

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: P929812

Luminaire Tested: DFN2DS-4P2F0-030DS850-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P929812
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-4P2F0-030DS850-RLL
Description: 2 foot, 90deg - 4way Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

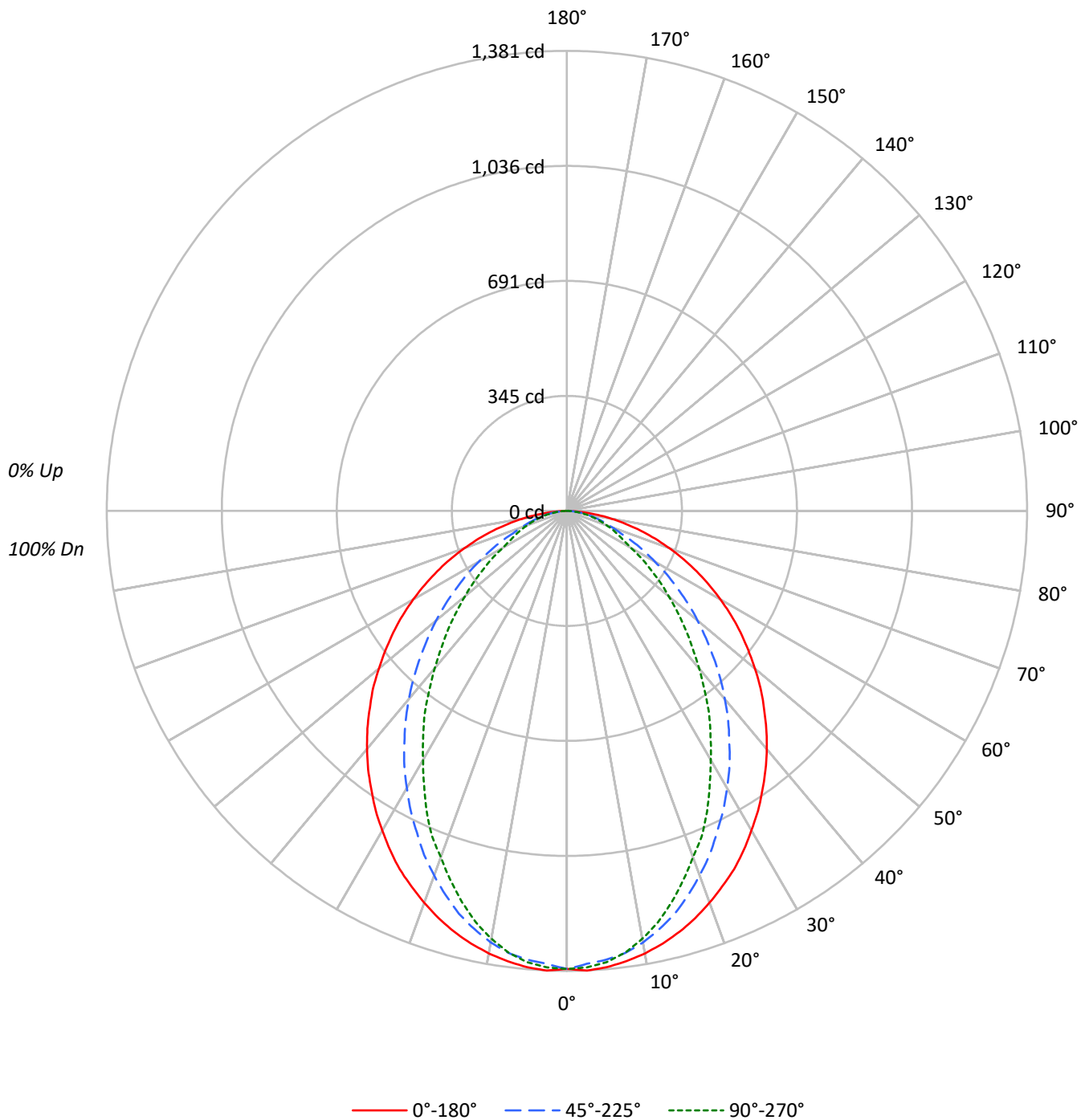
Lumens per Lamp: N/A
Luminaire Lumens: 2827.9 lumens
Efficiency: N/A
Efficacy: 93.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 2.07' x L: 2.07' x H: 0')
CIE Type: Direct

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: P929812

CATALOG NUMBER: DFN2DS-4P2F0-030DS850-RLL

Luminous Intensity Polar Plot



TEST NUMBER: P929812

CATALOG NUMBER: DFN2DS-4P2F0-030DS850-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°	3443	3443	3443
5°	3456	3400	3419
10°	3430	3345	3316
15°	3390	3245	3152
20°	3336	3104	2948
25°	3280	2943	2750
30°	3202	2777	2497
35°	3127	2598	2275
40°	3051	2412	2018
45°	2961	2204	1784
50°	2870	1993	1556
55°	2776	1765	1337
60°	2667	1527	1110
65°	2544	1283	1010
70°	2396	1056	929
75°	2215	964	867
80°	1955	861	790
85°	1537	678	678

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2961 cd/sqm

TEST NUMBER: P929812

CATALOG NUMBER: DFN2DS-4P2F0-030DS850-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	

TEST NUMBER: P929812

CATALOG NUMBER: DFN2DS-4P2F0-030DS850-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

TEST NUMBER: P929812

CATALOG NUMBER: DFN2DS-4P2F0-030DS850-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	15.53	17.05	15.90	17.37	17.68	11.49	13.01	11.86	13.33	13.64
	3H	17.30	18.66	17.67	18.99	19.35	12.76	14.12	13.13	14.45	14.81
	4H	17.96	19.24	18.36	19.59	19.97	13.26	14.54	13.66	14.89	15.26
	6H	18.45	19.63	18.86	20.00	20.39	13.64	14.82	14.05	15.19	15.58
	8H	18.62	19.74	19.04	20.13	20.53	13.76	14.89	14.19	15.28	15.68
	12H	18.72	19.80	19.15	20.18	20.61	13.84	14.92	14.27	15.30	15.73
4H	2H	15.63	16.91	16.03	17.26	17.64	12.19	13.47	12.59	13.82	14.19
	3H	17.57	18.63	17.98	19.03	19.43	13.63	14.69	14.04	15.09	15.49
	4H	18.32	19.27	18.75	19.69	20.13	14.23	15.18	14.66	15.60	16.04
	6H	18.91	19.74	19.37	20.18	20.64	14.72	15.55	15.17	15.99	16.45
	8H	19.12	19.90	19.59	20.34	20.81	14.88	15.66	15.34	16.10	16.57
	12H	19.28	19.97	19.76	20.45	20.92	15.00	15.69	15.48	16.17	16.64
8H	4H	18.34	19.12	18.80	19.56	20.03	14.58	15.36	15.05	15.80	16.27
	6H	18.98	19.62	19.47	20.11	20.59	15.17	15.81	15.67	16.30	16.78
	8H	19.23	19.81	19.74	20.31	20.80	15.39	15.97	15.90	16.48	16.96
	12H	19.43	19.94	19.94	20.43	21.00	15.57	16.08	16.08	16.57	17.14
12H	4H	18.33	19.02	18.81	19.50	19.97	14.63	15.32	15.11	15.80	16.27
	6H	18.96	19.54	19.47	20.05	20.53	15.23	15.81	15.75	16.32	16.81
	8H	19.24	19.75	19.75	20.25	20.81	15.51	16.02	16.02	16.51	17.07