293.8
10°	2313.1	2298.1	2255.5	2249.0	2236.3
12.5°	2281.1	2261.9	2204.2	2191.5	2167.9
15°	2242.6	2219.1	2146.6	2106.1	2084.9
17.5°	2197.8	2163.7	2074.0	2027.1	1992.9
20°	2146.6	2103.8	1997.2	1944.0	1896.9
22.5°	2091.2	2042.1	1918.2	1845.7	1813.9
25°	2035.7	1967.3	1826.5	1739.1	1707.0
27.5°	1969.6	1896.9	1741.2	1640.9	1591.8
30°	1899.2	1817.9	1647.2	1538.6	1480.9
32.5°	1830.8	1732.6	1557.8	1429.7	1376.2
35°	1754.0	1645.2	1457.5	1323.1	1276.0
37.5°	1679.4	1561.9	1363.6	1216.1	1163.0
40°	1600.3	1472.5	1265.3	1113.9	1058.4
42.5°	1519.3	1382.8	1167.2	1009.2	956.1
45°	1434.0	1290.9	1067.0	915.3	864.1
47.5°	1352.9	1201.5	971.0	819.3	772.5
50°	1263.2	1111.8	877.0	729.7	685.1
52.5°	1175.6	1015.6	787.4	646.5	606.0
55°	1090.3	923.9	693.4	565.5	525.0
57.5°	1002.9	832.2	610.4	490.8	456.6
60°	913.3	742.5	522.7	414.1	379.9
62.5°	825.8	655.2	448.0	345.7	328.7
65°	736.2	563.2	371.3	298.9	292.3
67.5°	650.9	477.9	298.9	262.3	256.1
70°	561.2	394.8	247.4	226.2	217.5
72.5°	475.9	317.8	206.9	190.0	185.7
75°	392.6	243.1	170.7	155.7	153.7
77.5°	309.5	172.7	134.5	125.8	121.6
80°	232.5	123.8	102.4	94.0	94.0
82.5°	162.1	83.3	70.4	66.1	66.1
85°	91.7	46.9	40.5	40.5	40.5
87.5°	34.1	17.0	17.0	14.9	14.9
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	16.95	18.47	17.32	18.79	19.10	12.91	14.43	13.28	14.75	15.06
	3H	18.72	20.08	19.10	20.41	20.77	14.18	15.54	14.56	15.87	16.23
	4H	19.38	20.66	19.78	21.01	21.39	14.68	15.96	15.08	16.31	16.69
	6H	19.87	21.06	20.29	21.42	21.81	15.06	16.24	15.47	16.61	17.00
	8H	20.04	21.16	20.46	21.55	21.96	15.19	16.31	15.61	16.70	17.10
	12H	20.14	21.22	20.57	21.60	22.03	15.27	16.34	15.70	16.73	17.16
4H	2H	17.06	18.34	17.46	18.69	19.06	13.61	14.89	14.01	15.24	15.62
	3H	18.99	20.05	19.40	20.45	20.85	15.05	16.11	15.46	16.51	16.92
	4H	19.74	20.70	20.17	21.11	21.55	15.65	16.61	16.08	17.02	17.46
	6H	20.33	21.16	20.79	21.61	22.07	16.14	16.97	16.60	17.41	17.87
	8H	20.55	21.32	21.01	21.77	22.23	16.30	17.08	16.76	17.52	17.99
	12H	20.70	21.39	21.18	21.87	22.34	16.42	17.11	16.90	17.59	18.06
8H	4H	19.76	20.54	20.23	20.98	21.45	16.00	16.78	16.47	17.23	17.69
	6H	20.40	21.04	20.90	21.53	22.01	16.59	17.23	17.09	17.73	18.20
	8H	20.65	21.23	21.16	21.74	22.23	16.81	17.39	17.33	17.90	18.39
	12H	20.86	21.37	21.36	21.86	22.42	16.99	17.50	17.50	17.99	18.56
12H	4H	19.75	20.44	20.23	20.92	21.39	16.05	16.74	16.53	17.22	17.69
	6H	20.38	20.96	20.90	21.47	21.96	16.65	17.23	17.17	17.74	18.23
	8H	20.67	21.18	21.18	21.67	22.23	16.93	17.44	17.44	17.93	18.49