

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: P930968

Luminaire Tested: DFN2DS-SQ3F0-070DS930-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930968
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-SQ3F0-070DS930-RLL
Description: 3 foot, Square Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

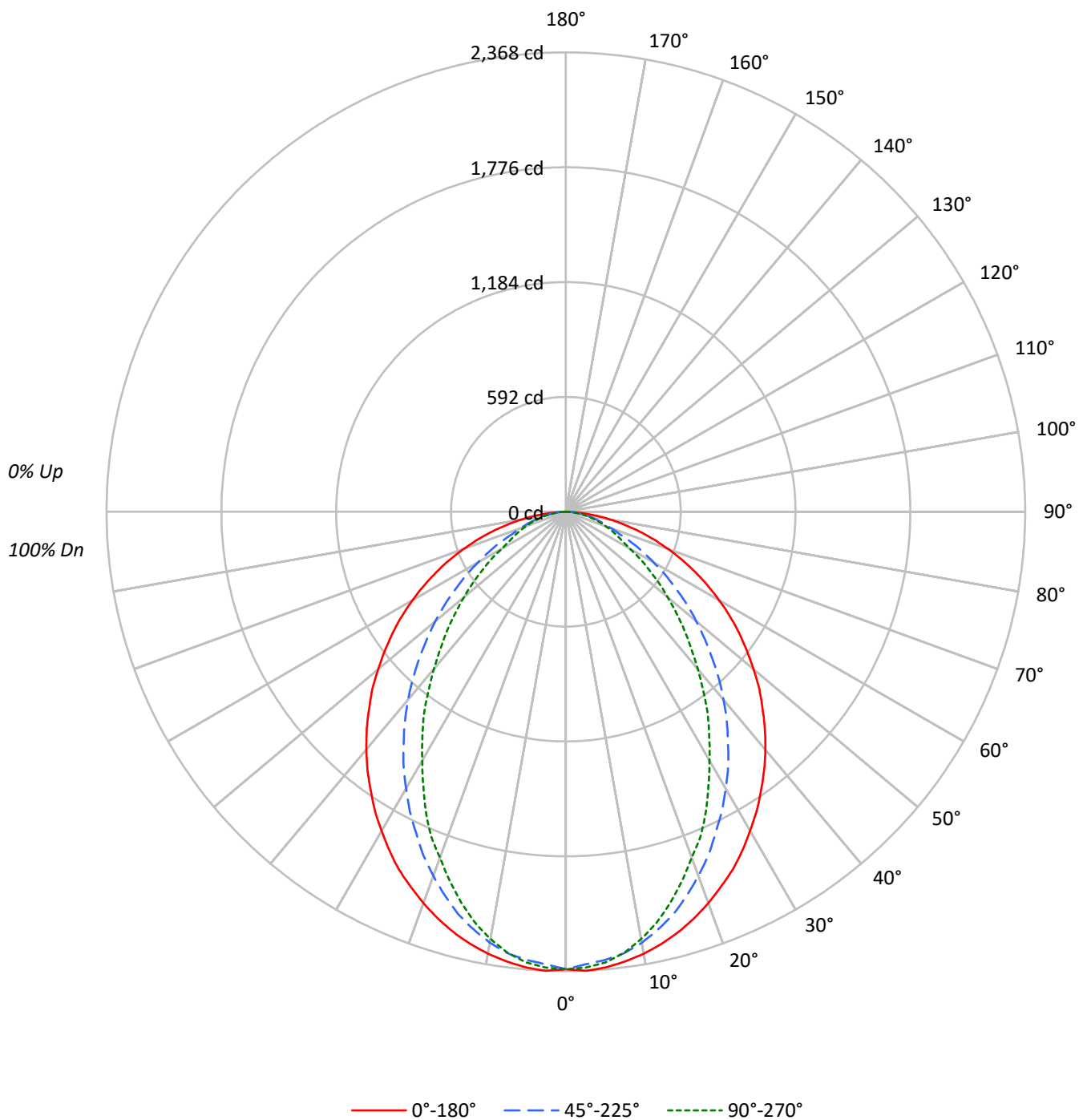
Lumens per Lamp: N/A
Luminaire Lumens: 4849.2 lumens
Efficiency: N/A
Efficacy: 67.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.06' x L: 3.06' x H: 0')
CIE Type: Direct

Input Watts (W): 71.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9963
Total Harmonic Distortion (THDi): 0.065
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°	2702	2702	2702
5°	2712	2668	2683
10°	2691	2624	2602
15°	2660	2546	2473
20°	2617	2435	2313
25°	2574	2309	2158
30°	2513	2179	1959
35°	2453	2039	1785
40°	2394	1893	1583
45°	2324	1729	1400
50°	2252	1563	1221
55°	2178	1385	1049
60°	2093	1198	871
65°	1996	1007	792
70°	1880	829	729
75°	1738	756	680
80°	1534	676	620
85°	1206	532	532

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2324 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	14.69	16.21	15.05	16.52	16.84	10.65	12.17	11.01	12.48	12.80
	3H	16.45	17.82	16.83	18.15	18.51	11.91	13.28	12.29	13.61	13.97
	4H	17.12	18.40	17.52	18.75	19.13	12.41	13.70	12.81	14.04	14.42
	6H	17.61	18.79	18.02	19.16	19.55	12.80	13.98	13.21	14.35	14.74
	8H	17.77	18.90	18.20	19.29	19.69	12.92	14.05	13.35	14.44	14.84
	12H	17.88	18.96	18.31	19.34	19.77	13.00	14.08	13.43	14.46	14.89
4H	2H	14.79	16.07	15.19	16.42	16.80	11.34	12.62	11.74	12.97	13.35
	3H	16.72	17.79	17.14	18.19	18.59	12.79	13.85	13.20	14.25	14.65
	4H	17.47	18.43	17.91	18.85	19.29	13.39	14.34	13.82	14.76	15.20
	6H	18.07	18.90	18.52	19.34	19.80	13.87	14.71	14.33	15.15	15.61
	8H	18.28	19.06	18.74	19.50	19.97	14.04	14.81	14.50	15.26	15.73
	12H	18.43	19.13	18.92	19.61	20.08	14.15	14.85	14.64	15.33	15.80
8H	4H	17.50	18.28	17.96	18.72	19.19	13.74	14.52	14.20	14.96	15.43
	6H	18.14	18.78	18.63	19.27	19.75	14.33	14.97	14.82	15.46	15.94
	8H	18.39	18.96	18.90	19.47	19.96	14.55	15.12	15.06	15.63	16.12
	12H	18.59	19.10	19.10	19.59	20.16	14.73	15.24	15.24	15.73	16.29
12H	4H	17.48	18.18	17.97	18.66	19.13	13.78	14.48	14.27	14.96	15.43
	6H	18.12	18.69	18.63	19.20	19.69	14.39	14.97	14.90	15.48	15.97
	8H	18.40	18.91	18.91	19.40	19.97	14.66	15.17	15.17	15.67	16.23