

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: P930802

Luminaire Tested: DFN2DS-SQ2F0-030DS850-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930802
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-SQ2F0-030DS850-RLL
Description: 2 foot, Square Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

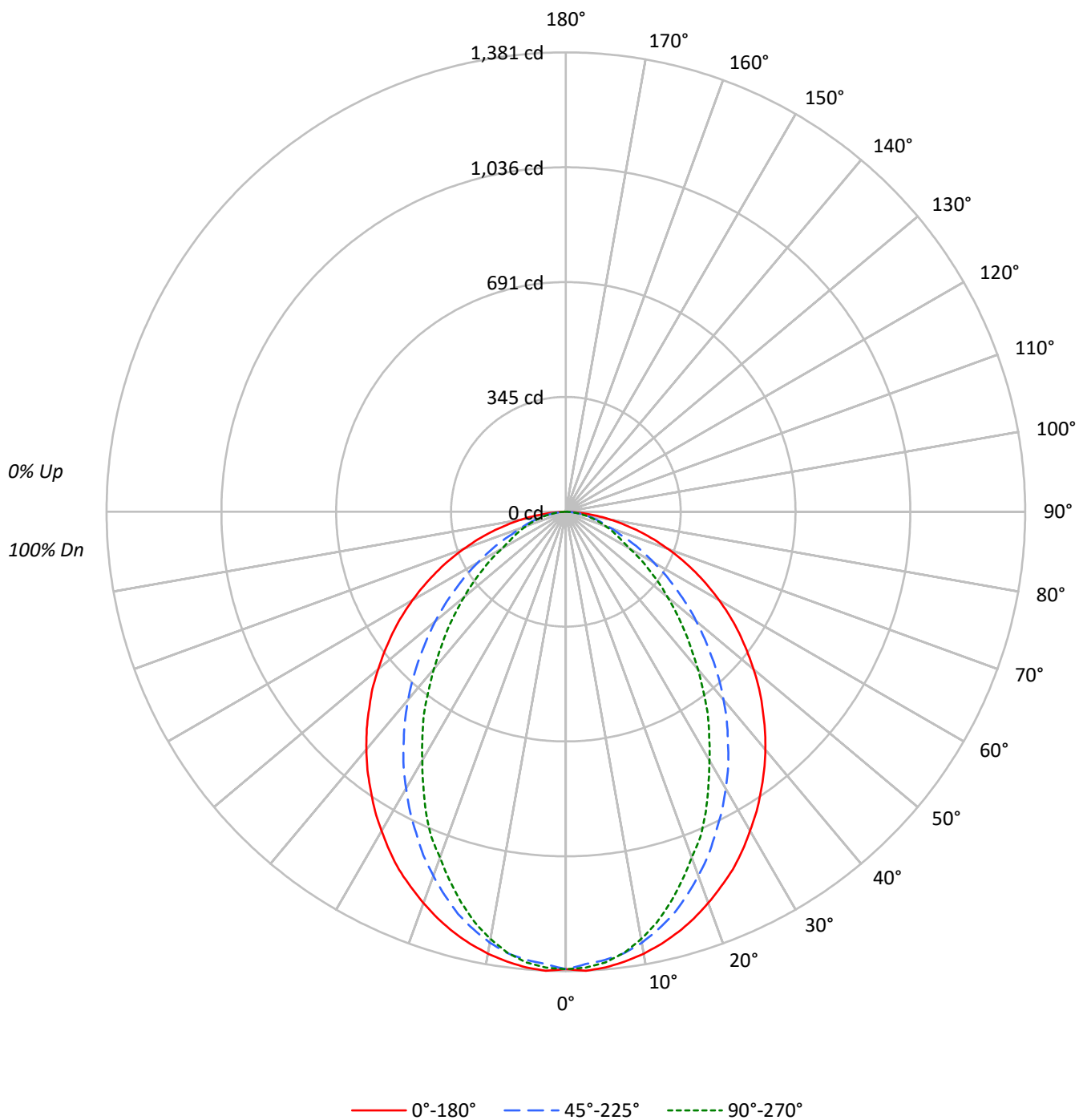
Lumens per Lamp: N/A
Luminaire Lumens: 2827.9 lumens
Efficiency: N/A
Efficacy: 105.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 2.21' x L: 2.21' x H: 0')
CIE Type: Direct

Input Watts (W): 26.7
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: P930802

CATALOG NUMBER: DFN2DS-SQ2F0-030DS850-RLL

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	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°	3023	3023	3023
5°	3035	2986	3002
10°	3012	2937	2912
15°	2977	2850	2768
20°	2929	2725	2589
25°	2880	2584	2415
30°	2812	2439	2193
35°	2746	2281	1997
40°	2679	2118	1772
45°	2601	1935	1567
50°	2520	1750	1367
55°	2437	1550	1174
60°	2342	1341	975
65°	2234	1126	887
70°	2104	928	816
75°	1945	846	761
80°	1717	756	694
85°	1350	595	595

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2601 cd/sqm

TEST NUMBER: P930802

CATALOG NUMBER: DFN2DS-SQ2F0-030DS850-RLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	128.9	4.6
10°-20°	353.8	12.5
20°-30°	496.7	17.6
30°-40°	541.4	19.1
40°-50°	497.6	17.6
50°-60°	390.8	13.8
60°-70°	254.4	9.0
70°-80°	130.9	4.6
80°-90°	33.4	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°	979.3	34.6
0°-40°	1520.7	53.8
0°-60°	2409.2	85.2
0°-90°	2827.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2827.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1375	1375	1375	1375	1375	
5°	1375	1369	1353	1364	1360	130
15°	1308	1294	1252	1228	1216	369
25°	1187	1147	1065	1014	995	546
35°	1023	959	850	772	744	640
45°	836	753	622	534	504	646
55°	636	539	404	330	306	568
65°	429	328	216	174	170	426
75°	229	142	100	91	90	242
85°	54	27	24	24	24	64
90°	0	0	0	0	0	

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CATALOG NUMBER: DFN2DS-SQ2F0-030DS850-RLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1375.0	1375.0	1375.0	1375.0	1375.0
2.5°	1381.3	1375.0	1361.3	1373.8	1371.4
5°	1375.0	1368.8	1352.6	1363.8	1360.1
7.5°	1363.8	1356.4	1339.0	1343.9	1337.7
10°	1348.9	1340.2	1315.4	1311.5	1304.2
12.5°	1330.2	1319.0	1285.4	1278.0	1264.3
15°	1307.8	1294.1	1251.8	1228.2	1215.8
17.5°	1281.7	1261.8	1209.5	1182.2	1162.2
20°	1251.8	1226.9	1164.7	1133.7	1106.2
22.5°	1219.6	1190.8	1118.6	1076.4	1057.8
25°	1187.2	1147.3	1065.2	1014.2	995.4
27.5°	1148.6	1106.2	1015.4	957.0	928.2
30°	1107.6	1060.2	960.6	897.3	863.6
32.5°	1067.6	1010.4	908.5	833.7	802.6
35°	1022.9	959.4	849.9	771.5	744.1
37.5°	979.4	910.8	795.2	709.2	678.3
40°	933.3	858.7	737.9	649.5	617.3
42.5°	886.0	806.5	680.7	588.5	557.5
45°	836.3	752.8	622.3	533.8	503.9
47.5°	788.9	700.7	566.3	477.8	450.5
50°	736.7	648.3	511.5	425.5	399.5
52.5°	685.6	592.3	459.2	377.1	353.4
55°	635.8	538.8	404.3	329.8	306.2
57.5°	584.9	485.3	356.0	286.2	266.3
60°	532.5	433.1	304.9	241.4	221.6
62.5°	481.6	382.1	261.3	201.6	191.7
65°	429.3	328.5	216.5	174.2	170.5
67.5°	379.6	278.7	174.2	153.0	149.3
70°	327.3	230.2	144.3	131.9	126.9
72.5°	277.5	185.3	120.7	110.8	108.2
75°	228.9	141.8	99.6	90.8	89.6
77.5°	180.4	100.7	78.4	73.4	70.9
80°	135.6	72.2	59.7	54.8	54.8
82.5°	94.5	48.6	41.0	38.6	38.6
85°	53.5	27.3	23.6	23.6	23.6
87.5°	20.0	9.9	9.9	8.8	8.8
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	15.08	16.60	15.44	16.91	17.23	11.04	12.56	11.40	12.87	13.19
	3H	16.84	18.21	17.22	18.54	18.90	12.30	13.67	12.68	14.00	14.36
	4H	17.51	18.79	17.91	19.14	19.52	12.81	14.09	13.21	14.43	14.81
	6H	18.00	19.18	18.41	19.55	19.94	13.19	14.37	13.60	14.74	15.13
	8H	18.16	19.29	18.59	19.68	20.08	13.31	14.44	13.74	14.83	15.23
	12H	18.27	19.35	18.70	19.73	20.16	13.39	14.47	13.82	14.85	15.28
4H	2H	15.18	16.46	15.58	16.81	17.19	11.73	13.02	12.13	13.36	13.74
	3H	17.12	18.18	17.53	18.58	18.98	13.18	14.24	13.59	14.64	15.04
	4H	17.87	18.82	18.30	19.24	19.68	13.78	14.73	14.21	15.15	15.59
	6H	18.46	19.29	18.91	19.73	20.19	14.27	15.10	14.72	15.54	16.00
	8H	18.67	19.45	19.13	19.89	20.36	14.43	15.20	14.89	15.65	16.12
	12H	18.82	19.52	19.31	20.00	20.47	14.54	15.24	15.03	15.72	16.19
8H	4H	17.89	18.67	18.35	19.11	19.58	14.13	14.91	14.59	15.35	15.82
	6H	18.53	19.17	19.02	19.66	20.14	14.72	15.36	15.21	15.85	16.33
	8H	18.78	19.35	19.29	19.86	20.35	14.94	15.52	15.45	16.03	16.51
	12H	18.98	19.49	19.49	19.98	20.55	15.12	15.63	15.63	16.12	16.68
12H	4H	17.87	18.57	18.36	19.05	19.52	14.17	14.87	14.66	15.35	15.82
	6H	18.51	19.09	19.02	19.59	20.08	14.78	15.36	15.29	15.87	16.36
	8H	18.79	19.30	19.30	19.79	20.36	15.05	15.56	15.56	16.06	16.62