

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: P929808

Luminaire Tested: DFN2DS-4P2F0-030DS835-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P929808
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-4P2F0-030DS835-RLL
Description: 2 foot, 90deg - 4way Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

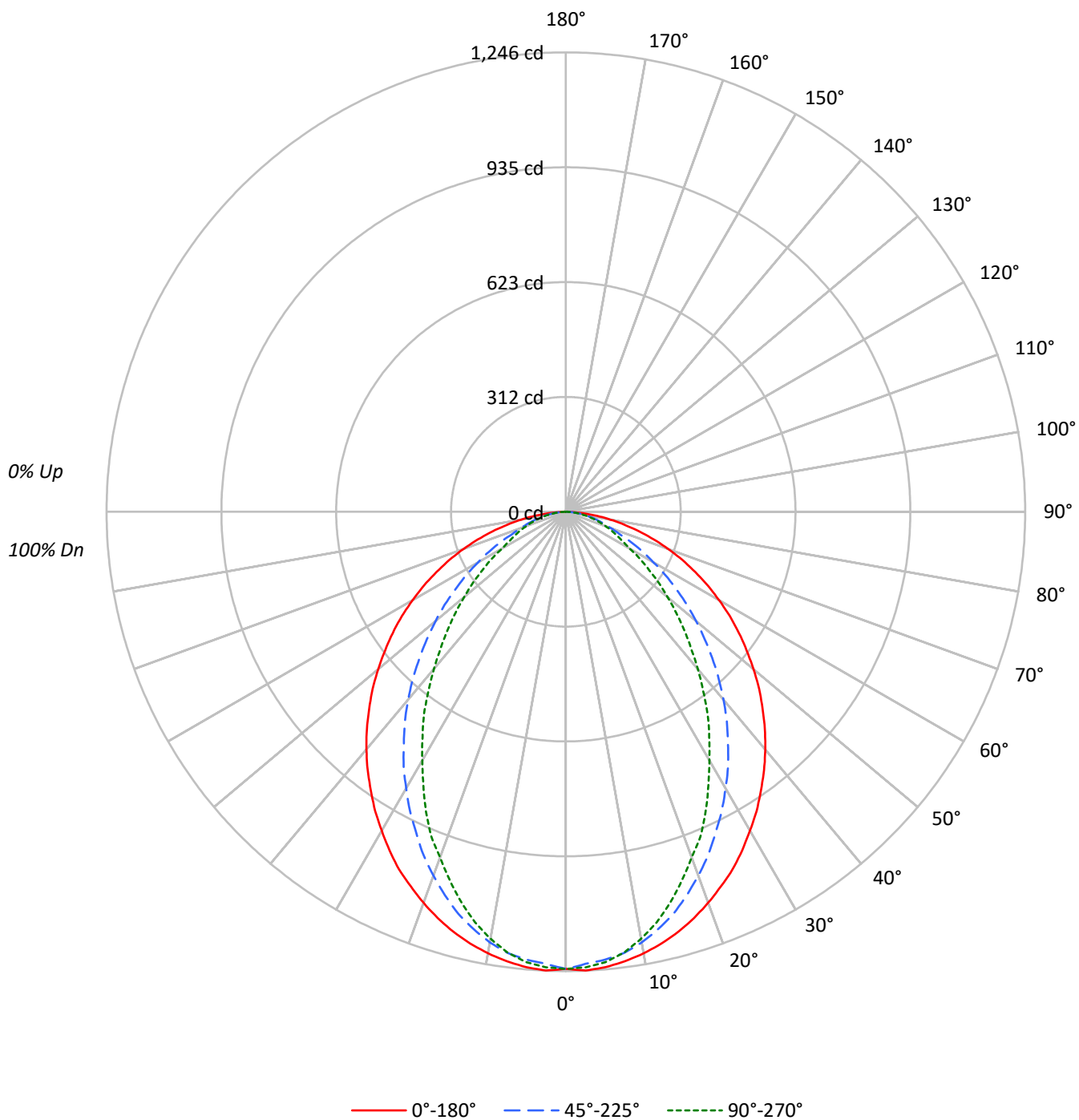
Lumens per Lamp: N/A
Luminaire Lumens: 2550.0 lumens
Efficiency: N/A
Efficacy: 84.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 2.07' x L: 2.07' x H: 0')
CIE Type: Direct

Input Watts (W): 30.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9954
Total Harmonic Distortion (THDi): 0.076
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P929808

CATALOG NUMBER: DFN2DS-4P2F0-030DS835-RLL

Luminous Intensity Polar Plot



TEST NUMBER: P929808

CATALOG NUMBER: DFN2DS-4P2F0-030DS835-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°	3105	3105	3105
5°	3117	3066	3083
10°	3093	3016	2990
15°	3057	2926	2842
20°	3008	2798	2658
25°	2958	2654	2480
30°	2888	2504	2251
35°	2820	2343	2051
40°	2751	2175	1819
45°	2670	1987	1609
50°	2588	1797	1403
55°	2503	1592	1205
60°	2405	1377	1001
65°	2294	1157	911
70°	2160	952	838
75°	1997	869	782
80°	1764	776	712
85°	1385	612	612

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2670 cd/sqm

TEST NUMBER: P929808

CATALOG NUMBER: DFN2DS-4P2F0-030DS835-RLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	116.2	4.6
10°-20°	319.0	12.5
20°-30°	447.9	17.6
30°-40°	488.2	19.1
40°-50°	448.7	17.6
50°-60°	352.4	13.8
60°-70°	229.4	9.0
70°-80°	118.1	4.6
80°-90°	30.1	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°	883.1	34.6
0°-40°	1371.3	53.8
0°-60°	2172.4	85.2
0°-90°	2550.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2550.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1240	1240	1240	1240	1240	
5°	1240	1234	1220	1230	1226	118
15°	1179	1167	1129	1108	1096	332
25°	1070	1034	960	914	898	492
35°	922	865	766	696	671	577
45°	754	679	561	481	454	582
55°	573	486	365	297	276	512
65°	387	296	195	157	154	384
75°	206	128	90	82	81	218
85°	48	25	21	21	21	58
90°	0	0	0	0	0	

TEST NUMBER: P929808

CATALOG NUMBER: DFN2DS-4P2F0-030DS835-RLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1239.9	1239.9	1239.9	1239.9	1239.9
2.5°	1245.5	1239.9	1227.5	1238.8	1236.6
5°	1239.9	1234.3	1219.7	1229.8	1226.4
7.5°	1229.8	1223.1	1207.4	1211.8	1206.2
10°	1216.3	1208.5	1186.1	1182.6	1176.0
12.5°	1199.5	1189.4	1159.1	1152.4	1140.0
15°	1179.3	1166.9	1128.8	1107.5	1096.3
17.5°	1155.7	1137.8	1090.6	1066.0	1048.0
20°	1128.8	1106.3	1050.2	1022.3	997.5
22.5°	1099.7	1073.8	1008.7	970.6	953.8
25°	1070.5	1034.5	960.5	914.5	897.6
27.5°	1035.7	997.5	915.6	862.9	837.0
30°	998.7	956.0	866.2	809.1	778.7
32.5°	962.7	911.1	819.2	751.8	723.7
35°	922.4	865.1	766.4	695.7	671.0
37.5°	883.1	821.3	717.0	639.5	611.6
40°	841.6	774.3	665.4	585.7	556.6
42.5°	798.9	727.2	613.8	530.7	502.7
45°	754.1	678.8	561.1	481.3	454.4
47.5°	711.4	631.8	510.6	430.8	406.2
50°	664.3	584.6	461.2	383.7	360.2
52.5°	618.2	534.1	414.1	340.0	318.7
55°	573.3	485.8	364.6	297.4	276.1
57.5°	527.4	437.6	321.0	258.1	240.1
60°	480.2	390.5	274.9	217.7	199.8
62.5°	434.3	344.5	235.6	181.8	172.9
65°	387.1	296.2	195.2	157.1	153.7
67.5°	342.3	251.3	157.1	138.0	134.6
70°	295.1	207.6	130.1	118.9	114.4
72.5°	250.2	167.1	108.8	99.9	97.6
75°	206.4	127.9	89.8	81.9	80.8
77.5°	162.7	90.8	70.7	66.2	63.9
80°	122.3	65.1	53.8	49.4	49.4
82.5°	85.2	43.8	37.0	34.8	34.8
85°	48.2	24.6	21.3	21.3	21.3
87.5°	18.0	8.9	8.9	7.9	7.9
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P929808

CATALOG NUMBER: DFN2DS-4P2F0-030DS835-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	15.17	16.69	15.54	17.01	17.32	11.13	12.65	11.50	12.97	13.28
	3H	16.94	18.30	17.31	18.63	18.99	12.40	13.76	12.77	14.09	14.45
	4H	17.60	18.88	18.00	19.23	19.61	12.90	14.18	13.30	14.53	14.91
	6H	18.09	19.27	18.50	19.64	20.03	13.28	14.46	13.69	14.83	15.22
	8H	18.26	19.38	18.68	19.77	20.17	13.40	14.53	13.83	14.92	15.32
	12H	18.36	19.44	18.79	19.82	20.25	13.48	14.56	13.92	14.94	15.37
4H	2H	15.27	16.56	15.67	16.90	17.28	11.83	13.11	12.23	13.46	13.83
	3H	17.21	18.27	17.62	18.67	19.07	13.27	14.33	13.68	14.73	15.13
	4H	17.96	18.91	18.39	19.33	19.77	13.87	14.83	14.30	15.24	15.68
	6H	18.55	19.38	19.01	19.82	20.28	14.36	15.19	14.81	15.63	16.09
	8H	18.76	19.54	19.23	19.98	20.45	14.52	15.30	14.98	15.74	16.21
	12H	18.92	19.61	19.40	20.09	20.56	14.64	15.33	15.12	15.81	16.28
8H	4H	17.98	18.76	18.44	19.20	19.67	14.22	15.00	14.69	15.44	15.91
	6H	18.62	19.26	19.12	19.75	20.23	14.81	15.45	15.31	15.94	16.42
	8H	18.87	19.45	19.38	19.96	20.44	15.03	15.61	15.54	16.12	16.61
	12H	19.07	19.58	19.58	20.07	20.64	15.21	15.72	15.72	16.21	16.78
12H	4H	17.97	18.66	18.45	19.14	19.61	14.27	14.96	14.75	15.44	15.91
	6H	18.60	19.18	19.11	19.69	20.18	14.87	15.45	15.39	15.96	16.45
	8H	18.88	19.39	19.39	19.89	20.45	15.15	15.66	15.66	16.15	16.71