

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: P931244

Luminaire Tested: DFN2DS-TR2F0-020DS950-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931244
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-TR2F0-020DS950-RLL
Description: 2 foot, Triangle Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

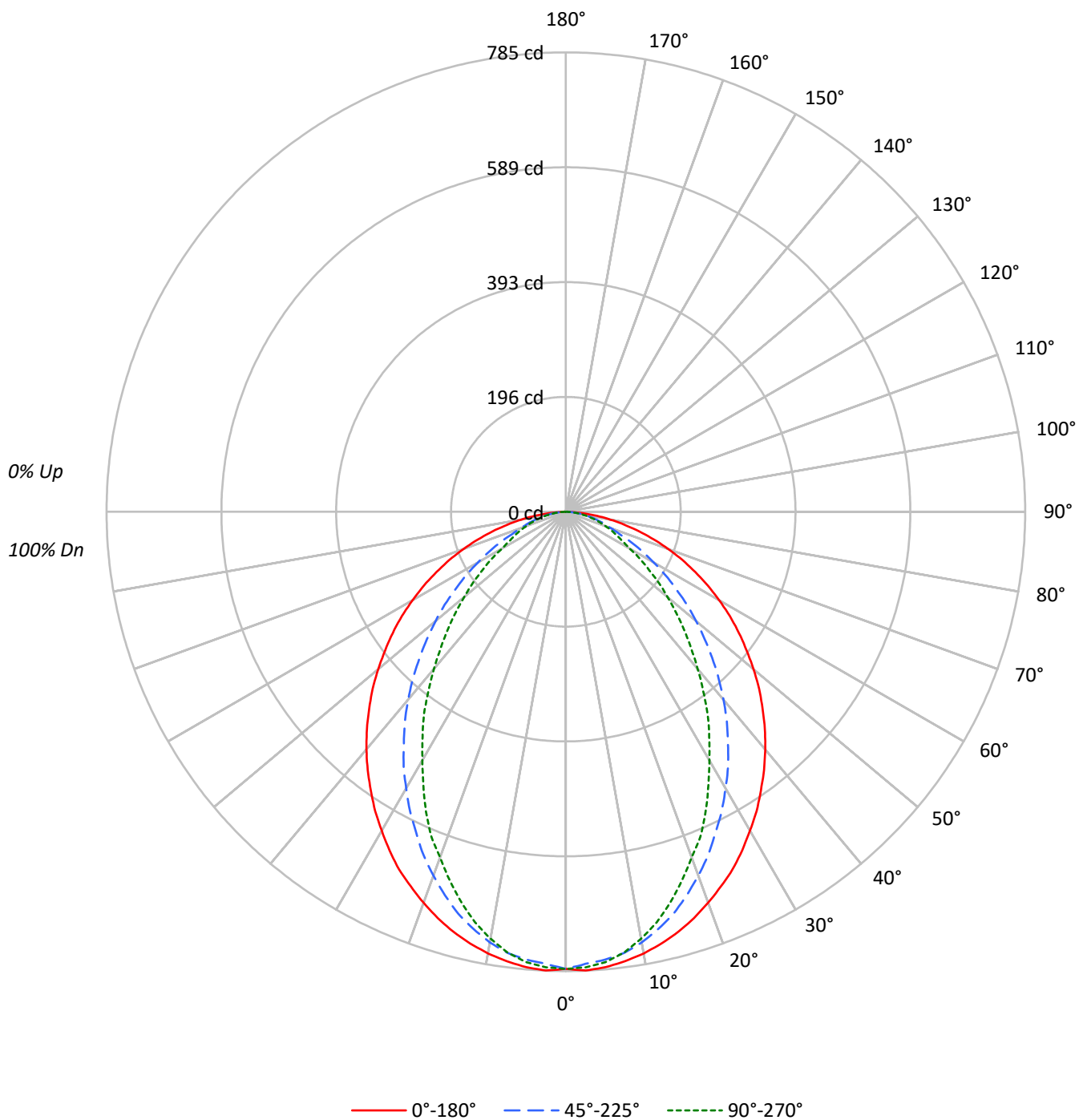
Lumens per Lamp: N/A
Luminaire Lumens: 1606.5 lumens
Efficiency: N/A
Efficacy: 91.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 2.36' x L: 2.04' x H: 0')
CIE Type: Direct

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°	1742	1742	1742
5°	1749	1720	1730
10°	1736	1692	1678
15°	1716	1642	1595
20°	1688	1571	1492
25°	1660	1489	1392
30°	1620	1405	1263
35°	1582	1315	1151
40°	1543	1221	1021
45°	1499	1115	903
50°	1452	1008	788
55°	1405	893	676
60°	1350	773	562
65°	1287	649	511
70°	1212	534	470
75°	1120	487	439
80°	989	435	399
85°	775	343	343

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1499 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.2	4.6
10°-20°	201.0	12.5
20°-30°	282.2	17.6
30°-40°	307.6	19.1
40°-50°	282.7	17.6
50°-60°	222.0	13.8
60°-70°	144.5	9.0
70°-80°	74.4	4.6
80°-90°	19.0	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°	556.3	34.6
0°-40°	863.9	53.8
0°-60°	1368.6	85.2
0°-90°	1606.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1606.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	781	781	781	781	781	
5°	781	778	768	775	773	74
15°	743	735	711	698	691	209
25°	674	652	605	576	566	310
35°	581	545	483	438	423	364
45°	475	428	354	303	286	367
55°	361	306	230	187	174	323
65°	244	187	123	99	97	242
75°	130	80	56	52	51	138
85°	30	16	13	13	13	36
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	781.1	781.1	781.1	781.1	781.1
2.5°	784.6	781.1	773.3	780.5	779.1
5°	781.1	777.6	768.4	774.8	772.6
7.5°	774.8	770.6	760.6	763.5	759.9
10°	766.3	761.3	747.2	745.0	740.9
12.5°	755.7	749.3	730.2	726.0	718.2
15°	743.0	735.1	711.1	697.7	690.7
17.5°	728.1	716.8	687.1	671.5	660.3
20°	711.1	696.9	661.7	644.0	628.4
22.5°	692.8	676.5	635.5	611.5	600.9
25°	674.4	651.8	605.1	576.2	565.5
27.5°	652.5	628.4	576.8	543.6	527.3
30°	629.2	602.2	545.7	509.7	490.5
32.5°	606.5	574.0	516.1	473.6	456.0
35°	581.1	545.1	482.9	438.3	422.7
37.5°	556.3	517.4	451.7	402.9	385.3
40°	530.1	487.8	419.2	369.0	350.6
42.5°	503.3	458.1	386.7	334.3	316.8
45°	475.1	427.6	353.5	303.3	286.2
47.5°	448.2	398.0	321.7	271.4	255.9
50°	418.5	368.4	290.6	241.7	227.0
52.5°	389.4	336.4	260.8	214.2	200.8
55°	361.2	306.1	229.7	187.4	173.9
57.5°	332.3	275.7	202.2	162.6	151.3
60°	302.6	246.0	173.2	137.2	125.9
62.5°	273.6	217.1	148.5	114.5	108.9
65°	243.9	186.6	123.0	99.0	96.9
67.5°	215.6	158.3	99.0	86.9	84.9
70°	185.9	130.8	81.9	74.9	72.1
72.5°	157.6	105.3	68.5	62.9	61.5
75°	130.0	80.5	56.5	51.6	50.9
77.5°	102.5	57.3	44.5	41.7	40.3
80°	77.0	41.0	33.9	31.1	31.1
82.5°	53.7	27.6	23.3	21.9	21.9
85°	30.3	15.5	13.4	13.4	13.4
87.5°	11.3	5.7	5.7	4.9	4.9
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	13.16	14.69	13.53	15.00	15.31	9.12	10.65	9.49	10.96	11.27
	3H	14.93	16.29	15.31	16.62	16.98	10.39	11.76	10.77	12.08	12.44
	4H	15.59	16.88	15.99	17.22	17.60	10.89	12.17	11.29	12.52	12.90
	6H	16.08	17.27	16.50	17.63	18.02	11.27	12.46	11.68	12.82	13.21
	8H	16.25	17.38	16.68	17.76	18.17	11.40	12.52	11.82	12.91	13.31
	12H	16.35	17.43	16.78	17.81	18.24	11.48	12.56	11.91	12.94	13.37
4H	2H	13.27	14.55	13.67	14.90	15.28	9.82	11.10	10.22	11.45	11.83
	3H	15.20	16.26	15.61	16.66	17.06	11.26	12.33	11.67	12.73	13.13
	4H	15.95	16.91	16.38	17.32	17.76	11.86	12.82	12.29	13.23	13.67
	6H	16.54	17.37	17.00	17.82	18.28	12.35	13.18	12.81	13.62	14.08
	8H	16.76	17.53	17.22	17.98	18.44	12.51	13.29	12.98	13.73	14.20
	12H	16.91	17.60	17.39	18.08	18.55	12.63	13.32	13.11	13.80	14.27
8H	4H	15.97	16.75	16.44	17.19	17.66	12.22	12.99	12.68	13.44	13.90
	6H	16.61	17.25	17.11	17.74	18.22	12.80	13.44	13.30	13.94	14.41
	8H	16.86	17.44	17.38	17.95	18.44	13.02	13.60	13.54	14.11	14.60
	12H	17.07	17.57	17.57	18.07	18.63	13.20	13.71	13.71	14.20	14.77
12H	4H	15.96	16.65	16.44	17.13	17.60	12.26	12.95	12.74	13.43	13.90
	6H	16.59	17.17	17.11	17.68	18.17	12.87	13.44	13.38	13.95	14.44
	8H	16.88	17.39	17.39	17.88	18.44	13.14	13.65	13.65	14.14	14.70