

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: P930636

Luminaire Tested: DFN2DS-PN4F0-040DS835-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930636
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-PN4F0-040DS835-RLL
Description: 4 foot, Pentagon Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

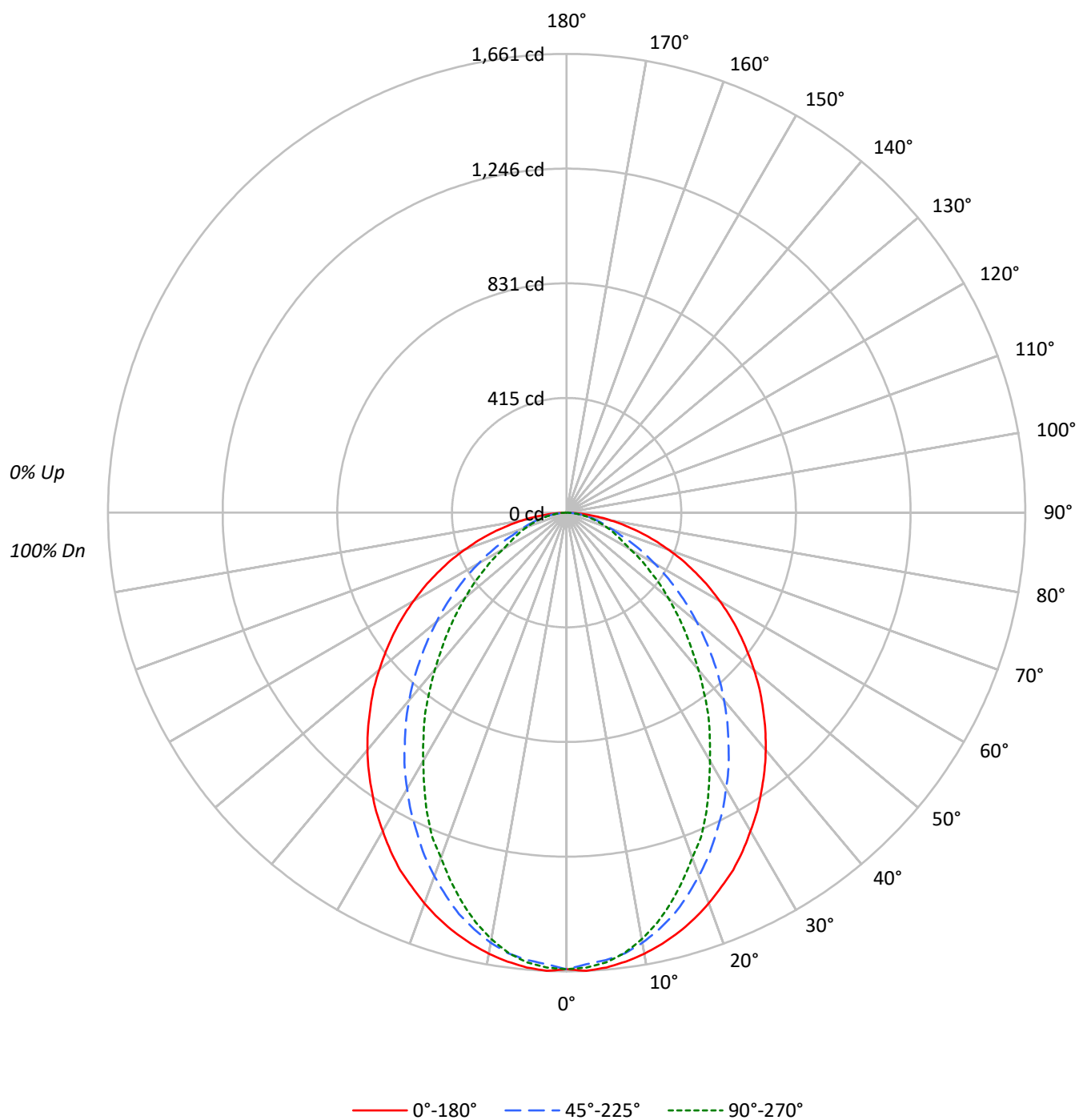
Lumens per Lamp: N/A
Luminaire Lumens: 3400.0 lumens
Efficiency: N/A
Efficacy: 89.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.94' x L: 3.74' x H: 0')
CIE Type: Direct

Input Watts (W): 38.1
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°	1207	1207	1207
5°	1211	1192	1198
10°	1202	1172	1162
15°	1188	1137	1105
20°	1169	1088	1033
25°	1150	1031	964
30°	1122	973	875
35°	1096	911	797
40°	1069	845	707
45°	1038	772	625
50°	1006	698	545
55°	973	619	468
60°	935	535	389
65°	892	450	354
70°	840	370	325
75°	776	338	304
80°	685	301	277
85°	539	238	238

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1038 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	154.9	4.6
10°-20°	425.3	12.5
20°-30°	597.2	17.6
30°-40°	650.9	19.1
40°-50°	598.3	17.6
50°-60°	469.9	13.8
60°-70°	305.8	9.0
70°-80°	157.4	4.6
80°-90°	40.2	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°	1177.4	34.6
0°-40°	1828.4	53.8
0°-60°	2896.5	85.2
0°-90°	3400.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3400.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1653	1653	1653	1653	1653	
5°	1653	1646	1626	1640	1635	157
15°	1572	1556	1505	1477	1462	443
25°	1427	1379	1281	1219	1197	656
35°	1230	1154	1022	928	895	770
45°	1005	905	748	642	606	776
55°	764	648	486	396	368	683
65°	516	395	260	210	205	512
75°	275	170	120	109	108	291
85°	64	33	28	28	28	77
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1653.2	1653.2	1653.2	1653.2	1653.2
2.5°	1660.7	1653.2	1636.7	1651.8	1648.7
5°	1653.2	1645.7	1626.2	1639.7	1635.3
7.5°	1639.7	1630.8	1609.9	1615.7	1608.3
10°	1621.8	1611.3	1581.4	1576.8	1568.0
12.5°	1599.4	1585.9	1545.4	1536.5	1520.0
15°	1572.4	1555.9	1505.1	1476.7	1461.8
17.5°	1541.0	1517.0	1454.1	1421.3	1397.3
20°	1505.1	1475.1	1400.3	1363.0	1330.0
22.5°	1466.2	1431.8	1344.9	1294.1	1271.8
25°	1427.3	1379.4	1280.6	1219.4	1196.8
27.5°	1381.0	1330.0	1220.8	1150.5	1116.0
30°	1331.6	1274.6	1154.9	1078.7	1038.3
32.5°	1283.7	1214.8	1092.2	1002.4	964.9
35°	1229.9	1153.5	1021.9	927.6	894.6
37.5°	1177.5	1095.1	956.0	852.7	815.4
40°	1122.1	1032.4	887.2	781.0	742.1
42.5°	1065.2	969.5	818.4	707.6	670.3
45°	1005.4	905.1	748.1	641.8	605.9
47.5°	948.6	842.4	680.8	574.5	541.6
50°	885.7	779.5	614.9	511.6	480.3
52.5°	824.3	712.1	552.1	453.3	424.9
55°	764.5	647.8	486.2	396.5	368.1
57.5°	703.2	583.5	427.9	344.1	320.2
60°	640.3	520.6	366.5	290.3	266.4
62.5°	579.1	459.4	314.1	242.4	230.5
65°	516.2	394.9	260.3	209.5	204.9
67.5°	456.4	335.1	209.5	184.0	179.5
70°	393.5	276.8	173.5	158.6	152.5
72.5°	333.7	222.9	145.1	133.2	130.2
75°	275.2	170.5	119.7	109.2	107.8
77.5°	217.0	121.1	94.3	88.3	85.2
80°	163.0	86.8	71.7	65.9	65.9
82.5°	113.7	58.4	49.4	46.3	46.3
85°	64.3	32.9	28.4	28.4	28.4
87.5°	24.0	11.9	11.9	10.5	10.5
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	11.89	13.41	12.25	13.72	14.04	7.85	9.37	8.21	9.68	10.00
	3H	13.65	15.02	14.03	15.35	15.71	9.11	10.48	9.49	10.81	11.17
	4H	14.32	15.60	14.72	15.95	16.33	9.62	10.90	10.01	11.24	11.62
	6H	14.81	15.99	15.22	16.36	16.75	10.00	11.18	10.41	11.55	11.94
	8H	14.97	16.10	15.40	16.49	16.89	10.12	11.25	10.55	11.64	12.04
	12H	15.08	16.16	15.51	16.54	16.97	10.20	11.28	10.63	11.66	12.09
4H	2H	11.99	13.27	12.39	13.62	14.00	8.54	9.82	8.94	10.17	10.55
	3H	13.93	14.99	14.34	15.39	15.79	9.99	11.05	10.40	11.45	11.85
	4H	14.67	15.63	15.11	16.05	16.49	10.59	11.54	11.02	11.96	12.40
	6H	15.27	16.10	15.72	16.54	17.00	11.07	11.91	11.53	12.35	12.81
	8H	15.48	16.26	15.94	16.70	17.17	11.24	12.01	11.70	12.46	12.93
	12H	15.63	16.33	16.12	16.81	17.28	11.35	12.05	11.84	12.53	13.00
8H	4H	14.70	15.48	15.16	15.92	16.39	10.94	11.72	11.40	12.16	12.63
	6H	15.34	15.98	15.83	16.47	16.95	11.53	12.17	12.02	12.66	13.14
	8H	15.59	16.16	16.10	16.67	17.16	11.75	12.32	12.26	12.83	13.32
	12H	15.79	16.30	16.30	16.79	17.36	11.93	12.44	12.44	12.93	13.49
12H	4H	14.68	15.38	15.17	15.86	16.33	10.98	11.68	11.47	12.16	12.63
	6H	15.32	15.89	15.83	16.40	16.89	11.59	12.17	12.10	12.68	13.17
	8H	15.60	16.11	16.11	16.60	17.17	11.86	12.37	12.37	12.87	13.43