

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: P930457

Luminaire Tested: DFN2DS-PN2F0-040DS840-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930457
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-PN2F0-040DS840-FLL
Description: 2 foot, Pentagon Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

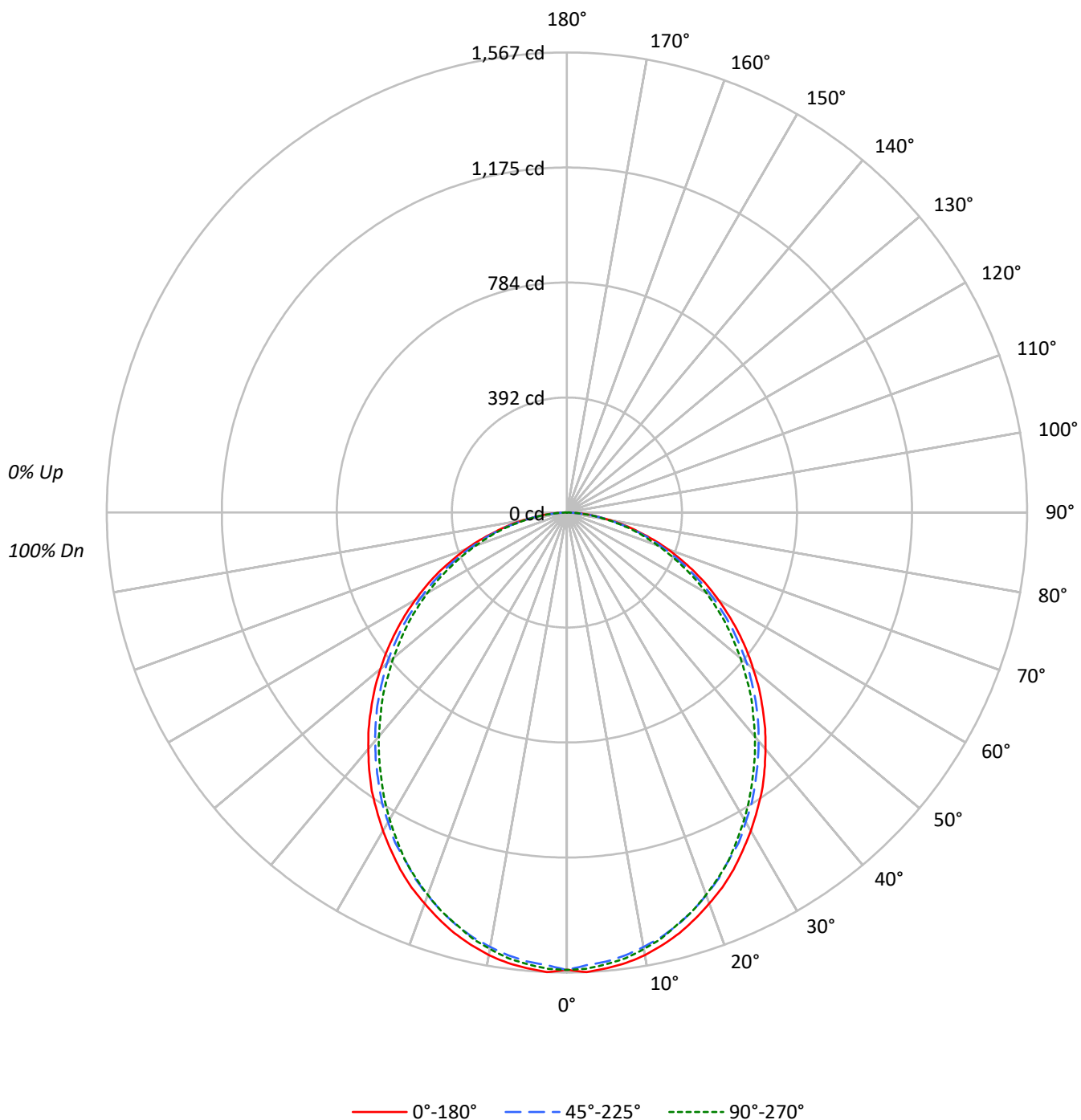
Lumens per Lamp: N/A
Luminaire Lumens: 3963.9 lumens
Efficiency: N/A
Efficacy: 93.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 2.29' x L: 2.17' x H: 0')
CIE Type: Direct

Input Watts (W): 42.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9613
Total Harmonic Distortion (THDi): 0.083
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°	3374	3374	3374
5°	3387	3338	3358
10°	3367	3305	3321
15°	3326	3262	3259
20°	3266	3198	3194
25°	3208	3118	3118
30°	3132	3046	3020
35°	3062	2959	2915
40°	2974	2871	2817
45°	2886	2785	2717
50°	2791	2696	2600
55°	2693	2591	2495
60°	2583	2466	2375
65°	2465	2342	2234
70°	2315	2191	2087
75°	2106	2018	1968
80°	1868	1811	1719
85°	1526	1454	1305

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2886 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	15.51	17.12	15.87	17.43	17.75	15.06	16.67	15.43	16.99	17.30
	3H	17.26	18.71	17.64	19.04	19.40	16.77	18.22	17.14	18.55	18.91
	4H	17.90	19.27	18.30	19.62	20.00	17.41	18.78	17.81	19.13	19.50
	6H	18.37	19.64	18.78	20.01	20.40	17.87	19.14	18.28	19.51	19.90
	8H	18.52	19.73	18.94	20.12	20.52	18.01	19.22	18.44	19.61	20.01
	12H	18.61	19.77	19.04	20.15	20.58	18.09	19.25	18.52	19.64	20.07
4H	2H	16.07	17.44	16.47	17.79	18.16	15.72	17.08	16.11	17.43	17.81
	3H	18.04	19.19	18.45	19.59	19.99	17.64	18.78	18.05	19.18	19.58
	4H	18.82	19.86	19.25	20.27	20.71	18.40	19.43	18.83	19.85	20.28
	6H	19.42	20.32	19.87	20.76	21.22	18.98	19.89	19.44	20.33	20.79
	8H	19.61	20.45	20.07	20.89	21.36	19.17	20.01	19.63	20.46	20.92
	12H	19.74	20.50	20.22	20.97	21.44	19.29	20.05	19.77	20.52	20.99
8H	4H	19.09	19.94	19.55	20.38	20.85	18.72	19.57	19.18	20.01	20.47
	6H	19.81	20.51	20.30	21.00	21.47	19.43	20.13	19.92	20.62	21.09
	8H	20.07	20.70	20.58	21.20	21.69	19.68	20.31	20.18	20.81	21.30
	12H	20.27	20.82	20.77	21.32	21.88	19.85	20.41	20.36	20.90	21.46
12H	4H	19.12	19.88	19.60	20.36	20.82	18.75	19.51	19.23	19.99	20.46
	6H	19.85	20.48	20.36	20.99	21.48	19.48	20.12	19.99	20.62	21.11
	8H	20.17	20.72	20.67	21.22	21.78	19.79	20.35	20.30	20.84	21.40