

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: P930816

Luminaire Tested: DFN2DS-SQ2F0-040DS835-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930816
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-SQ2F0-040DS835-RLL
Description: 2 foot, Square Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

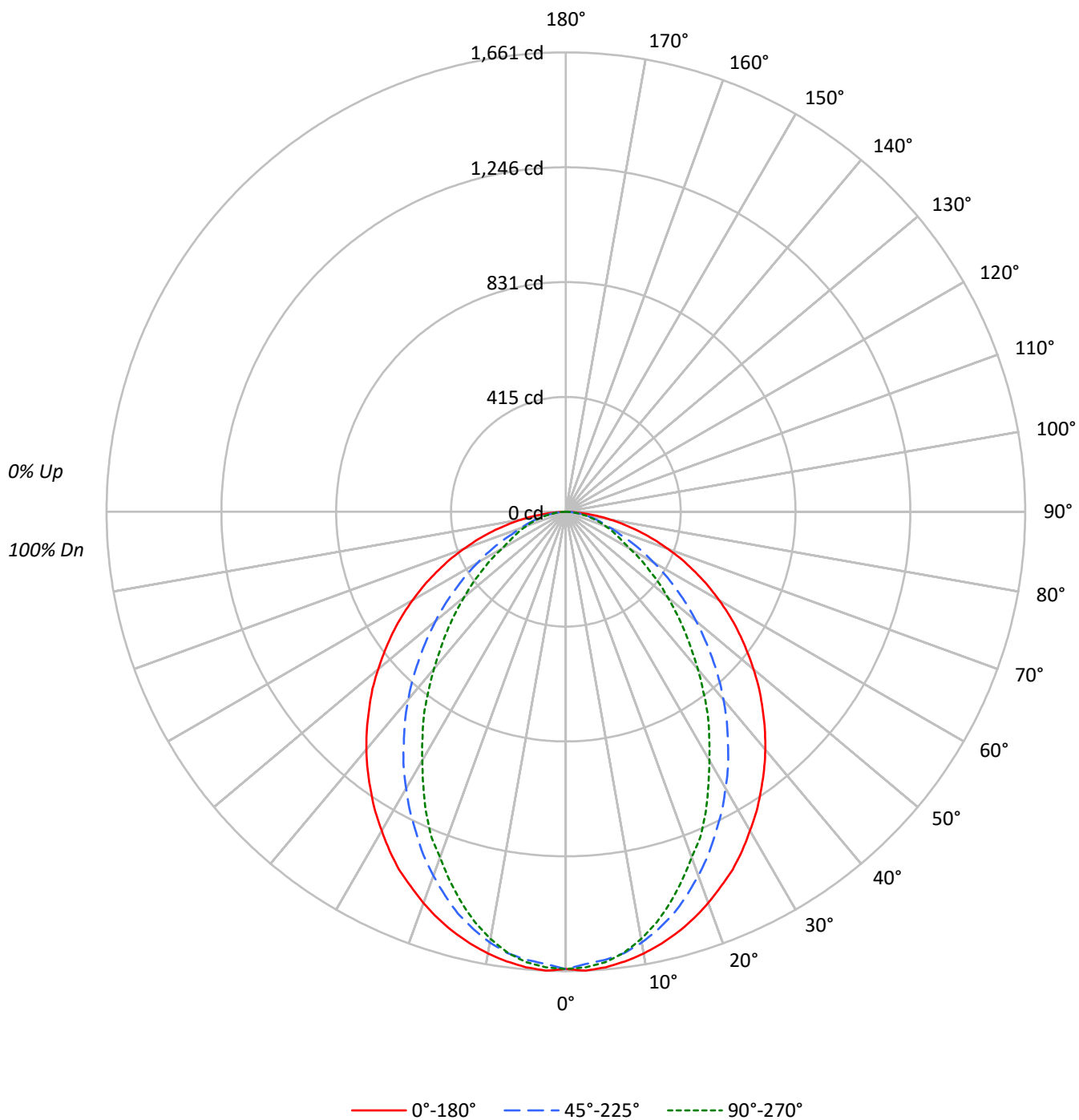
Lumens per Lamp: N/A
Luminaire Lumens: 3400.0 lumens
Efficiency: N/A
Efficacy: 90.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 2.21' x L: 2.21' x H: 0')
CIE Type: Direct

Input Watts (W): 37.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9952
Total Harmonic Distortion (THDi): 0.069
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P930816

CATALOG NUMBER: DFN2DS-SQ2F0-040DS835-RLL

Luminous Intensity Polar Plot



TEST NUMBER: P930816

CATALOG NUMBER: DFN2DS-SQ2F0-040DS835-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°	3635	3635	3635
5°	3649	3589	3610
10°	3621	3531	3501
15°	3580	3426	3328
20°	3522	3277	3112
25°	3463	3107	2904
30°	3381	2932	2636
35°	3301	2743	2401
40°	3221	2547	2130
45°	3126	2326	1884
50°	3030	2103	1643
55°	2931	1864	1411
60°	2816	1612	1172
65°	2686	1354	1066
70°	2530	1115	980
75°	2338	1017	916
80°	2064	908	834
85°	1622	717	717

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
Vertical Angle: 45°
Luminance: 3126 cd/sqm

TEST NUMBER: P930816

CATALOG NUMBER: DFN2DS-SQ2F0-040DS835-RLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	154.9	4.6
10°-20°	425.3	12.5
20°-30°	597.2	17.6
30°-40°	650.9	19.1
40°-50°	598.3	17.6
50°-60°	469.9	13.8
60°-70°	305.8	9.0
70°-80°	157.4	4.6
80°-90°	40.2	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°	1177.4	34.6
0°-40°	1828.4	53.8
0°-60°	2896.5	85.2
0°-90°	3400.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3400.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1653	1653	1653	1653	1653	
5°	1653	1646	1626	1640	1635	157
15°	1572	1556	1505	1477	1462	443
25°	1427	1379	1281	1219	1197	656
35°	1230	1154	1022	928	895	770
45°	1005	905	748	642	606	776
55°	764	648	486	396	368	683
65°	516	395	260	210	205	512
75°	275	170	120	109	108	291
85°	64	33	28	28	28	77
90°	0	0	0	0	0	



TEST NUMBER: P930816

CATALOG NUMBER: DFN2DS-SQ2F0-040DS835-RLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1653.2	1653.2	1653.2	1653.2	1653.2
2.5°	1660.7	1653.2	1636.7	1651.8	1648.7
5°	1653.2	1645.7	1626.2	1639.7	1635.3
7.5°	1639.7	1630.8	1609.9	1615.7	1608.3
10°	1621.8	1611.3	1581.4	1576.8	1568.0
12.5°	1599.4	1585.9	1545.4	1536.5	1520.0
15°	1572.4	1555.9	1505.1	1476.7	1461.8
17.5°	1541.0	1517.0	1454.1	1421.3	1397.3
20°	1505.1	1475.1	1400.3	1363.0	1330.0
22.5°	1466.2	1431.8	1344.9	1294.1	1271.8
25°	1427.3	1379.4	1280.6	1219.4	1196.8
27.5°	1381.0	1330.0	1220.8	1150.5	1116.0
30°	1331.6	1274.6	1154.9	1078.7	1038.3
32.5°	1283.7	1214.8	1092.2	1002.4	964.9
35°	1229.9	1153.5	1021.9	927.6	894.6
37.5°	1177.5	1095.1	956.0	852.7	815.4
40°	1122.1	1032.4	887.2	781.0	742.1
42.5°	1065.2	969.5	818.4	707.6	670.3
45°	1005.4	905.1	748.1	641.8	605.9
47.5°	948.6	842.4	680.8	574.5	541.6
50°	885.7	779.5	614.9	511.6	480.3
52.5°	824.3	712.1	552.1	453.3	424.9
55°	764.5	647.8	486.2	396.5	368.1
57.5°	703.2	583.5	427.9	344.1	320.2
60°	640.3	520.6	366.5	290.3	266.4
62.5°	579.1	459.4	314.1	242.4	230.5
65°	516.2	394.9	260.3	209.5	204.9
67.5°	456.4	335.1	209.5	184.0	179.5
70°	393.5	276.8	173.5	158.6	152.5
72.5°	333.7	222.9	145.1	133.2	130.2
75°	275.2	170.5	119.7	109.2	107.8
77.5°	217.0	121.1	94.3	88.3	85.2
80°	163.0	86.8	71.7	65.9	65.9
82.5°	113.7	58.4	49.4	46.3	46.3
85°	64.3	32.9	28.4	28.4	28.4
87.5°	24.0	11.9	11.9	10.5	10.5
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P930816

CATALOG NUMBER: DFN2DS-SQ2F0-040DS835-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	15.72	17.24	16.08	17.55	17.87	11.68	13.20	12.04	13.51	13.83
	3H	17.48	18.85	17.86	19.18	19.54	12.94	14.31	13.32	14.64	15.00
	4H	18.15	19.43	18.55	19.78	20.16	13.45	14.73	13.85	15.08	15.45
	6H	18.64	19.82	19.05	20.19	20.58	13.83	15.01	14.24	15.38	15.77
	8H	18.80	19.93	19.23	20.32	20.72	13.95	15.08	14.38	15.47	15.87
	12H	18.91	19.99	19.34	20.37	20.80	14.03	15.11	14.46	15.49	15.92
4H	2H	15.82	17.10	16.22	17.45	17.83	12.37	13.66	12.77	14.00	14.38
	3H	17.76	18.82	18.17	19.22	19.62	13.82	14.88	14.23	15.28	15.68
	4H	18.51	19.46	18.94	19.88	20.32	14.42	15.37	14.85	15.79	16.23
	6H	19.10	19.93	19.55	20.37	20.83	14.91	15.74	15.36	16.18	16.64
	8H	19.31	20.09	19.78	20.53	21.00	15.07	15.84	15.53	16.29	16.76
	12H	19.47	20.16	19.95	20.64	21.11	15.18	15.88	15.67	16.36	16.83
8H	4H	18.53	19.31	18.99	19.75	20.22	14.77	15.55	15.23	15.99	16.46
	6H	19.17	19.81	19.66	20.30	20.78	15.36	16.00	15.85	16.49	16.97
	8H	19.42	19.99	19.93	20.50	20.99	15.58	16.16	16.09	16.67	17.15
	12H	19.62	20.13	20.13	20.62	21.19	15.76	16.27	16.27	16.76	17.32
12H	4H	18.51	19.21	19.00	19.69	20.16	14.81	15.51	15.30	15.99	16.46
	6H	19.15	19.73	19.66	20.24	20.72	15.42	16.00	15.94	16.51	17.00
	8H	19.43	19.94	19.94	20.43	21.00	15.69	16.20	16.20	16.70	17.26