

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: P931234

Luminaire Tested: DFN2DS-TR2F0-020DS850-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931234
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-TR2F0-020DS850-RLL
Description: 2 foot, Triangle Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

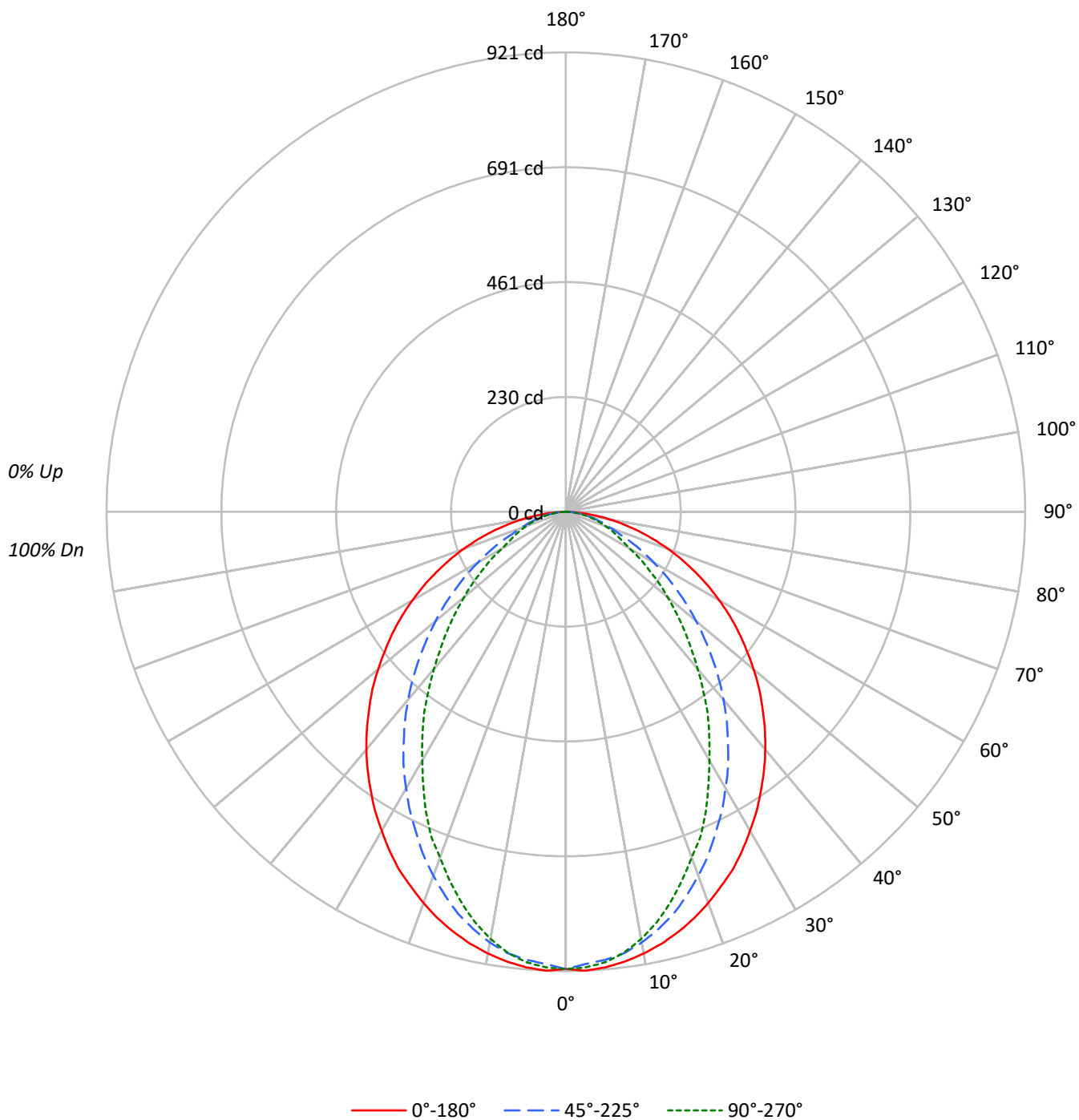
Lumens per Lamp: N/A
Luminaire Lumens: 1885.3 lumens
Efficiency: N/A
Efficacy: 107.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 2.36' x L: 2.04' x H: 0')
CIE Type: Direct

Input Watts (W): 17.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9968
Total Harmonic Distortion (THDi): 0.064
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

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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°	2045	2045	2045
5°	2052	2019	2030
10°	2037	1986	1969
15°	2013	1927	1872
20°	1981	1843	1751
25°	1948	1748	1633
30°	1902	1649	1483
35°	1857	1543	1351
40°	1811	1433	1198
45°	1759	1309	1060
50°	1704	1183	924
55°	1648	1048	794
60°	1584	907	659
65°	1510	762	600
70°	1422	627	552
75°	1315	571	515
80°	1161	511	469
85°	911	402	402

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
Vertical Angle: 45°
Luminance: 1759 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	85.9	4.6
10°-20°	235.8	12.5
20°-30°	331.1	17.6
30°-40°	361.0	19.1
40°-50°	331.8	17.6
50°-60°	260.6	13.8
60°-70°	169.6	9.0
70°-80°	87.3	4.6
80°-90°	22.3	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°	652.9	34.6
0°-40°	1013.8	53.8
0°-60°	1606.2	85.2
0°-90°	1885.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1885.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	917	917	917	917	917	
5°	917	913	902	909	907	87
15°	872	863	834	819	811	246
25°	792	765	710	676	664	364
35°	682	640	567	514	496	427
45°	558	502	415	356	336	431
55°	424	359	270	220	204	379
65°	286	219	144	116	114	284
75°	153	94	66	61	60	161
85°	36	18	16	16	16	43
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	916.7	916.7	916.7	916.7	916.7
2.5°	920.8	916.7	907.5	915.9	914.3
5°	916.7	912.6	901.7	909.3	906.7
7.5°	909.3	904.3	892.6	896.0	891.7
10°	899.3	893.4	876.9	874.3	869.5
12.5°	886.9	879.3	856.9	852.0	842.8
15°	871.9	862.7	834.5	818.8	810.6
17.5°	854.5	841.2	806.4	788.1	774.9
20°	834.5	817.9	776.5	755.8	737.5
22.5°	813.0	793.9	745.8	717.6	705.2
25°	791.5	764.9	710.1	676.2	663.6
27.5°	765.8	737.5	676.9	637.9	618.8
30°	738.4	706.8	640.4	598.2	575.7
32.5°	711.8	673.6	605.6	555.8	535.1
35°	681.9	639.7	566.7	514.4	496.1
37.5°	652.9	607.2	530.1	472.9	452.1
40°	622.1	572.5	492.0	433.1	411.4
42.5°	590.7	537.6	453.8	392.4	371.7
45°	557.5	501.8	414.9	355.9	335.9
47.5°	526.0	467.1	377.5	318.5	300.3
50°	491.2	432.3	341.0	283.7	266.4
52.5°	457.0	394.8	306.1	251.4	235.7
55°	423.9	359.2	269.6	219.9	204.1
57.5°	389.9	323.5	237.3	190.9	177.6
60°	355.1	288.7	203.3	161.0	147.7
62.5°	321.1	254.7	174.2	134.4	127.8
65°	286.2	219.0	144.4	116.2	113.7
67.5°	253.1	185.8	116.2	102.0	99.6
70°	218.1	153.5	96.2	87.9	84.6
72.5°	185.0	123.5	80.4	73.9	72.2
75°	152.6	94.5	66.3	60.6	59.8
77.5°	120.3	67.2	52.2	48.9	47.2
80°	90.4	48.1	39.8	36.5	36.5
82.5°	63.0	32.4	27.4	25.7	25.7
85°	35.6	18.2	15.7	15.7	15.7
87.5°	13.3	6.7	6.7	5.8	5.8
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	13.72	15.24	14.08	15.55	15.87	9.68	11.20	10.05	11.52	11.83
	3H	15.48	16.85	15.86	17.18	17.54	10.95	12.31	11.33	12.64	13.00
	4H	16.15	17.43	16.55	17.78	18.16	11.45	12.73	11.85	13.08	13.46
	6H	16.64	17.82	17.05	18.19	18.58	11.83	13.01	12.24	13.38	13.77
	8H	16.80	17.93	17.23	18.32	18.72	11.95	13.08	12.38	13.47	13.87
	12H	16.91	17.99	17.34	18.37	18.80	12.03	13.11	12.46	13.49	13.92
4H	2H	13.82	15.10	14.22	15.45	15.83	10.38	11.66	10.78	12.01	12.39
	3H	15.76	16.82	16.17	17.22	17.62	11.82	12.88	12.23	13.28	13.68
	4H	16.51	17.46	16.94	17.88	18.32	12.42	13.38	12.85	13.79	14.23
	6H	17.10	17.93	17.55	18.37	18.83	12.91	13.74	13.36	14.18	14.64
	8H	17.31	18.09	17.78	18.53	19.00	13.07	13.85	13.53	14.29	14.76
	12H	17.47	18.16	17.95	18.64	19.11	13.19	13.88	13.67	14.36	14.83
8H	4H	16.53	17.31	16.99	17.75	18.22	12.77	13.55	13.24	13.99	14.46
	6H	17.17	17.81	17.66	18.30	18.78	13.36	14.00	13.86	14.49	14.97
	8H	17.42	17.99	17.93	18.50	18.99	13.58	14.16	14.09	14.67	15.15
	12H	17.62	18.13	18.13	18.62	19.19	13.76	14.27	14.27	14.76	15.32
12H	4H	16.51	17.21	17.00	17.69	18.16	12.82	13.51	13.30	13.99	14.46
	6H	17.15	17.73	17.66	18.24	18.72	13.42	14.00	13.94	14.51	15.00
	8H	17.43	17.94	17.94	18.43	19.00	13.70	14.21	14.20	14.70	15.26