

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: P930529

Luminaire Tested: DFN2DS-PN3F0-040DS840-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930529
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P333812)
Test Lab: INNOVATION CENTER
Issue Date: 11/20/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DS-PN3F0-040DS840-FLL
Description: 3 foot, Pentagon Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

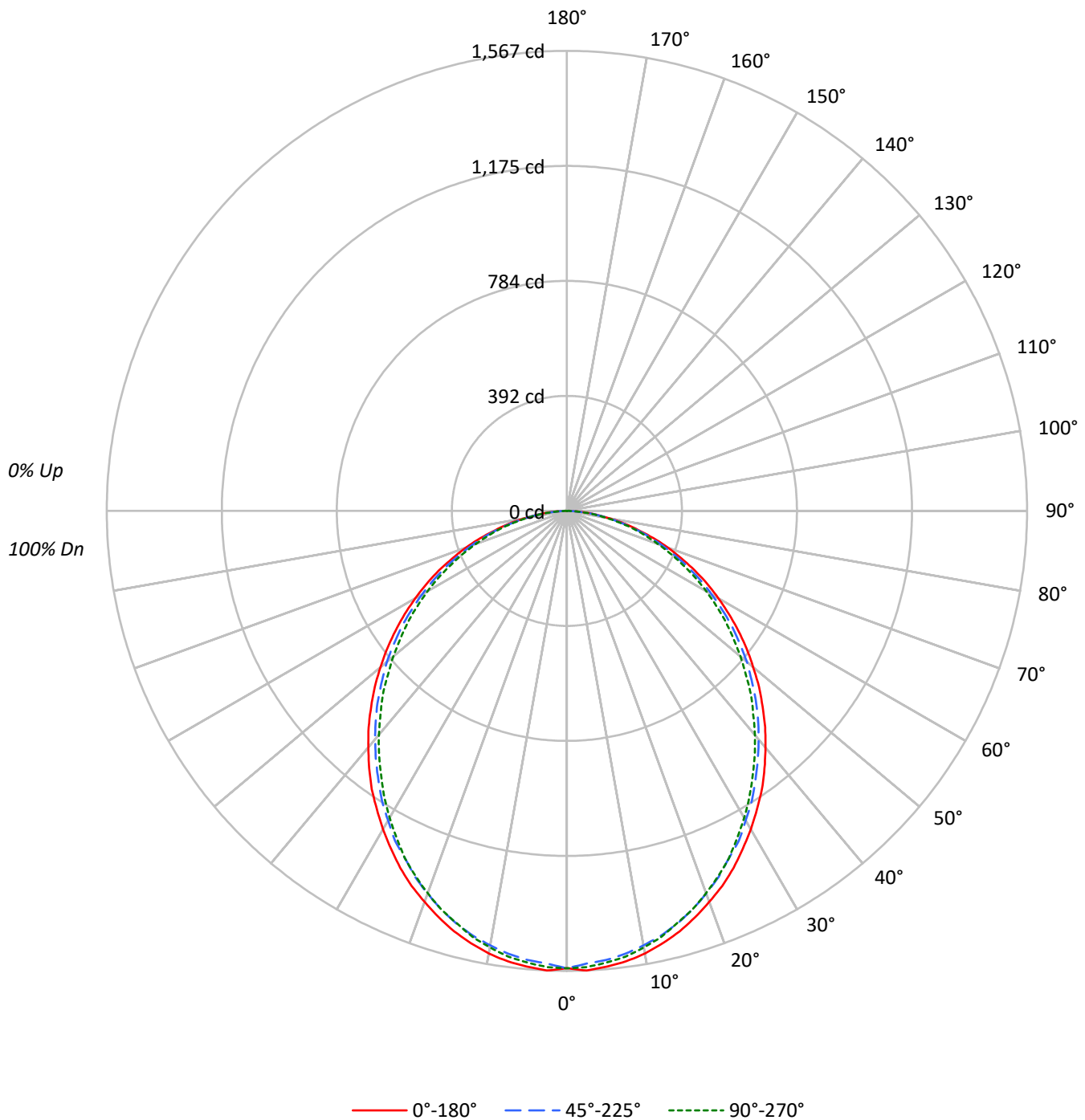
Lumens per Lamp: N/A
Luminaire Lumens: 3963.9 lumens
Efficiency: N/A
Efficacy: 101.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.11' x L: 2.96' x H: 0')
CIE Type: Direct

Input Watts (W): 38.9
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9972
Total Harmonic Distortion (THDi): 0.128
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	109	104	100	96	106	102	98	95	98	95	92		94	91	89		90
2	99	91	85	79	97	89	83	78	86	81	76		83	78	74		80
3	91	80	72	66	88	79	71	65	76	69	64		73	68	63		71
4	83	71	63	56	81	70	62	56	68	61	55		65	59	54		63
5	77	64	55	49	75	63	55	48	61	53	48		59	52	47		57
6	71	58	49	43	69	57	48	42	55	48	42		53	47	42		52
7	66	52	44	38	64	52	43	38	50	43	37		49	42	37		47
8	61	48	40	34	60	47	39	34	46	39	33		45	38	33		44
9	57	44	36	30	56	43	36	30	42	35	30		41	35	30		40
10	54	41	33	28	53	40	33	28	39	32	27		38	32	27		37

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1821	1821	1821
5°	1828	1802	1813
10°	1817	1784	1793
15°	1795	1761	1759
20°	1763	1726	1724
25°	1731	1683	1683
30°	1691	1644	1630
35°	1653	1597	1573
40°	1605	1550	1520
45°	1558	1503	1466
50°	1507	1455	1403
55°	1454	1399	1347
60°	1394	1331	1282
65°	1330	1264	1206
70°	1250	1183	1127
75°	1137	1089	1062
80°	1008	977	928
85°	824	785	704

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
Vertical Angle: 45°
Luminance: 1558 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	146.6	3.7
10°-20°	412.6	10.4
20°-30°	606.3	15.3
30°-40°	704.2	17.8
40°-50°	703.3	17.7
50°-60°	613.3	15.5
60°-70°	453.4	11.4
70°-80°	256.5	6.5
80°-90°	67.7	1.7
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°	1165.5	29.4
0°-40°	1869.8	47.2
0°-60°	3186.4	80.4
0°-90°	3963.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3963.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1558	1558	1558	1558	1558	
5°	1558	1552	1536	1547	1545	148
15°	1483	1474	1455	1461	1453	418
25°	1342	1330	1305	1308	1305	618
35°	1158	1143	1119	1110	1103	723
45°	942	932	909	893	887	727
55°	713	704	686	668	661	638
65°	481	472	457	443	436	476
75°	252	249	241	232	235	269
85°	61	60	58	54	52	72
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1558.0	1558.0	1558.0	1558.0	1558.0
2.5°	1567.1	1559.6	1543.0	1558.0	1555.2
5°	1558.0	1552.1	1535.5	1547.4	1544.6
7.5°	1547.4	1538.5	1522.0	1534.1	1531.1
10°	1531.1	1520.6	1502.7	1514.6	1510.1
12.5°	1508.5	1499.6	1481.7	1489.2	1486.1
15°	1483.1	1474.2	1454.7	1460.7	1453.3
17.5°	1451.7	1442.7	1423.2	1430.6	1423.2
20°	1417.1	1408.2	1387.3	1391.7	1385.9
22.5°	1382.8	1369.3	1349.7	1349.7	1346.7
25°	1342.2	1330.3	1304.9	1307.8	1304.9
27.5°	1297.3	1286.8	1267.5	1263.0	1255.6
30°	1252.5	1240.4	1218.0	1213.5	1207.5
32.5°	1204.5	1195.6	1171.6	1162.6	1156.5
35°	1158.1	1143.1	1119.1	1110.1	1102.6
37.5°	1105.6	1092.1	1068.1	1057.7	1050.1
40°	1051.8	1039.6	1015.6	1002.3	996.3
42.5°	999.3	987.2	963.4	948.2	939.3
45°	942.3	931.9	909.3	893.0	886.9
47.5°	886.9	876.4	852.5	835.9	827.0
50°	828.4	820.9	800.0	779.0	771.5
52.5°	771.5	761.1	741.6	725.1	714.6
55°	713.2	704.1	686.2	668.2	660.8
57.5°	654.7	647.2	627.6	609.7	603.7
60°	596.2	590.3	569.4	552.9	548.3
62.5°	539.3	528.8	513.9	498.9	492.9
65°	481.0	471.9	457.0	443.4	436.0
67.5°	421.0	413.4	400.1	389.6	383.6
70°	365.6	359.6	346.0	335.5	329.6
72.5°	308.7	302.6	295.2	284.7	280.2
75°	251.7	248.7	241.1	232.2	235.2
77.5°	200.7	194.7	191.7	187.2	182.8
80°	149.8	148.2	145.2	140.8	137.8
82.5°	101.9	101.9	100.5	94.4	94.4
85°	61.4	60.0	58.5	53.9	52.5
87.5°	27.0	24.0	21.0	16.5	14.9
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	13.37	14.98	13.73	15.29	15.60	12.92	14.53	13.29	14.85	15.16
	3H	15.12	16.57	15.49	16.90	17.26	14.62	16.08	15.00	16.41	16.77
	4H	15.76	17.13	16.16	17.48	17.85	15.27	16.64	15.67	16.98	17.36
	6H	16.23	17.50	16.64	17.86	18.25	15.73	17.00	16.14	17.36	17.75
	8H	16.37	17.58	16.80	17.97	18.37	15.87	17.08	16.30	17.47	17.87
	12H	16.46	17.62	16.89	18.01	18.43	15.95	17.11	16.38	17.49	17.92
4H	2H	13.93	15.30	14.32	15.64	16.02	13.57	14.94	13.97	15.29	15.67
	3H	15.90	17.05	16.31	17.45	17.85	15.49	16.64	15.90	17.04	17.44
	4H	16.68	17.71	17.11	18.13	18.56	16.25	17.29	16.69	17.70	18.14
	6H	17.27	18.18	17.73	18.62	19.08	16.84	17.75	17.30	18.19	18.64
	8H	17.46	18.31	17.92	18.75	19.22	17.03	17.87	17.49	18.31	18.78
	12H	17.60	18.36	18.08	18.83	19.30	17.14	17.90	17.62	18.38	18.85
8H	4H	16.95	17.80	17.41	18.24	18.71	16.58	17.42	17.04	17.87	18.33
	6H	17.66	18.37	18.16	18.86	19.33	17.28	17.99	17.78	18.47	18.95
	8H	17.92	18.55	18.43	19.06	19.55	17.53	18.16	18.04	18.67	19.16
	12H	18.12	18.68	18.63	19.17	19.73	17.71	18.27	18.22	18.76	19.32
12H	4H	16.98	17.74	17.46	18.21	18.68	16.61	17.37	17.09	17.85	18.32
	6H	17.71	18.34	18.22	18.85	19.33	17.34	17.97	17.85	18.48	18.97
	8H	18.02	18.58	18.53	19.07	19.63	17.65	18.20	18.15	18.69	19.26