

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: P930796

Luminaire Tested: DFN2DS-SQ2F0-030DS830-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930796
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-SQ2F0-030DS830-RLL
Description: 2 foot, Square Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

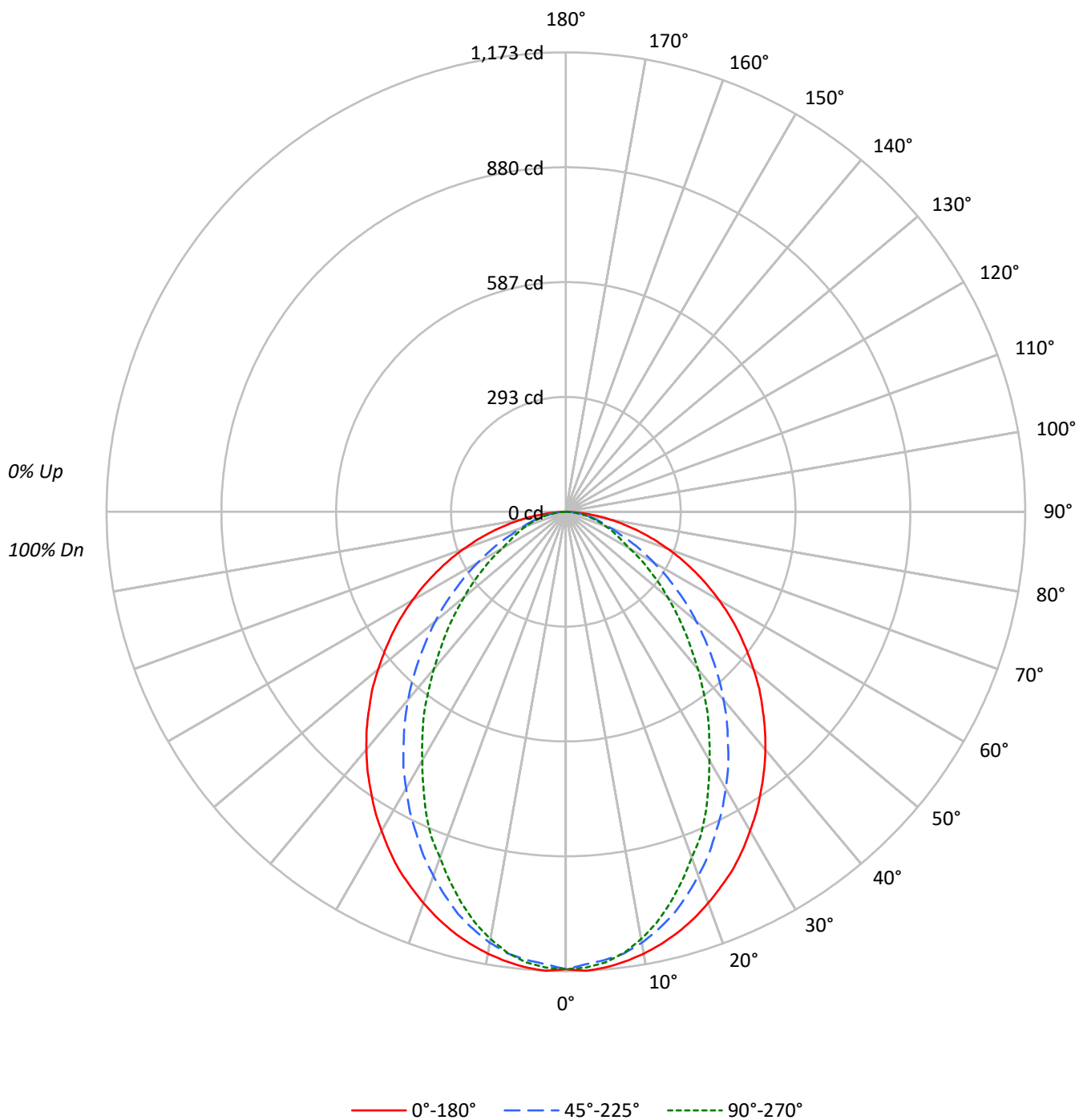
Lumens per Lamp: N/A
Luminaire Lumens: 2402.1 lumens
Efficiency: N/A
Efficacy: 90.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 2.21' x L: 2.21' x H: 0')
CIE Type: Direct

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: P930796

CATALOG NUMBER: DFN2DS-SQ2F0-030DS830-RLL

Luminous Intensity Polar Plot



TEST NUMBER: P930796

CATALOG NUMBER: DFN2DS-SQ2F0-030DS830-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°	2568	2568	2568
5°	2578	2536	2550
10°	2558	2495	2474
15°	2529	2421	2351
20°	2488	2315	2199
25°	2447	2195	2051
30°	2389	2072	1862
35°	2332	1938	1697
40°	2276	1799	1505
45°	2209	1644	1331
50°	2141	1486	1161
55°	2070	1317	997
60°	1989	1139	828
65°	1897	957	753
70°	1787	788	693
75°	1652	719	647
80°	1459	642	589
85°	1145	507	507

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2209 cd/sqm

TEST NUMBER: P930796

CATALOG NUMBER: DFN2DS-SQ2F0-030DS830-RLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	109.5	4.6
10°-20°	300.5	12.5
20°-30°	421.9	17.6
30°-40°	459.9	19.1
40°-50°	422.7	17.6
50°-60°	332.0	13.8
60°-70°	216.1	9.0
70°-80°	111.2	4.6
80°-90°	28.4	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°	831.9	34.6
0°-40°	1291.8	53.8
0°-60°	2046.4	85.2
0°-90°	2402.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2402.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1168	1168	1168	1168	1168	
5°	1168	1163	1149	1158	1155	111
15°	1111	1099	1063	1043	1033	313
25°	1008	974	905	862	846	464
35°	869	815	722	655	632	544
45°	710	639	529	453	428	549
55°	540	458	344	280	260	483
65°	365	279	184	148	145	362
75°	194	120	85	77	76	206
85°	45	23	20	20	20	54
90°	0	0	0	0	0	

TEST NUMBER: P930796

CATALOG NUMBER: DFN2DS-SQ2F0-030DS830-RLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1168.0	1168.0	1168.0	1168.0	1168.0
2.5°	1173.3	1168.0	1156.3	1166.9	1164.9
5°	1168.0	1162.7	1149.0	1158.5	1155.3
7.5°	1158.5	1152.2	1137.4	1141.5	1136.2
10°	1145.8	1138.4	1117.3	1114.0	1107.8
12.5°	1129.9	1120.4	1091.9	1085.6	1073.9
15°	1110.9	1099.2	1063.3	1043.3	1032.7
17.5°	1088.7	1071.8	1027.3	1004.2	987.2
20°	1063.3	1042.1	989.3	963.0	939.6
22.5°	1035.9	1011.5	950.2	914.3	898.5
25°	1008.4	974.5	904.8	861.5	845.5
27.5°	975.6	939.6	862.5	812.9	788.5
30°	940.8	900.6	816.0	762.2	733.5
32.5°	906.9	858.3	771.7	708.2	681.7
35°	868.9	814.9	721.9	655.3	632.1
37.5°	831.9	773.7	675.4	602.4	576.1
40°	792.8	729.4	626.8	551.7	524.3
42.5°	752.6	685.0	578.2	499.9	473.5
45°	710.4	639.4	528.6	453.4	428.0
47.5°	670.1	595.2	481.0	405.8	382.6
50°	625.8	550.7	434.5	361.4	339.3
52.5°	582.3	503.1	390.1	320.3	300.2
55°	540.0	457.6	343.5	280.2	260.1
57.5°	496.8	412.2	302.4	243.1	226.2
60°	452.3	367.9	259.0	205.1	188.2
62.5°	409.1	324.5	221.9	171.3	162.9
65°	364.6	279.0	183.9	148.0	144.8
67.5°	322.4	236.7	148.0	130.0	126.8
70°	278.0	195.6	122.6	112.0	107.8
72.5°	235.7	157.4	102.5	94.1	91.9
75°	194.4	120.5	84.6	77.1	76.1
77.5°	153.3	85.5	66.6	62.4	60.2
80°	115.2	61.3	50.7	46.5	46.5
82.5°	80.3	41.3	34.9	32.8	32.8
85°	45.4	23.2	20.1	20.1	20.1
87.5°	17.0	8.4	8.4	7.4	7.4
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P930796

CATALOG NUMBER: DFN2DS-SQ2F0-030DS830-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	14.51	16.03	14.88	16.35	16.66	10.47	11.99	10.84	12.31	12.62
	3H	16.28	17.64	16.65	17.97	18.33	11.74	13.10	12.11	13.43	13.79
	4H	16.94	18.22	17.34	18.57	18.95	12.24	13.52	12.64	13.87	14.25
	6H	17.43	18.61	17.84	18.98	19.37	12.62	13.80	13.03	14.17	14.56
	8H	17.60	18.72	18.02	19.11	19.51	12.74	13.87	13.17	14.26	14.66
	12H	17.70	18.78	18.13	19.16	19.59	12.83	13.90	13.26	14.29	14.71
4H	2H	14.62	15.90	15.02	16.24	16.62	11.17	12.45	11.57	12.80	13.18
	3H	16.55	17.61	16.96	18.01	18.41	12.61	13.67	13.02	14.07	14.47
	4H	17.30	18.25	17.73	18.67	19.11	13.21	14.17	13.64	14.58	15.02
	6H	17.89	18.72	18.35	19.16	19.62	13.70	14.53	14.15	14.97	15.43
	8H	18.10	18.88	18.57	19.33	19.79	13.86	14.64	14.32	15.08	15.55
	12H	18.26	18.95	18.74	19.43	19.90	13.98	14.67	14.46	15.15	15.62
8H	4H	17.32	18.10	17.79	18.54	19.01	13.56	14.34	14.03	14.78	15.25
	6H	17.96	18.60	18.46	19.09	19.57	14.15	14.79	14.65	15.28	15.76
	8H	18.21	18.79	18.72	19.30	19.78	14.37	14.95	14.89	15.46	15.95
	12H	18.41	18.92	18.92	19.42	19.98	14.55	15.06	15.06	15.55	16.12
12H	4H	17.31	18.00	17.79	18.48	18.95	13.61	14.30	14.09	14.78	15.25
	6H	17.94	18.52	18.45	19.03	19.52	14.21	14.79	14.73	15.30	15.79
	8H	18.23	18.74	18.73	19.23	19.79	14.49	15.00	15.00	15.49	16.05