

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: P930263

Luminaire Tested: DFN2DS-HX4F0-040DS927-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930263
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-HX4F0-040DS927-FLL
Description: 4 foot, Hexagon Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

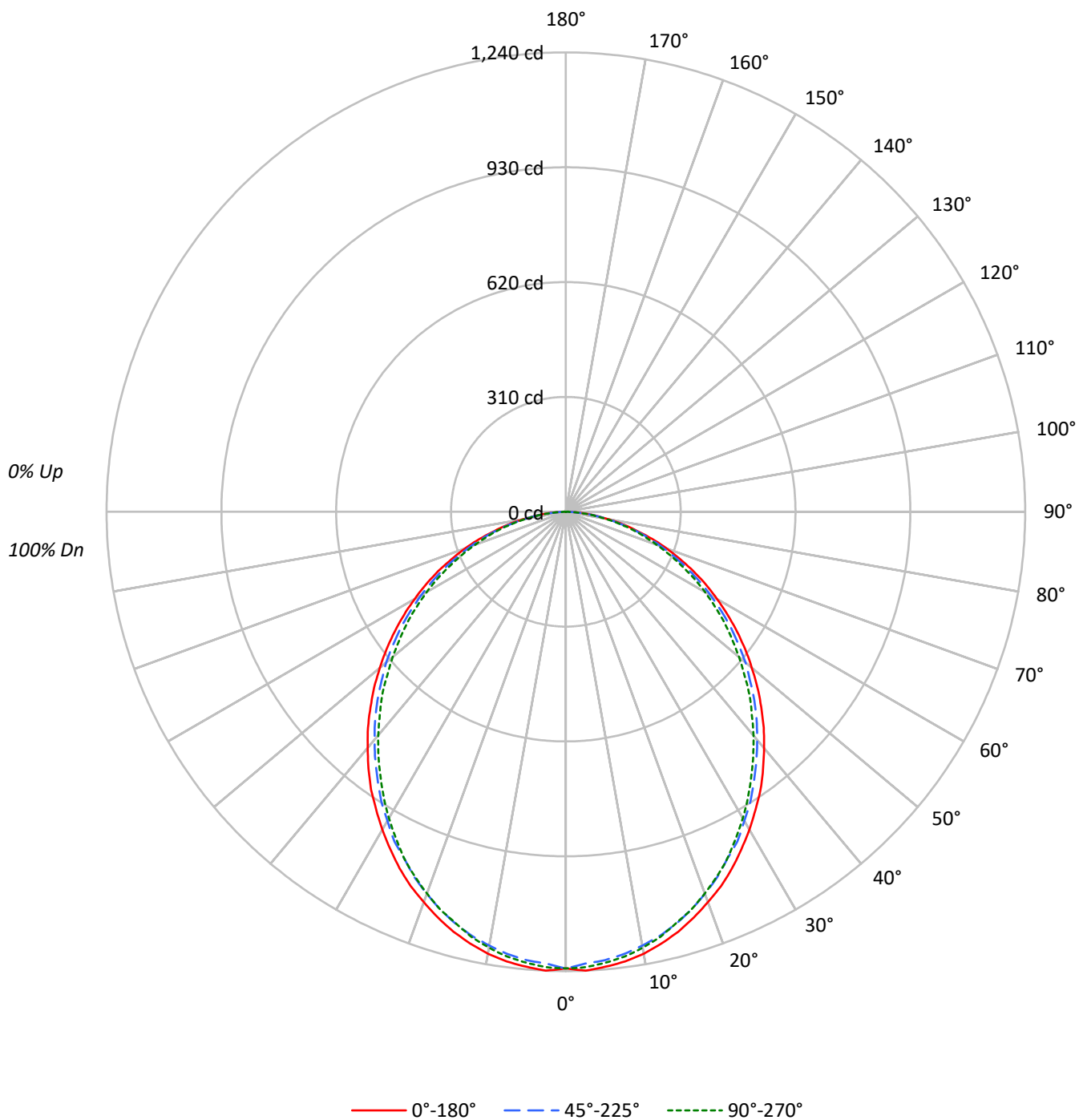
Lumens per Lamp: N/A
Luminaire Lumens: 3136.3 lumens
Efficiency: N/A
Efficacy: 82.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 4.09' x L: 3.54' x H: 0')
CIE Type: Direct

Input Watts (W): 38.1
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9977
Total Harmonic Distortion (THDi): 0.049
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°	917	917	917
5°	920	907	912
10°	915	898	902
15°	903	886	885
20°	887	869	868
25°	871	847	847
30°	851	827	820
35°	832	804	792
40°	808	780	765
45°	784	757	738
50°	758	732	706
55°	732	704	678
60°	701	670	645
65°	670	636	607
70°	629	595	567
75°	572	548	535
80°	508	492	467
85°	414	395	354

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 784 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	116.0	3.7
10°-20°	326.4	10.4
20°-30°	479.7	15.3
30°-40°	557.2	17.8
40°-50°	556.5	17.7
50°-60°	485.2	15.5
60°-70°	358.7	11.4
70°-80°	202.9	6.5
80°-90°	53.6	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°	922.2	29.4
0°-40°	1479.4	47.2
0°-60°	2521.1	80.4
0°-90°	3136.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3136.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1233	1233	1233	1233	1233	
5°	1233	1228	1215	1224	1222	117
15°	1173	1166	1151	1156	1150	330
25°	1062	1053	1032	1035	1032	489
35°	916	904	886	878	872	572
45°	746	737	720	706	702	575
55°	564	557	543	529	523	504
65°	381	373	362	351	345	376
75°	199	197	191	184	186	213
85°	48	47	46	43	42	57
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1232.7	1232.7	1232.7	1232.7	1232.7
2.5°	1239.9	1233.9	1220.9	1232.7	1230.5
5°	1232.7	1228.0	1214.9	1224.4	1222.1
7.5°	1224.4	1217.3	1204.2	1213.8	1211.4
10°	1211.4	1203.1	1189.0	1198.4	1194.8
12.5°	1193.5	1186.5	1172.3	1178.3	1175.8
15°	1173.4	1166.4	1150.9	1155.7	1149.8
17.5°	1148.6	1141.5	1126.1	1131.9	1126.1
20°	1121.2	1114.2	1097.6	1101.1	1096.5
22.5°	1094.1	1083.4	1067.9	1067.9	1065.6
25°	1062.0	1052.6	1032.5	1034.7	1032.5
27.5°	1026.4	1018.1	1002.8	999.3	993.4
30°	991.0	981.4	963.7	960.1	955.4
32.5°	953.0	946.0	927.0	919.8	915.0
35°	916.3	904.5	885.5	878.3	872.4
37.5°	874.8	864.1	845.1	836.8	830.9
40°	832.2	822.6	803.6	793.0	788.3
42.5°	790.7	781.1	762.2	750.3	743.2
45°	745.6	737.4	719.5	706.5	701.7
47.5°	701.7	693.4	674.5	661.4	654.4
50°	655.5	649.5	633.0	616.3	610.4
52.5°	610.4	602.2	586.8	573.7	565.4
55°	564.3	557.1	542.9	528.7	522.8
57.5°	518.0	512.1	496.6	482.4	477.7
60°	471.7	467.0	450.5	437.4	433.9
62.5°	426.7	418.4	406.6	394.7	390.0
65°	380.6	373.3	361.5	350.9	345.0
67.5°	333.1	327.1	316.6	308.2	303.5
70°	289.2	284.5	273.8	265.5	260.8
72.5°	244.3	239.4	233.6	225.2	221.7
75°	199.1	196.8	190.8	183.7	186.1
77.5°	158.8	154.0	151.7	148.1	144.6
80°	118.6	117.3	114.9	111.4	109.1
82.5°	80.6	80.6	79.5	74.7	74.7
85°	48.5	47.4	46.3	42.6	41.5
87.5°	21.4	19.0	16.6	13.1	11.8
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	10.98	12.59	11.34	12.90	13.22	10.54	12.15	10.90	12.46	12.77
	3H	12.73	14.18	13.11	14.51	14.87	12.24	13.69	12.62	14.02	14.38
	4H	13.38	14.75	13.77	15.09	15.47	12.88	14.25	13.28	14.60	14.97
	6H	13.85	15.11	14.26	15.48	15.87	13.34	14.61	13.76	14.98	15.37
	8H	13.99	15.20	14.41	15.59	15.99	13.49	14.70	13.91	15.09	15.48
	12H	14.08	15.24	14.51	15.62	16.05	13.57	14.73	14.00	15.11	15.54
4H	2H	11.54	12.91	11.94	13.26	13.63	11.19	12.56	11.59	12.90	13.28
	3H	13.52	14.66	13.93	15.06	15.46	13.11	14.25	13.52	14.65	15.05
	4H	14.29	15.33	14.72	15.74	16.18	13.87	14.90	14.30	15.32	15.75
	6H	14.89	15.79	15.34	16.23	16.69	14.46	15.36	14.91	15.80	16.26
	8H	15.08	15.92	15.54	16.37	16.83	14.64	15.49	15.10	15.93	16.39
	12H	15.21	15.97	15.69	16.45	16.91	14.76	15.52	15.24	15.99	16.46
8H	4H	14.57	15.41	15.03	15.85	16.32	14.19	15.04	14.65	15.48	15.95
	6H	15.28	15.98	15.77	16.47	16.95	14.90	15.60	15.39	16.09	16.56
	8H	15.54	16.17	16.05	16.68	17.16	15.15	15.78	15.66	16.28	16.77
	12H	15.74	16.30	16.25	16.79	17.35	15.33	15.88	15.83	16.37	16.93
12H	4H	14.59	15.35	15.07	15.83	16.30	14.23	14.99	14.71	15.46	15.93
	6H	15.32	15.96	15.83	16.46	16.95	14.96	15.59	15.47	16.09	16.58
	8H	15.64	16.20	16.15	16.69	17.25	15.26	15.82	15.77	16.31	16.87