

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: P930434

Luminaire Tested: DFN2DS-PN2F0-020DS950-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930434
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-PN2F0-020DS950-RLL
Description: 2 foot, Pentagon Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

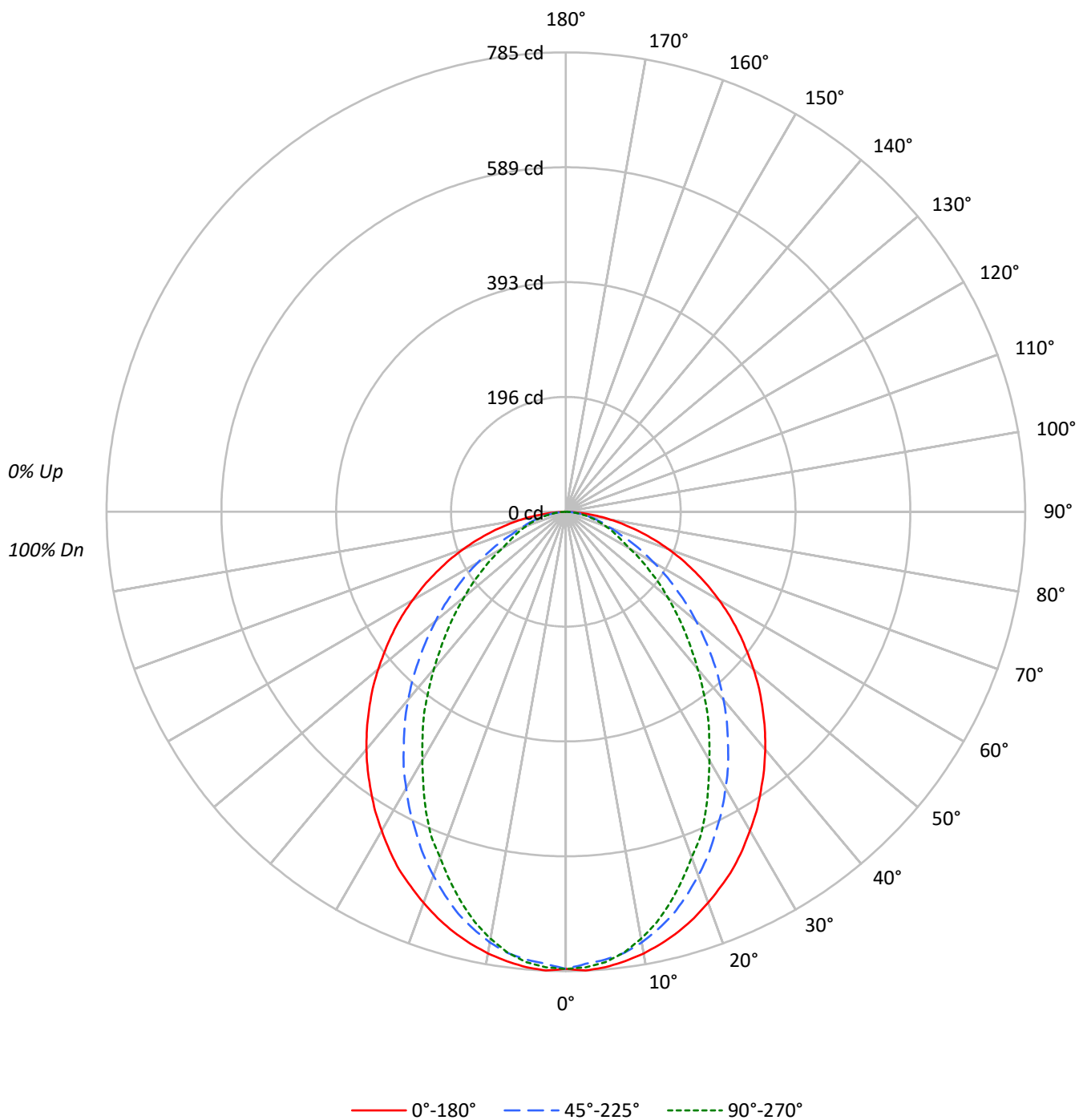
Lumens per Lamp: N/A
Luminaire Lumens: 1606.5 lumens
Efficiency: N/A
Efficacy: 83.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 2.29' x L: 2.17' x H: 0')
CIE Type: Direct

Input Watts (W): 19.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.099
Total Harmonic Distortion (THDi): 0.979
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°	1692	1692	1692
5°	1698	1671	1680
10°	1685	1643	1629
15°	1666	1594	1549
20°	1639	1525	1448
25°	1612	1446	1351
30°	1574	1365	1227
35°	1536	1277	1118
40°	1499	1185	991
45°	1455	1083	877
50°	1410	979	765
55°	1364	867	657
60°	1311	750	545
65°	1250	630	497
70°	1177	519	457
75°	1088	473	426
80°	960	423	388
85°	753	333	333

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1455 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	13.06	14.58	13.43	14.90	15.21	9.02	10.54	9.39	10.86	11.17
	3H	14.83	16.19	15.20	16.52	16.88	10.29	11.65	10.67	11.98	12.34
	4H	15.49	16.77	15.89	17.12	17.50	10.79	12.07	11.19	12.42	12.80
	6H	15.98	17.16	16.39	17.53	17.92	11.17	12.35	11.58	12.72	13.11
	8H	16.15	17.27	16.57	17.66	18.06	11.29	12.42	11.72	12.81	13.21
	12H	16.25	17.33	16.68	17.71	18.14	11.38	12.45	11.81	12.84	13.27
4H	2H	13.17	14.45	13.57	14.80	15.17	9.72	11.00	10.12	11.35	11.73
	3H	15.10	16.16	15.51	16.56	16.96	11.16	12.22	11.57	12.62	13.02
	4H	15.85	16.80	16.28	17.22	17.66	11.76	12.72	12.19	13.13	13.57
	6H	16.44	17.27	16.90	17.71	18.17	12.25	13.08	12.71	13.52	13.98
	8H	16.65	17.43	17.12	17.88	18.34	12.41	13.19	12.87	13.63	14.10
	12H	16.81	17.50	17.29	17.98	18.45	12.53	13.22	13.01	13.70	14.17
8H	4H	15.87	16.65	16.33	17.09	17.56	12.11	12.89	12.58	13.33	13.80
	6H	16.51	17.15	17.01	17.64	18.12	12.70	13.34	13.20	13.83	14.31
	8H	16.76	17.34	17.27	17.85	18.33	12.92	13.50	13.43	14.01	14.50
	12H	16.96	17.47	17.47	17.97	18.53	13.10	13.61	13.61	14.10	14.67
12H	4H	15.86	16.55	16.34	17.03	17.50	12.16	12.85	12.64	13.33	13.80
	6H	16.49	17.07	17.00	17.58	18.07	12.76	13.34	13.28	13.85	14.34
	8H	16.77	17.28	17.28	17.78	18.34	13.04	13.55	13.55	14.04	14.60