

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: P930870

Luminaire Tested: DFN2DS-SQ2F0-070DS835-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930870
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-SQ2F0-070DS835-RLL
Description: 2 foot, Square Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

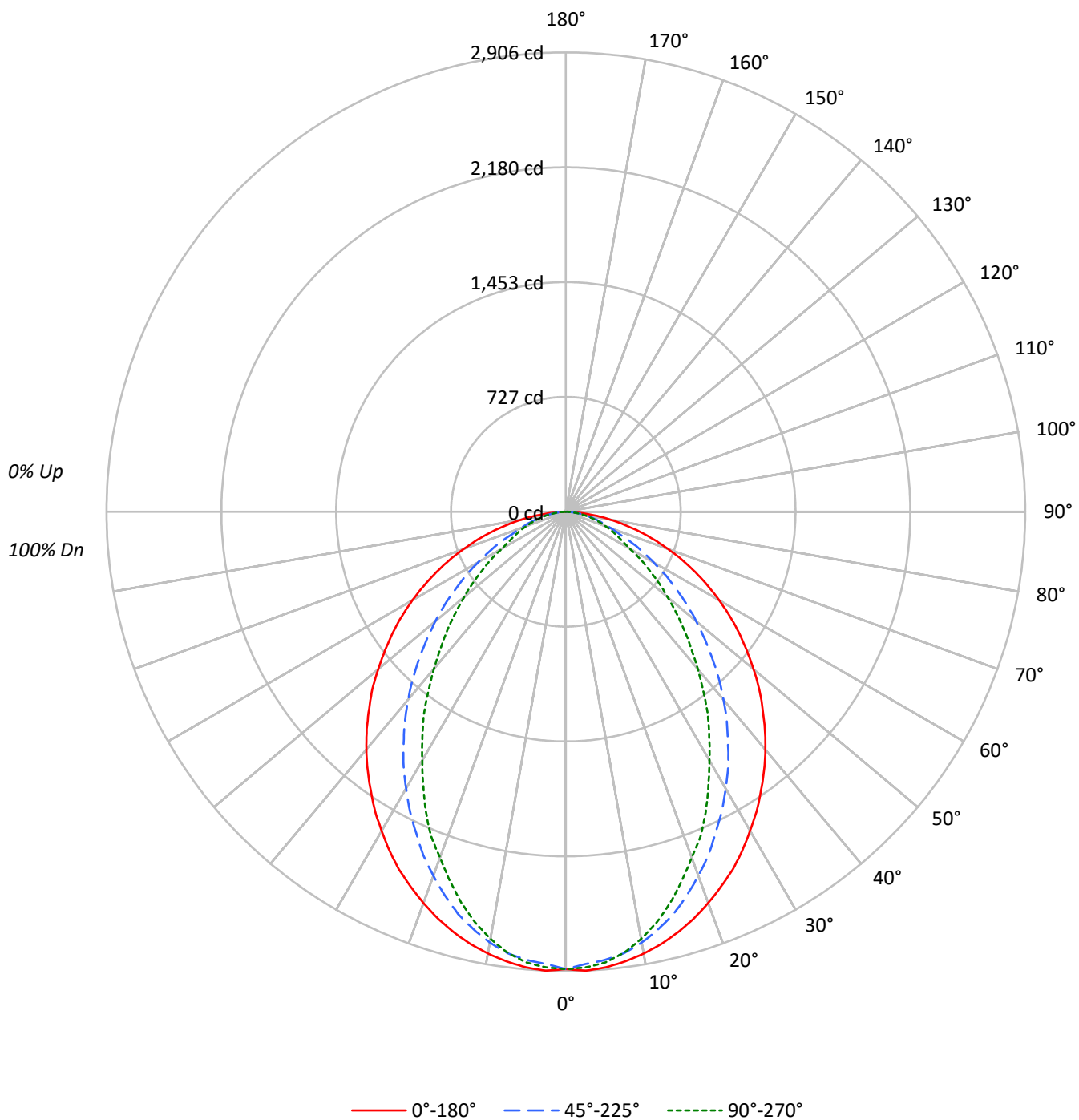
Lumens per Lamp: N/A
Luminaire Lumens: 5950.0 lumens
Efficiency: N/A
Efficacy: 83.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 2.21' x L: 2.21' x H: 0')
CIE Type: Direct

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: P930870

CATALOG NUMBER: DFN2DS-SQ2F0-070DS835-RLL

Luminous Intensity Polar Plot



TEST NUMBER: P930870

CATALOG NUMBER: DFN2DS-SQ2F0-070DS835-RLL

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°	6362	6362	6362
5°	6386	6282	6317
10°	6337	6179	6127
15°	6264	5996	5823
20°	6163	5734	5446
25°	6060	5437	5082
30°	5917	5132	4613
35°	5777	4801	4203
40°	5636	4456	3728
45°	5472	4071	3297
50°	5302	3681	2876
55°	5129	3262	2470
60°	4928	2821	2050
65°	4700	2370	1866
70°	4427	1952	1716
75°	4092	1779	1602
80°	3613	1590	1460
85°	2838	1254	1254

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 5472 cd/sqm

TEST NUMBER: P930870

CATALOG NUMBER: DFN2DS-SQ2F0-070DS835-RLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	271.1	4.6
10°-20°	744.3	12.5
20°-30°	1045.0	17.6
30°-40°	1139.2	19.1
40°-50°	1047.0	17.6
50°-60°	822.3	13.8
60°-70°	535.2	9.0
70°-80°	275.5	4.6
80°-90°	70.3	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°	2060.5	34.6
0°-40°	3199.7	53.8
0°-60°	5068.9	85.2
0°-90°	5950.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5950.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2893	2893	2893	2893	2893	
5°	2893	2880	2846	2870	2862	274
15°	2752	2723	2634	2584	2558	775
25°	2498	2414	2241	2134	2094	1149
35°	2152	2019	1788	1623	1566	1347
45°	1760	1584	1309	1123	1060	1359
55°	1338	1134	851	694	644	1195
65°	903	691	456	367	359	896
75°	482	298	209	191	189	509
85°	112	58	50	50	50	135
90°	0	0	0	0	0	

TEST NUMBER: P930870

CATALOG NUMBER: DFN2DS-SQ2F0-070DS835-RLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2893.1	2893.1	2893.1	2893.1	2893.1
2.5°	2906.1	2893.1	2864.2	2890.6	2885.3
5°	2893.1	2880.0	2845.9	2869.5	2861.7
7.5°	2869.5	2853.9	2817.3	2827.5	2814.5
10°	2838.1	2819.8	2767.5	2759.5	2743.9
12.5°	2798.9	2775.3	2704.5	2688.9	2660.0
15°	2751.7	2722.8	2633.9	2584.2	2558.1
17.5°	2696.7	2654.8	2544.8	2487.2	2445.3
20°	2633.9	2581.4	2450.6	2385.3	2327.5
22.5°	2565.9	2505.6	2353.6	2264.7	2225.6
25°	2497.8	2413.9	2241.1	2133.9	2094.5
27.5°	2416.7	2327.5	2136.4	2013.4	1953.1
30°	2330.3	2230.6	2021.1	1887.8	1817.0
32.5°	2246.4	2125.9	1911.4	1754.2	1688.6
35°	2152.2	2018.6	1788.4	1623.4	1565.6
37.5°	2060.6	1916.4	1673.1	1492.2	1427.0
40°	1963.6	1806.7	1552.5	1366.7	1298.6
42.5°	1864.2	1696.7	1432.2	1238.3	1173.1
45°	1759.5	1583.9	1309.2	1123.1	1060.3
47.5°	1660.0	1474.2	1191.4	1005.3	947.8
50°	1550.0	1364.2	1076.1	895.3	840.6
52.5°	1442.5	1246.1	966.1	793.3	743.6
55°	1337.8	1133.6	850.8	693.9	644.2
57.5°	1230.6	1021.1	748.9	602.2	560.3
60°	1120.6	911.1	641.4	508.1	466.1
62.5°	1013.3	803.9	549.7	424.2	403.3
65°	903.3	691.1	455.6	366.7	358.6
67.5°	798.6	586.4	366.7	321.9	314.2
70°	688.6	484.4	303.6	277.5	266.9
72.5°	583.9	390.0	253.9	233.1	227.8
75°	481.7	298.3	209.4	191.1	188.6
77.5°	379.7	211.9	165.0	154.4	149.2
80°	285.3	151.9	125.6	115.3	115.3
82.5°	198.9	102.2	86.4	81.1	81.1
85°	112.5	57.5	49.7	49.7	49.7
87.5°	41.9	20.8	20.8	18.3	18.3
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P930870

CATALOG NUMBER: DFN2DS-SQ2F0-070DS835-RLL

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	17.66	19.18	18.03	19.50	19.81	13.62	15.15	13.99	15.46	15.77
	3H	19.43	20.79	19.81	21.12	21.48	14.89	16.25	15.27	16.58	16.94
	4H	20.09	21.38	20.49	21.72	22.10	15.39	16.67	15.79	17.02	17.40
	6H	20.58	21.77	21.00	22.13	22.53	15.77	16.95	16.18	17.32	17.71
	8H	20.75	21.88	21.18	22.27	22.67	15.90	17.02	16.32	17.41	17.81
	12H	20.85	21.93	21.28	22.31	22.74	15.98	17.06	16.41	17.44	17.87
4H	2H	17.77	19.05	18.17	19.40	19.77	14.32	15.60	14.72	15.95	16.33
	3H	19.70	20.76	20.11	21.16	21.56	15.76	16.83	16.17	17.22	17.63
	4H	20.45	21.41	20.88	21.82	22.26	16.36	17.32	16.79	17.73	18.17
	6H	21.04	21.87	21.50	22.32	22.78	16.85	17.68	17.31	18.12	18.58
	8H	21.26	22.03	21.72	22.48	22.94	17.01	17.79	17.48	18.23	18.70
	12H	21.41	22.10	21.89	22.58	23.05	17.13	17.82	17.61	18.30	18.77
8H	4H	20.47	21.25	20.94	21.70	22.16	16.72	17.49	17.18	17.94	18.40
	6H	21.11	21.75	21.61	22.25	22.72	17.30	17.94	17.80	18.44	18.91
	8H	21.36	21.94	21.88	22.45	22.94	17.52	18.10	18.04	18.61	19.10
	12H	21.57	22.08	22.08	22.57	23.13	17.70	18.21	18.21	18.70	19.27
12H	4H	20.46	21.15	20.94	21.63	22.10	16.76	17.45	17.24	17.93	18.40
	6H	21.09	21.67	21.61	22.18	22.67	17.37	17.94	17.88	18.45	18.94
	8H	21.38	21.89	21.89	22.38	22.94	17.64	18.15	18.15	18.64	19.21