

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: P930973

Luminaire Tested: DFN2DS-SQ3F0-070DS950-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930973
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-SQ3F0-070DS950-FLL
Description: 3 foot, Square Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

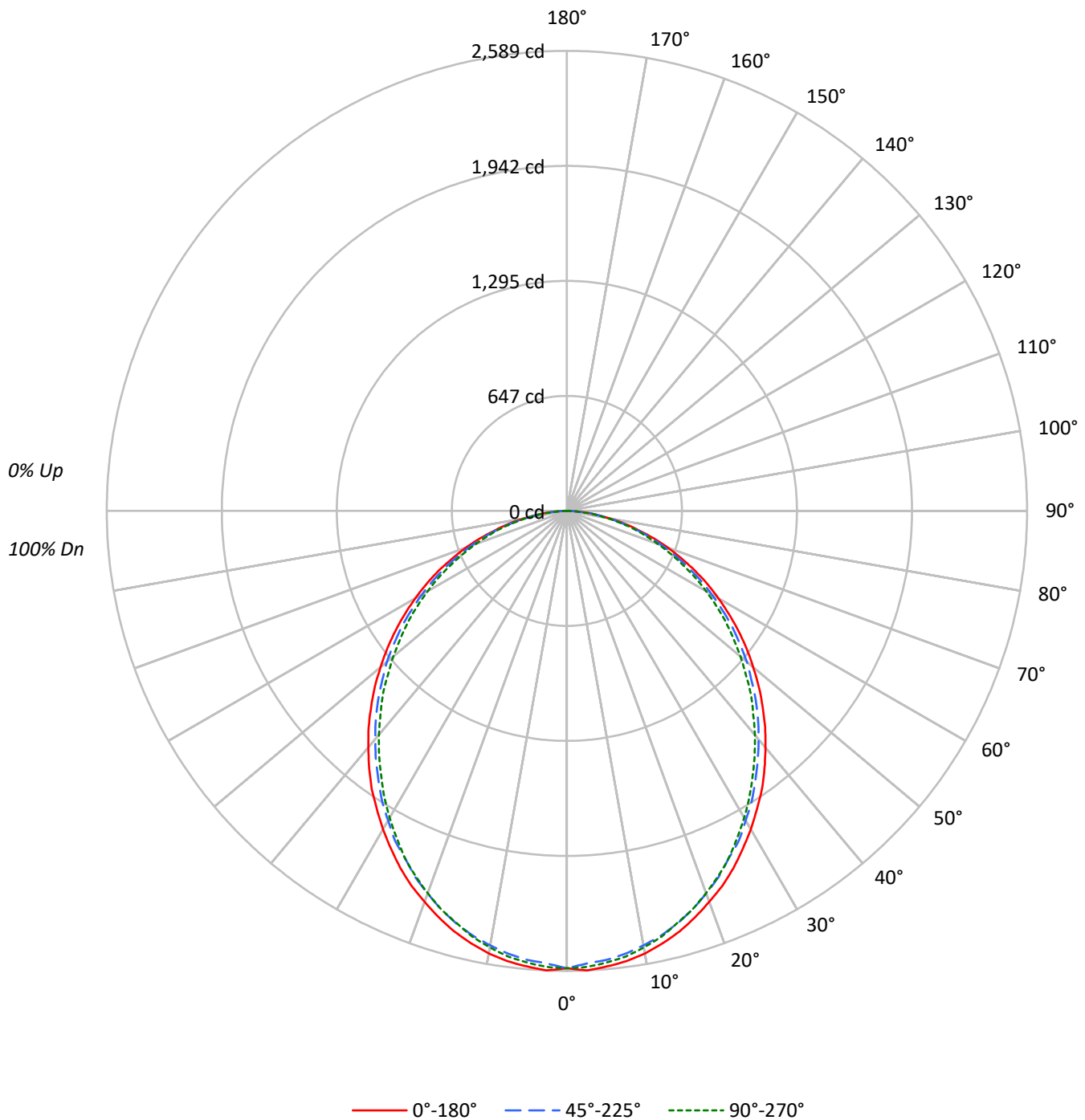
Lumens per Lamp: N/A
Luminaire Lumens: 6548.9 lumens
Efficiency: N/A
Efficacy: 91.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.06' x L: 3.06' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P930973

CATALOG NUMBER: DFN2DS-SQ3F0-070DS950-FLL

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°	2949	2949	2949
5°	2960	2918	2935
10°	2943	2888	2903
15°	2907	2851	2848
20°	2855	2795	2792
25°	2804	2726	2726
30°	2738	2662	2639
35°	2676	2586	2548
40°	2599	2510	2462
45°	2523	2434	2374
50°	2440	2356	2272
55°	2354	2265	2181
60°	2257	2156	2076
65°	2155	2047	1953
70°	2023	1915	1824
75°	1840	1763	1721
80°	1634	1584	1502
85°	1333	1271	1140

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
Vertical Angle: 45°
Luminance: 2523 cd/sqm

TEST NUMBER: P930973

CATALOG NUMBER: DFN2DS-SQ3F0-070DS950-FLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	242.3	3.7
10°-20°	681.6	10.4
20°-30°	1001.7	15.3
30°-40°	1163.4	17.8
40°-50°	1162.0	17.7
50°-60°	1013.2	15.5
60°-70°	749.0	11.4
70°-80°	423.8	6.5
80°-90°	111.9	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°	1925.6	29.4
0°-40°	3089.0	47.2
0°-60°	5264.2	80.4
0°-90°	6548.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6548.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2574	2574	2574	2574	2574	
5°	2574	2564	2537	2557	2552	244
15°	2450	2436	2403	2413	2401	690
25°	2218	2198	2156	2161	2156	1020
35°	1913	1889	1849	1834	1822	1195
45°	1557	1540	1502	1475	1465	1202
55°	1178	1163	1134	1104	1092	1053
65°	795	780	755	733	720	786
75°	416	411	398	384	389	444
85°	101	99	97	89	87	119
90°	0	0	0	0	0	

TEST NUMBER: P930973

CATALOG NUMBER: DFN2DS-SQ3F0-070DS950-FLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2573.9	2573.9	2573.9	2573.9	2573.9
2.5°	2588.9	2576.5	2549.2	2573.9	2569.2
5°	2573.9	2564.3	2536.9	2556.6	2551.9
7.5°	2556.6	2541.9	2514.6	2534.6	2529.6
10°	2529.6	2512.2	2482.5	2502.3	2494.9
12.5°	2492.2	2477.6	2447.9	2460.2	2455.2
15°	2450.3	2435.5	2403.2	2413.2	2400.9
17.5°	2398.2	2383.6	2351.3	2363.6	2351.3
20°	2341.2	2326.6	2291.9	2299.3	2289.5
22.5°	2284.5	2262.2	2229.9	2229.9	2224.9
25°	2217.6	2197.9	2155.9	2160.6	2155.9
27.5°	2143.3	2126.0	2093.9	2086.6	2074.2
30°	2069.3	2049.2	2012.3	2004.9	1994.9
32.5°	1989.9	1975.2	1935.5	1920.6	1910.6
35°	1913.2	1888.6	1848.9	1834.0	1821.6
37.5°	1826.6	1804.3	1764.6	1747.3	1734.9
40°	1737.6	1717.6	1677.9	1655.9	1645.9
42.5°	1650.9	1631.0	1591.6	1566.6	1551.9
45°	1556.9	1539.6	1502.3	1475.2	1465.2
47.5°	1465.2	1447.9	1408.2	1380.9	1366.3
50°	1368.6	1356.3	1321.6	1287.0	1274.6
52.5°	1274.6	1257.3	1225.3	1198.0	1180.6
55°	1178.2	1163.3	1133.6	1103.9	1091.6
57.5°	1081.6	1069.3	1036.9	1007.3	997.4
60°	985.0	975.2	940.7	913.3	906.0
62.5°	890.9	873.7	849.0	824.3	814.3
65°	794.7	779.6	755.0	732.7	720.3
67.5°	695.6	683.0	660.9	643.6	633.6
70°	603.9	594.0	571.6	554.3	544.6
72.5°	509.9	500.0	487.6	470.3	463.0
75°	415.7	411.0	398.3	383.7	388.7
77.5°	331.7	321.7	316.7	309.3	302.0
80°	247.6	245.0	240.0	232.7	227.7
82.5°	168.3	168.3	165.9	156.0	156.0
85°	101.4	99.0	96.7	89.0	86.7
87.5°	44.6	39.7	34.7	27.3	24.7
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	15.04	16.65	15.41	16.97	17.28	14.60	16.21	14.96	16.52	16.83
	3H	16.79	18.24	17.17	18.57	18.93	16.30	17.75	16.68	18.08	18.44
	4H	17.44	18.81	17.83	19.15	19.53	16.94	18.31	17.34	18.66	19.03
	6H	17.91	19.17	18.32	19.54	19.93	17.40	18.67	17.82	19.04	19.43
	8H	18.05	19.26	18.47	19.65	20.05	17.55	18.76	17.97	19.15	19.54
	12H	18.14	19.30	18.57	19.68	20.11	17.63	18.79	18.06	19.17	19.60
4H	2H	15.60	16.97	16.00	17.32	17.69	15.25	16.62	15.65	16.96	17.34
	3H	17.58	18.72	17.99	19.12	19.52	17.17	18.32	17.58	18.71	19.11
	4H	18.35	19.39	18.78	19.80	20.24	17.93	18.96	18.36	19.38	19.81
	6H	18.95	19.85	19.40	20.29	20.75	18.52	19.42	18.97	19.86	20.32
	8H	19.14	19.98	19.60	20.43	20.89	18.70	19.55	19.16	19.99	20.45
	12H	19.27	20.03	19.75	20.51	20.98	18.82	19.58	19.30	20.05	20.52
8H	4H	18.63	19.47	19.09	19.91	20.38	18.25	19.10	18.71	19.54	20.01
	6H	19.34	20.04	19.83	20.53	21.01	18.96	19.66	19.45	20.15	20.63
	8H	19.60	20.23	20.11	20.74	21.22	19.21	19.84	19.72	20.35	20.83
	12H	19.80	20.36	20.31	20.85	21.41	19.39	19.94	19.89	20.43	21.00
12H	4H	18.65	19.41	19.13	19.89	20.36	18.29	19.05	18.77	19.52	19.99
	6H	19.39	20.02	19.89	20.52	21.01	19.02	19.65	19.53	20.16	20.64
	8H	19.70	20.26	20.21	20.75	21.31	19.32	19.88	19.83	20.37	20.93