

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: P930961

Luminaire Tested: DFN2DS-SQ3F0-070DS840-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930961
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P333812)
Test Lab: INNOVATION CENTER
Issue Date: 11/20/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DS-SQ3F0-070DS840-FLL
Description: 3 foot, Square Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

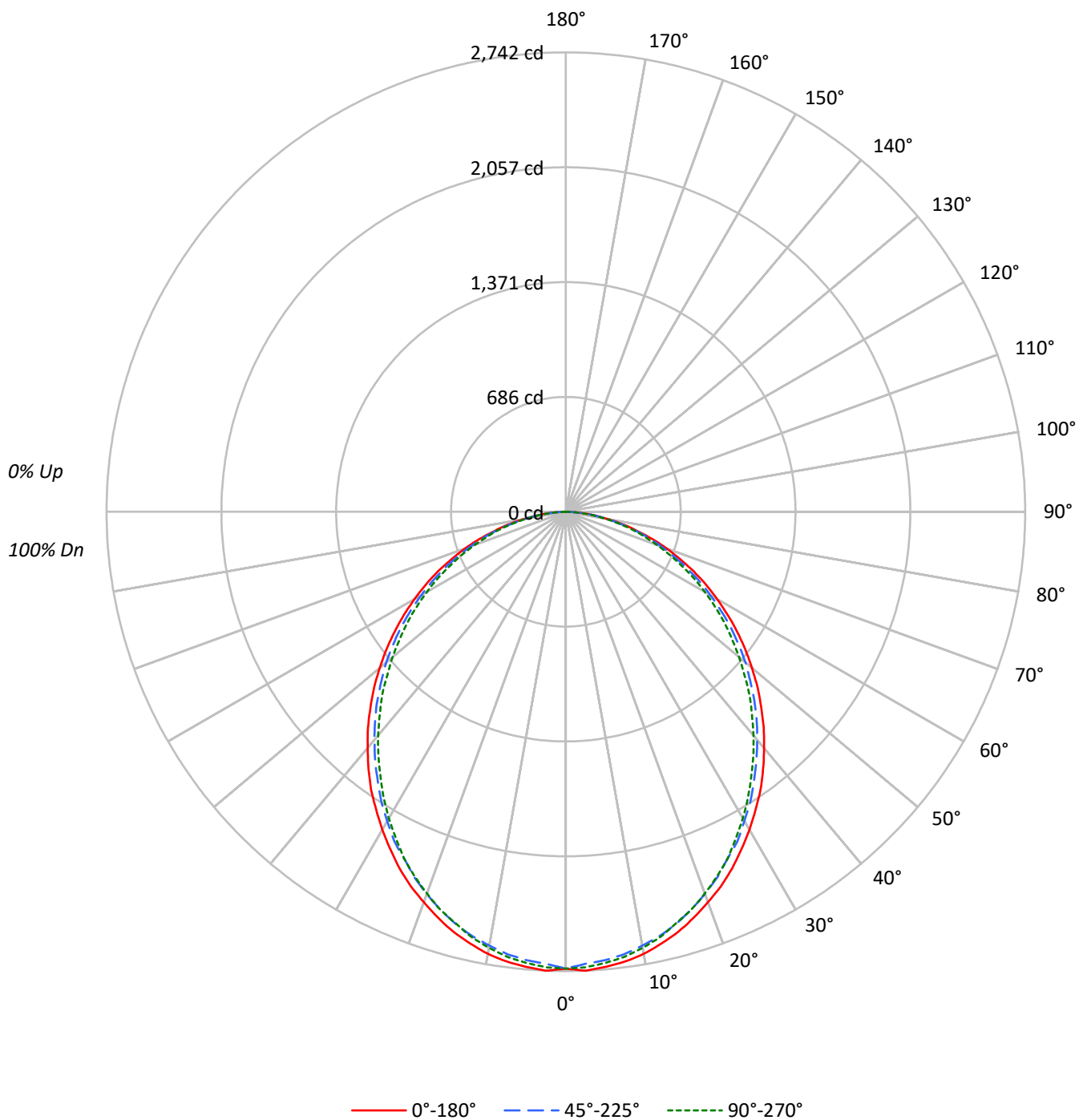
Lumens per Lamp: N/A
Luminaire Lumens: 6936.9 lumens
Efficiency: N/A
Efficacy: 97.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.06' x L: 3.06' x H: 0')
CIE Type: Direct

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	109	104	100	96	106	102	98	95	98	95	92		94	91	89		90
2	99	91	85	79	97	89	83	78	86	81	76		83	78	74		80
3	91	80	72	66	88	79	71	65	76	69	64		73	68	63		71
4	83	71	63	56	81	70	62	56	68	61	55		65	59	54		63
5	77	64	55	49	75	63	55	48	61	53	48		59	52	47		57
6	71	58	49	43	69	57	48	42	55	48	42		53	47	42		52
7	66	52	44	38	64	52	43	38	50	43	37		49	42	37		47
8	61	48	40	34	60	47	39	34	46	39	33		45	38	33		44
9	57	44	36	30	56	43	36	30	42	35	30		41	35	30		40
10	54	41	33	28	53	40	33	28	39	32	27		38	32	27		37

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3124	3124	3124
5°	3136	3091	3109
10°	3118	3059	3075
15°	3079	3020	3017
20°	3024	2960	2957
25°	2970	2887	2887
30°	2900	2820	2796
35°	2835	2739	2699
40°	2753	2659	2608
45°	2672	2579	2515
50°	2584	2495	2407
55°	2493	2399	2310
60°	2391	2283	2199
65°	2282	2168	2069
70°	2143	2028	1933
75°	1949	1868	1823
80°	1731	1678	1591
85°	1412	1346	1207

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2672 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	256.6	3.7
10°-20°	722.0	10.4
20°-30°	1061.1	15.3
30°-40°	1232.4	17.8
40°-50°	1230.8	17.7
50°-60°	1073.3	15.5
60°-70°	793.4	11.4
70°-80°	448.9	6.5
80°-90°	118.5	1.7
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°	2039.7	29.4
0°-40°	3272.1	47.2
0°-60°	5576.2	80.4
0°-90°	6936.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6936.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2726	2726	2726	2726	2726	
5°	2726	2716	2687	2708	2703	259
15°	2596	2580	2546	2556	2543	731
25°	2349	2328	2284	2289	2284	1081
35°	2027	2000	1958	1943	1930	1266
45°	1649	1631	1591	1563	1552	1273
55°	1248	1232	1201	1169	1156	1116
65°	842	826	800	776	763	832
75°	440	435	422	406	412	470
85°	107	105	102	94	92	126
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2726.4	2726.4	2726.4	2726.4	2726.4
2.5°	2742.3	2729.2	2700.3	2726.4	2721.4
5°	2726.4	2716.2	2687.3	2708.1	2703.1
7.5°	2708.1	2692.5	2663.6	2684.8	2679.5
10°	2679.5	2661.1	2629.6	2650.5	2642.7
12.5°	2639.9	2624.4	2593.0	2606.0	2600.7
15°	2595.5	2579.9	2545.6	2556.3	2543.1
17.5°	2540.3	2524.8	2490.6	2503.7	2490.6
20°	2480.0	2464.5	2427.7	2435.5	2425.2
22.5°	2419.9	2396.3	2362.1	2362.1	2356.8
25°	2349.0	2328.1	2283.7	2288.7	2283.7
27.5°	2270.3	2251.9	2218.0	2210.2	2197.1
30°	2191.9	2170.7	2131.5	2123.7	2113.1
32.5°	2107.8	2092.3	2050.2	2034.4	2023.8
35°	2026.6	2000.5	1958.5	1942.6	1929.5
37.5°	1934.8	1911.2	1869.2	1850.8	1837.7
40°	1840.5	1819.4	1777.4	1754.1	1743.4
42.5°	1748.7	1727.6	1685.9	1659.5	1643.8
45°	1649.1	1630.8	1591.3	1562.7	1552.1
47.5°	1552.1	1533.7	1491.7	1462.8	1447.2
50°	1449.7	1436.6	1399.9	1363.3	1350.1
52.5°	1350.1	1331.8	1297.9	1269.0	1250.5
55°	1248.0	1232.2	1200.8	1169.4	1156.3
57.5°	1145.7	1132.6	1098.4	1067.0	1056.5
60°	1043.3	1033.0	996.4	967.5	959.7
62.5°	943.7	925.4	899.3	873.2	862.6
65°	841.7	825.8	799.7	776.1	763.0
67.5°	736.8	723.5	700.1	681.8	671.2
70°	639.7	629.2	605.5	587.2	576.9
72.5°	540.1	529.6	516.5	498.2	490.4
75°	440.3	435.3	421.9	406.4	411.7
77.5°	351.4	340.7	335.4	327.6	319.9
80°	262.3	259.6	254.3	246.4	241.1
82.5°	178.3	178.3	175.8	165.3	165.3
85°	107.4	104.9	102.4	94.3	91.8
87.5°	47.2	42.0	36.7	28.9	26.1
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	15.24	16.85	15.60	17.16	17.48	14.80	16.41	15.16	16.72	17.04
	3H	16.99	18.44	17.37	18.77	19.13	16.50	17.95	16.88	18.28	18.64
	4H	17.64	19.01	18.03	19.35	19.73	17.14	18.51	17.54	18.86	19.23
	6H	18.11	19.37	18.52	19.74	20.13	17.60	18.87	18.02	19.24	19.63
	8H	18.25	19.46	18.67	19.85	20.25	17.75	18.96	18.17	19.35	19.75
	12H	18.34	19.50	18.77	19.88	20.31	17.83	18.99	18.26	19.37	19.80
4H	2H	15.80	17.17	16.20	17.52	17.89	15.45	16.82	15.85	17.16	17.54
	3H	17.78	18.92	18.19	19.32	19.72	17.37	18.52	17.78	18.91	19.31
	4H	18.55	19.59	18.98	20.00	20.44	18.13	19.16	18.56	19.58	20.01
	6H	19.15	20.05	19.60	20.49	20.95	18.72	19.62	19.17	20.06	20.52
	8H	19.34	20.18	19.80	20.63	21.09	18.90	19.75	19.36	20.19	20.65
	12H	19.47	20.23	19.95	20.71	21.18	19.02	19.78	19.50	20.25	20.72
8H	4H	18.83	19.67	19.29	20.11	20.58	18.45	19.30	18.91	19.74	20.21
	6H	19.54	20.24	20.03	20.73	21.21	19.16	19.86	19.65	20.35	20.83
	8H	19.80	20.43	20.31	20.94	21.42	19.41	20.04	19.92	20.55	21.03
	12H	20.00	20.56	20.51	21.05	21.61	19.59	20.14	20.09	20.63	21.20
12H	4H	18.85	19.61	19.33	20.09	20.56	18.49	19.25	18.97	19.72	20.19
	6H	19.59	20.22	20.09	20.72	21.21	19.22	19.85	19.73	20.36	20.84
	8H	19.90	20.46	20.41	20.95	21.51	19.52	20.08	20.03	20.57	21.13