

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: P930869

Luminaire Tested: DFN2DS-SQ2F0-070DS835-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930869
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-SQ2F0-070DS835-FLL
Description: 2 foot, Square Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

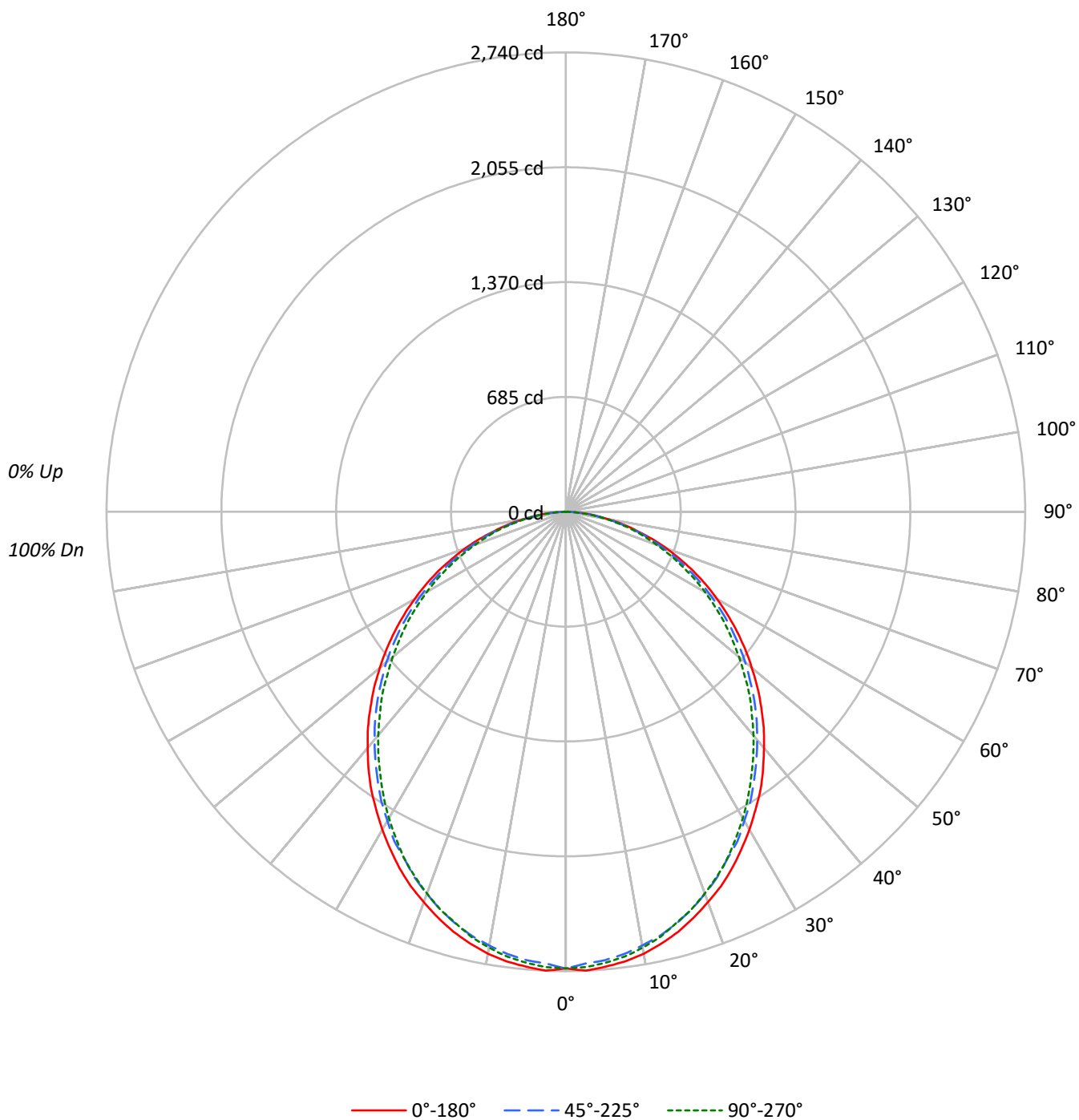
Lumens per Lamp: N/A
Luminaire Lumens: 6930.0 lumens
Efficiency: N/A
Efficacy: 97.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 2.21' x L: 2.21' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P930869

CATALOG NUMBER: DFN2DS-SQ2F0-070DS835-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°	5989	5989	5989
5°	6012	5926	5961
10°	5977	5866	5895
15°	5903	5789	5784
20°	5797	5675	5669
25°	5694	5535	5535
30°	5560	5407	5360
35°	5435	5252	5174
40°	5278	5097	4999
45°	5123	4943	4822
50°	4954	4784	4614
55°	4780	4599	4428
60°	4584	4378	4216
65°	4375	4157	3966
70°	4109	3889	3705
75°	3737	3581	3494
80°	3318	3216	3050
85°	2707	2581	2314

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
Vertical Angle: 45°
Luminance: 5123 cd/sqm

TEST NUMBER: P930869

CATALOG NUMBER: DFN2DS-SQ2F0-070DS835-FLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	256.4	3.7
10°-20°	721.3	10.4
20°-30°	1060.0	15.3
30°-40°	1231.1	17.8
40°-50°	1229.6	17.7
50°-60°	1072.2	15.5
60°-70°	792.6	11.4
70°-80°	448.4	6.5
80°-90°	118.4	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°	2037.7	29.4
0°-40°	3268.8	47.2
0°-60°	5570.6	80.4
0°-90°	6930.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6930.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2724	2724	2724	2724	2724	
5°	2724	2714	2685	2705	2700	259
15°	2593	2577	2543	2554	2541	730
25°	2347	2326	2281	2286	2281	1080
35°	2025	1998	1956	1941	1928	1264
45°	1648	1629	1590	1561	1550	1271
55°	1247	1231	1200	1168	1155	1115
65°	841	825	799	775	762	831
75°	440	435	422	406	411	470
85°	107	105	102	94	92	126
90°	0	0	0	0	0	

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CATALOG NUMBER: DFN2DS-SQ2F0-070DS835-FLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2723.7	2723.7	2723.7	2723.7	2723.7
2.5°	2739.6	2726.5	2697.6	2723.7	2718.7
5°	2723.7	2713.5	2684.6	2705.4	2700.4
7.5°	2705.4	2689.8	2660.9	2682.1	2676.8
10°	2676.8	2658.4	2627.0	2647.9	2640.1
12.5°	2637.3	2621.8	2590.4	2603.4	2598.1
15°	2592.9	2577.3	2543.1	2553.7	2540.6
17.5°	2537.8	2522.3	2488.1	2501.2	2488.1
20°	2477.5	2462.0	2425.3	2433.1	2422.8
22.5°	2417.5	2393.9	2359.7	2359.7	2354.4
25°	2346.7	2325.8	2281.4	2286.4	2281.4
27.5°	2268.0	2249.7	2215.8	2208.0	2194.9
30°	2189.7	2168.5	2129.4	2121.6	2111.0
32.5°	2105.7	2090.2	2048.2	2032.4	2021.8
35°	2024.6	1998.5	1956.5	1940.7	1927.6
37.5°	1932.9	1909.3	1867.3	1849.0	1835.9
40°	1838.7	1817.6	1775.6	1752.3	1741.7
42.5°	1747.0	1725.9	1684.2	1657.8	1642.2
45°	1647.5	1629.2	1589.7	1561.1	1550.5
47.5°	1550.5	1532.2	1490.2	1461.3	1445.8
50°	1448.3	1435.2	1398.5	1361.9	1348.8
52.5°	1348.8	1330.5	1296.6	1267.7	1249.3
55°	1246.8	1231.0	1199.6	1168.2	1155.1
57.5°	1144.6	1131.5	1097.3	1065.9	1055.4
60°	1042.3	1032.0	995.4	966.5	958.7
62.5°	942.8	924.5	898.4	872.3	861.7
65°	840.9	825.0	798.9	775.3	762.2
67.5°	736.1	722.8	699.4	681.1	670.5
70°	639.1	628.6	604.9	586.6	576.3
72.5°	539.6	529.1	516.0	497.7	489.9
75°	439.9	434.9	421.5	406.0	411.3
77.5°	351.0	340.4	335.1	327.3	319.6
80°	262.0	259.3	254.0	246.2	240.9
82.5°	178.1	178.1	175.6	165.1	165.1
85°	107.3	104.8	102.3	94.2	91.7
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	17.50	19.11	17.87	19.43	19.74	17.06	18.67	17.42	18.98	19.30
	3H	19.25	20.71	19.63	21.03	21.39	18.76	20.21	19.14	20.54	20.90
	4H	19.90	21.27	20.30	21.61	21.99	19.40	20.77	19.80	21.12	21.50
	6H	20.37	21.64	20.78	22.00	22.39	19.87	21.13	20.28	21.50	21.89
	8H	20.51	21.72	20.93	22.11	22.51	20.01	21.22	20.43	21.61	22.01
	12H	20.60	21.76	21.03	22.14	22.57	20.09	21.25	20.52	21.63	22.06
4H	2H	18.06	19.43	18.46	19.78	20.15	17.71	19.08	18.11	19.43	19.80
	3H	20.04	21.18	20.45	21.58	21.98	19.63	20.78	20.04	21.17	21.57
	4H	20.81	21.85	21.24	22.26	22.70	20.39	21.43	20.82	21.84	22.28
	6H	21.41	22.31	21.86	22.76	23.21	20.98	21.88	21.43	22.32	22.78
	8H	21.60	22.45	22.06	22.89	23.35	21.16	22.01	21.62	22.45	22.92
	12H	21.73	22.49	22.21	22.97	23.44	21.28	22.04	21.76	22.52	22.98
8H	4H	21.09	21.93	21.55	22.38	22.84	20.71	21.56	21.17	22.00	22.47
	6H	21.80	22.50	22.30	22.99	23.47	21.42	22.12	21.91	22.61	23.09
	8H	22.06	22.69	22.57	23.20	23.68	21.67	22.30	22.18	22.81	23.29
	12H	22.26	22.82	22.77	23.31	23.87	21.85	22.41	22.35	22.90	23.46
12H	4H	21.11	21.87	21.59	22.35	22.82	20.75	21.51	21.23	21.98	22.45
	6H	21.85	22.48	22.36	22.99	23.47	21.48	22.11	21.99	22.62	23.10
	8H	22.16	22.72	22.67	23.21	23.77	21.78	22.34	22.29	22.83	23.39