

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: P930881

Luminaire Tested: DFN2DS-SQ2F0-070DS940-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930881
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-SQ2F0-070DS940-FLL
Description: 2 foot, Square Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

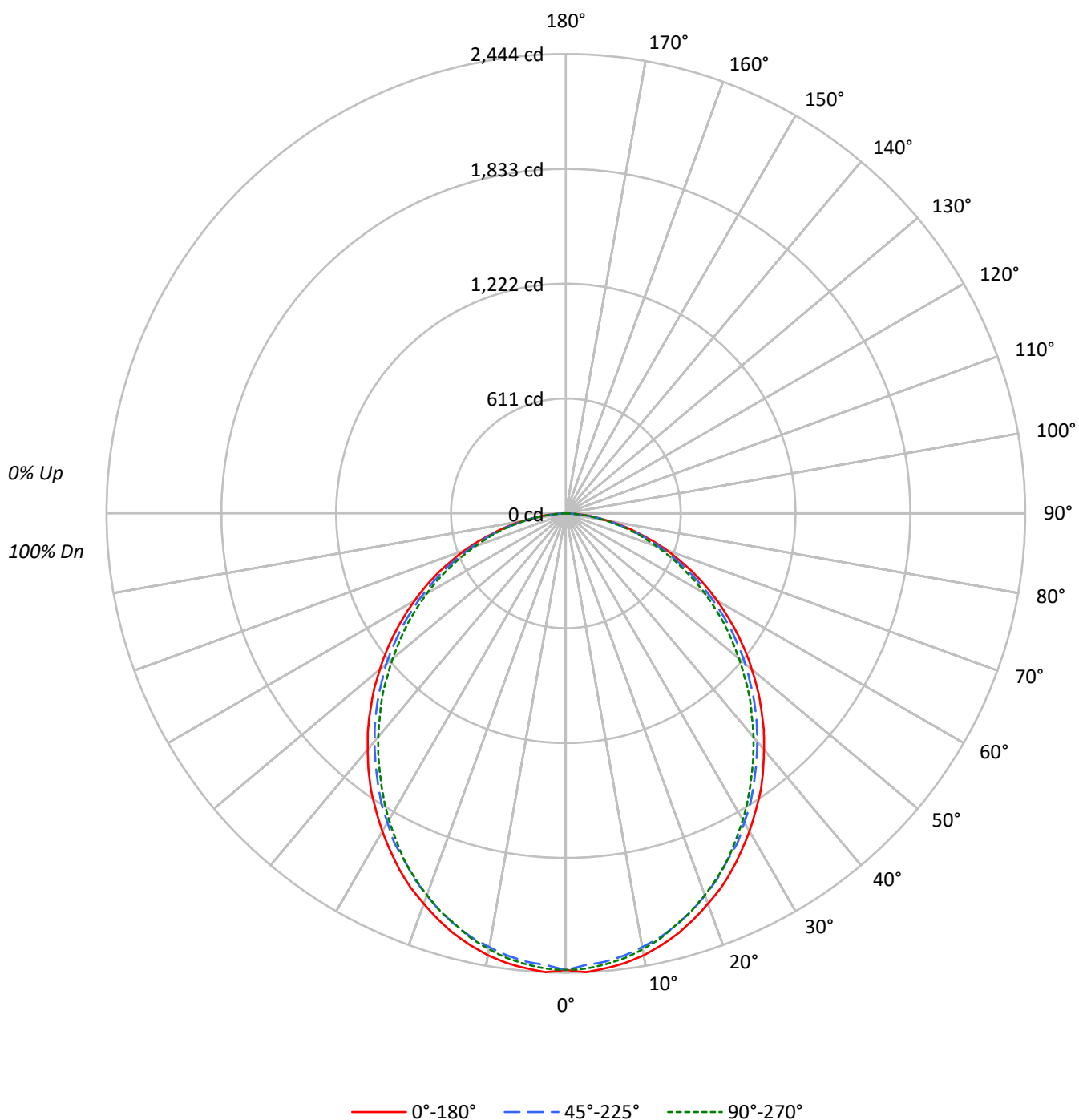
Lumens per Lamp: N/A
Luminaire Lumens: 6181.6 lumens
Efficiency: N/A
Efficacy: 86.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 2.21' x L: 2.21' x H: 0')
CIE Type: Direct

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	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°	5342	5342	5342
5°	5363	5286	5317
10°	5331	5232	5258
15°	5265	5164	5159
20°	5171	5062	5057
25°	5079	4937	4937
30°	4959	4823	4781
35°	4848	4685	4615
40°	4708	4546	4460
45°	4570	4410	4301
50°	4419	4268	4116
55°	4263	4102	3950
60°	4089	3905	3761
65°	3903	3708	3538
70°	3665	3469	3305
75°	3334	3194	3117
80°	2959	2869	2721
85°	2414	2303	2064

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 4570 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	228.7	3.7
10°-20°	643.4	10.4
20°-30°	945.5	15.3
30°-40°	1098.2	17.8
40°-50°	1096.8	17.7
50°-60°	956.4	15.5
60°-70°	707.0	11.4
70°-80°	400.0	6.5
80°-90°	105.6	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°	1817.6	29.4
0°-40°	2915.8	47.2
0°-60°	4969.0	80.4
0°-90°	6181.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6181.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2430	2430	2430	2430	2430	
5°	2430	2420	2395	2413	2409	231
15°	2313	2299	2268	2278	2266	651
25°	2093	2075	2035	2040	2035	963
35°	1806	1783	1745	1731	1719	1128
45°	1470	1453	1418	1392	1383	1134
55°	1112	1098	1070	1042	1030	994
65°	750	736	713	692	680	742
75°	392	388	376	362	367	419
85°	96	94	91	84	82	112
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2429.5	2429.5	2429.5	2429.5	2429.5
2.5°	2443.7	2432.0	2406.3	2429.5	2425.1
5°	2429.5	2420.4	2394.7	2413.2	2408.8
7.5°	2413.2	2399.3	2373.5	2392.4	2387.7
10°	2387.7	2371.3	2343.3	2361.9	2355.0
12.5°	2352.5	2338.6	2310.6	2322.2	2317.5
15°	2312.9	2299.0	2268.4	2277.9	2266.2
17.5°	2263.7	2249.9	2219.4	2231.1	2219.4
20°	2209.9	2196.1	2163.4	2170.3	2161.1
22.5°	2156.4	2135.4	2104.9	2104.9	2100.1
25°	2093.3	2074.6	2035.0	2039.5	2035.0
27.5°	2023.1	2006.7	1976.5	1969.5	1957.9
30°	1953.2	1934.3	1899.4	1892.5	1883.0
32.5°	1878.3	1864.5	1827.0	1812.9	1803.4
35°	1805.9	1782.7	1745.2	1731.1	1719.4
37.5°	1724.1	1703.1	1665.6	1649.3	1637.6
40°	1640.1	1621.3	1583.8	1563.1	1553.6
42.5°	1558.3	1539.5	1502.3	1478.8	1464.8
45°	1469.6	1453.2	1418.0	1392.5	1383.0
47.5°	1383.0	1366.7	1329.3	1303.5	1289.7
50°	1291.9	1280.2	1247.5	1214.8	1203.1
52.5°	1203.1	1186.8	1156.6	1130.8	1114.4
55°	1112.1	1098.1	1070.0	1042.0	1030.3
57.5°	1021.0	1009.3	978.8	950.8	941.4
60°	929.7	920.5	887.9	862.1	855.2
62.5°	841.0	824.7	801.4	778.1	768.6
65°	750.1	735.9	712.6	691.6	679.9
67.5°	656.6	644.7	623.9	607.5	598.1
70°	570.1	560.7	539.6	523.2	514.1
72.5°	481.3	472.0	460.3	443.9	437.0
75°	392.4	387.9	376.0	362.2	366.9
77.5°	313.1	303.6	298.9	292.0	285.1
80°	233.7	231.3	226.6	219.6	214.9
82.5°	158.9	158.9	156.6	147.3	147.3
85°	95.7	93.5	91.3	84.0	81.8
87.5°	42.1	37.5	32.7	25.8	23.3
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	17.10	18.72	17.47	19.03	19.34	16.66	18.27	17.02	18.58	18.90
	3H	18.85	20.31	19.23	20.64	21.00	18.36	19.82	18.74	20.14	20.50
	4H	19.50	20.87	19.90	21.22	21.59	19.01	20.38	19.40	20.72	21.10
	6H	19.97	21.24	20.38	21.60	21.99	19.47	20.74	19.88	21.10	21.49
	8H	20.11	21.32	20.54	21.71	22.11	19.61	20.82	20.04	21.21	21.61
	12H	20.20	21.36	20.63	21.75	22.17	19.69	20.85	20.12	21.23	21.66
4H	2H	17.66	19.03	18.06	19.38	19.76	17.31	18.68	17.71	19.03	19.40
	3H	19.64	20.79	20.05	21.18	21.58	19.23	20.38	19.64	20.78	21.18
	4H	20.42	21.45	20.85	21.87	22.30	19.99	21.03	20.42	21.44	21.88
	6H	21.01	21.92	21.47	22.36	22.81	20.58	21.49	21.04	21.93	22.38
	8H	21.20	22.05	21.66	22.49	22.96	20.76	21.61	21.23	22.05	22.52
	12H	21.33	22.09	21.81	22.57	23.04	20.88	21.64	21.36	22.12	22.59
8H	4H	20.69	21.54	21.15	21.98	22.44	20.32	21.16	20.78	21.60	22.07
	6H	21.40	22.11	21.90	22.60	23.07	21.02	21.73	21.52	22.21	22.69
	8H	21.66	22.29	22.17	22.80	23.29	21.27	21.90	21.78	22.41	22.90
	12H	21.86	22.42	22.37	22.91	23.47	21.45	22.01	21.96	22.50	23.06
12H	4H	20.72	21.48	21.20	21.95	22.42	20.35	21.11	20.83	21.59	22.06
	6H	21.45	22.08	21.96	22.59	23.07	21.08	21.71	21.59	22.22	22.71
	8H	21.76	22.32	22.27	22.81	23.37	21.39	21.94	21.89	22.43	23.00